In the United States Court of Appeals for the Eighth Circuit

Nos. 23-3758 and 23-3760

WILLIAM COUSER AND SUMMIT CARBON SOLUTIONS, LLC,

Plaintiffs-Appellees,

vs.

SHELBY COUNTY, IOWA, et al., and STORY COUNTY, IOWA, et al.,

Defendants-Appellants.

APPEAL FROM THE UNITED STATES DISTRICT COURT
FOR THE SOUTHERN DISTRICT OF IOWA
HONORABLE STEPHANIE M. ROSE, JUDGE

AMICUS CURIAE BRIEF OF PIPELINE SAFETY TRUST IN SUPPORT OF DEFENDANTS-APPELLANTS FOR REVERSAL

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CORPORATE DISCLOSURE STATEMENT

The Pipeline Safety Trust is a non-profit corporation incorporated in the State of Washington. The Pipeline Safety Trust has no parent corporation and no publicly held corporation owns any stock in The Pipeline Safety Trust. The mission of The Pipeline Safety Trust is to promote pipeline safety through education and advocacy, increased access to information, and partnerships with residents, safety advocates, government, and industry, resulting in safer communities and a healthier environment. The subject of carbon dioxide pipeline safety is crucial to the organization.

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INTEREST OF AMICUS CURIAE

Pipeline Safety Trust is a non-profit watchdog of the pipeline industry and its regulators. Its mission is to promote pipeline safety through education and advocacy, increased access to information, and partnerships with residents, safety advocates, government, and industry, resulting in safer communities and a healthier environment.

As the premiere non-governmental organization working to protect the public from the negative effects of pipelines, the Trust has developed an expertise in legislative and regulatory strategies. Its research and advocacy clearly show that local land use ordinances are critical tools for protecting the public from the consequences of pipeline incidents.

Pipeline Safety Trust itself came into existence because of a 1999 pipeline disaster in Bellingham, Washington, which killed three children and prompted community calls for a perpetually funded oversight organization to ensure safer pipelines nationwide. As part of its mission, Pipeline Safety Trust has consistently encouraged government authorities to be proactive and innovative in their approaches to failure prevention. It also represents the critical voice of communities located around pipeline infrastructure, who pay a heavy price when pipeline safety measures are inadequate or poorly followed.

In giving force and effect to local ordinances it is important to establish that federal and state laws governing carbon dioxide pipelines do not preempt local ordinances, such as the ones at issue in this case. The Trust's knowledge and experience informs us that the district court decisions regarding the Shelby County and Story County ordinances at issue in this case are incorrect and contrary to law. Upholding the district court decisions would be a setback to efforts across the country by local governments to protect their citizens and land from the consequences of pipeline incidents.

Pipeline Safety Trust believes that it can bring a knowledge and perspective to this case that will assist the Court in making the correct decision.

INTRODUCTION

Summit Carbon Solutions LLC (Summit) proposes to construct and operate a pipeline to carry carbon dioxide from ethanol plants in Iowa to a sequestration site in North Dakota. The pipeline would slice through 29 Iowa counties, impac prime farmland, run within several hundred feet of numerous occupied structures, and enter or come close to the corporate limits of several cities.

The carbon dioxide that Summit proposes to transport will ostensibly enter the pipeline in a supercritical state at a maximum pressure of 2,150 psi. Though carbon dioxide is relatively benign at low concentrations, transporting large quantities of the product in a supercritical phase via pipeline carries unique safety risks that are magnified in the event of a failure. Carbon dioxide is an asphyxiant and is toxic at higher concentrations. It is also, when released from a pipeline, heavier than air and disperses close to the ground where it can reach humans and other animals. These risks are acknowledged by the Pipeline and Hazardous Materials Safety Administration (PHMSA). Failure Investigation Report – Denbury Gulf Coast Pipelines LLC (2020), found at www.phmsa.dot.gov/sites/phmsa.dot.gov/files/202205/Failure%20Investigation%20Report%20-%20Denbury%20Gulf%20Coast%20Pipeline.pdf.

In Iowa, a county has the authority to adopt zoning ordinances:

> in accordance with a comprehensive plan and designed to preserve the availability of agricultural land; to consider the protection of soil from wind and water erosion; to encourage efficient urban development patterns; to lessen congestion in the street or highway; to secure safety from fire, flood, panic, and other dangers; to protect health and general welfare . . . .

Iowa Code § 335.5(1).

The district court decisions in these cases misconstrued and misapplied the law and the facts in determining that the county ordinances were preempted by federal and state law.

ARGUMENT

I. THE COUNTY ORDINANCES AT ISSUE IN THESE CASES COALESCE FEDERAL AND STATE LAWS AND REGULATIONS.

A. Federal Laws and Regulations

The only federal law relating to the carbon dioxide pipeline which is the subject of this case is the Pipeline Safety Act, 49 U.S.C. §§ 60101 *et seq*. The law requires the Secretary of Transportation, through the Pipeline and Hazardous Materials Safety Administration (PHMSA), to prescribe minimum safety standards that "apply to the design, installation, inspection, emergency plans and procedures, testing, construction, extension, operation, replacement, and maintenance of pipeline facilities." 49 U.S.C. § 60102(a)(2). However,

the Act is clear that it does not apply to the "location or routing of a pipeline facility." 49 U.S.C. § 60104(e).

Pursuant to the Act, PHMSA has promulgated regulations related to the "design, installation, inspection, emergency plans and procedures, testing, construction, extension, operation, replacement, and maintenance of pipeline facilities." These regulations include standards for the design and manufacture of the pipe used in the pipeline, 49 C.F.R. §§ 195.0-195.18, 195.100-195.134, standards for the construction of the pipeline itself, 49 C.F.R. §§ 195.200-195.266, and standards for controlling corrosion on the pipe in the pipeline, 49 C.F.R. §§ 195.551-195.591. None of these regulations establish any requirements concerning the location or routing of the pipeline. Indeed, pursuant to 49 U.S.C. § 60104(e), *supra*, they cannot.

In this regard, 49 C.F.R. § 195.210 requires some clarification. 49 C.F.R. § 195.210(a) states:

> (a) Pipeline right-of-way must be selected to avoid, as far as practicable, areas containing dwellings, industrial buildings, and places of public assembly.

This is a construction standard, not a location or routing standard. As with all PHMSA regulations, "the approach to risk has remained the same: to 'keep the product in the pipe.' Rather than limit where pipelines can be sited, the safety framework focuses on protecting the area around the pipeline after the

fact." Sara Gosman, *Planning for Failure: Pipelines, Risk, and the Energy Revolution*, 81 Ohio State Law Journal 349, 374 (2020). Given the prohibition on location and routing regulations in 49 U.S.C. § 60104(e), it is axiomatic that § 195.210(a) cannot be a location or routing requirement.

Likewise, the construction standard set forth in 49 C.F.R. § 195.210(b) is not a location or routing requirement. It provides as follows:

> No pipeline may be located within 50 feet (15 meters) of any private dwelling, or any industrial building or place of public assembly in which persons work, congregate, or assemble, unless it is provided with at least 12 inches (305) millimeters) of cover in addition to that prescribed in § 195.248.

Contrary to the misconception created by the pipeline companies, this regulation does not establish a 50-foot setback requirement. It is a requirement for the depth of cover of the pipe, depending on whether the setback is more or less than 50 feet. And again, the approach of the regulation is to attempt to minimize risk after the pipeline is in the ground, not to impose location and routing requirements before the pipeline is constructed.

Congress has always limited federal regulation of hazardous liquid pipelines to safe transportation as opposed to siting and routing, as a review of the history of the Pipeline Safety Act supports. Before 1960, Congress granted the Interstate Commerce Commission (ICC) authority to issue

transportation safety regulations via 49 U.S.C. § 835 (1952), which stated in relevant part:

> The Interstate Commerce Commission shall formulate regulations for the safe transportation within the limits of the jurisdiction of the United States of explosives and other dangerous articles, including flammable liquids, flammable solids, oxidizing materials, corrosive liquids, compressed gases, and poisonous substances, which shall be binding upon all common carriers which transport explosives or other dangerous articles by land, and upon all shippers making shipments of explosives or other dangerous articles via any common carrier engaged in interstate or foreign commerce by land or water.

Thus, the ICC had jurisdiction to issue safety regulations for all "common carriers engaged in interstate or foreign commerce" for "dangerous articles" including "flammable liquids" and "compressed gases." Since petroleum and natural gas pipelines were "common carriers" under the Interstate Commerce Act that transported hazardous substances, the foregoing statutory language was broad enough to allow the ICC to regulate the safety of petroleum, natural gas, and other compressed gas pipelines.

In 1960, Congress inadvertently stripped pipeline safety jurisdiction from the ICC by including the following definition of "carriers" within 49 U.S.C. § 831(1960):

> As used in this chapter-
> Unless otherwise indicated, "carrier" means any person engaged in the transportation of passengers or property, by land, **other than pipelines**, as a common, contract, or private carrier, or freight forwarder as those terms are used in the Interstate Commerce Act, as amended, and officers, agents, and employees of such carriers.

(Emphasis added.) Under this language, the ICC did not have jurisdiction over pipelines, such that it also did not have jurisdiction over pipeline safety.

In 1965, Congress passed an amendment to reauthorize the ICC to once again regulate pipeline safety. Pub. L. 89-95, 79 Stat. 285 (July 27, 1965). Then, in 1967, Congress transferred pipeline safety jurisdiction from the ICC to the Department of Transportation (DOT) via 49 U.S.C. § 1655(e)(4) and (f)(3)(A) of the Department of Transportation Act, 49 U.S.C. §§ 101 *et seq*. (DTA). Specifically, subsection (e)(4) transferred authority to regulate "explosives and dangerous articles" under 49 U.S.C. §§ 831-835 from the ICC to the DOT. Subsection (f)(3)(A) assigned regulation of "pipeline safety" to the Federal Railroad Administration (FRA), an agency within the DOT:

> The Federal Railroad Administrator shall carry out the functions, powers, and duties of the Secretary pertaining to railroad and pipeline safety as set forth in the statutes transferred to the Secretary by subsection (e) of this section.

The broad pipeline safety jurisdiction granted to the ICC and the FRA did not expressly grant or deny federal jurisdiction to regulate location or route for safety purposes. At that time, as now, federal jurisdiction over natural gas pipeline location and route was granted to the ICC by the Natural Gas Act (NGA), 15 U.S.C. §§ 717 *et seq*., such that assigning routing jurisdiction to the DOT was unnecessary and would have resulted in conflicting jurisdiction.

As regards hazardous liquids pipelines, during ICC and FRA jurisdiction, no federal statute granted a federal agency routing authority over them and states regulated pipeline routing and location. Therefore, the early federal pipeline safety statutes did not grant the federal government jurisdiction to determine the location or route of a hazardous liquid pipeline.

In 1968, at the request of the pipeline industry, Congress enacted the first version of the Pipeline Safety Act (PSA) in the form of the Natural Gas Pipeline Safety Act of 1968 (NGPSA). 49 USC §§ 1671 *et seq*. (1990); Public Law 90-481, 82 Stat. 720 (Aug. 12, 1968). Although the NGPSA regulated only natural gas pipelines and not hazardous liquid pipelines, it became the foundation for and model on which Congress based subsequent extensions of pipeline safety regulation to cover hazardous liquid pipelines. The NGPSA included § 1671(4), the definition of "pipeline facilities," which states that the NGPSA did not authorize the Secretary of Transportation to "prescribe the location or routing of any pipeline facility":

> (4) "Pipeline facilities" includes, without limitation, new and existing pipe rights-of-way and any equipment facility, or building used in the transportation of gas or the treatment of gas during the course of transportation **but "rights-of-way" as used in this chapter does not authorize the Secretary to prescribe the location or routing of any pipeline facility.**

(Emphasis added.) The term "rights-of-way" is used twice in the NGPSA, both times in the foregoing language. Although this language clarifies that the DOT

has no jurisdiction to prescribe the location or route of a right-of-way, it does not exclude the possibility that the DOT might have jurisdiction to regulate location or route under other provisions of the NGPSA, including via issuance of safety standards.

Congress extended federal pipeline safety jurisdiction to hazardous liquid pipelines via the Hazardous Liquid Pipeline Safety Act of 1979. Pub. L. 96-129, 93 Stat. 989 (Nov. 30, 1979). Rather than roll hazardous liquid pipeline regulation into the existing U.S. Code sections for natural gas pipelines, 49 U.S.C. §§ 1671 *et seq.*, Congress instead enacted a new title specifically for hazardous liquid pipelines. 49 U.S.C. §§ 2001 *et seq*. (1990). The NGPSA language withholding jurisdiction over location and route was incorporated **in whole** into the hazardous liquid pipeline statute at 49 USC § 2001(4) (1990). This language is identical to the language quoted above in 49 U.S.C. § 1671(4) (1990). It remained in the U.S. Code until 1994, 49 U.S.C. § 2001 (1994), when it was replaced by § 60104(e).

Congress extensively reworked U.S. hazardous materials statutes for all modes of transportation in 1994, Pub. L. 103–272, 108 Stat 745 (July 5, 1994) , including by combining the PSA's natural gas and hazardous liquid titles into a single subtitle, 49 USC Subtitle VIII, codified at 49 USC §§ 60101 *et seq*. As part of the 1994 amendments, Congress changed the wording of the PSA's

prohibition on federal determination of location and route under the PSA and codified it in its present location in 49 USC § 60104(e):

> This chapter does not authorize the Secretary of Transportation to prescribe the location or routing of a pipeline facility.

The purpose of these amendments was to "revise, codify, and enact without substantive change" and "make other technical improvements." Pub. L. 102-272, 106 Stat. 112 (Apr. 21, 1992). Nothing in the PSA authorizes the Secretary to prescribe location or route. Section 60104(e) makes clear that the DOT may not take action under **any section** of the PSA to regulate the location or route of pipelines. This means that the DOT may not promulgate safety standards under PSA § 60102(a) that have the effect of prescribing a proposed pipeline's route. For example, the DOT may not issue safety standards that prohibit construction of a pipeline on unstable soils or in densely populated areas. Whereas the earlier statutory prohibition might have been misread to allow the DOT to promulgate route safety standards as long as these did not relate to selection of a right-of-way, § 60104(e) bars use of any section of the PSA to prescribe location or route.

But rulemaking did not follow the statutory changes. The ICC issued a notice of a rulemaking to implement the pipeline safety jurisdiction returned to it by Congress in 1965, 30 Fed. Reg. 13266-67 (Oct. 19, 1965); 32 Fed. Reg. 1098 (Jan. 31, 1967), but due to the transfer of pipeline safety jurisdiction to

the DOT/FRA, these proposed ICC regulations were never finalized. The FRA adopted general regulations in 1967, 32 Fed. Reg. 16040 (Nov. 22, 1967). The purpose of the regulations was to require operators to "design, construct, test, maintain, and operate pipeline systems to provide for safety to the public and to the carrier's personnel." 32 Fed. Reg. 16040 (40 C.F.R. § 180.1).

In 1968, the FRA issued a rulemaking notice containing the DOT's proposed pipeline safety regulations for hazardous liquid pipelines. 33 Fed. Reg. 10213 (Jul. 17, 1967). It included proposed section 180.210 related to pipeline location:

> **§ 180.210 Pipeline location.**
>
> (a) Each carrier shall select its pipeline right-of-way so as to avoid, as far as practicable, areas containing private dwellings, industrial buildings, and places of public assembly.
>
> (b) No carrier may locate a pipeline within 50 feet of any private dwelling, or any industrial building or place of public assembly in which persons work, congregate, or assemble, unless it is to be laid at a depth to provide at least 24 inches additional cover to that prescribed in § 180.248.

The rulemaking notice did not discuss subpart (a) but did discuss subpart (b) and inquired as to the need for additional protection in populated areas via, for example, by encasing the pipeline in concrete slabs or casings or operation at a lower stress level. 33 Fed. Reg. at 10215. The notice did not present any

questions suggesting that the DOT would increase safety by regulating the location or route of a pipeline.

The proposed regulation was adopted by Final Rule. 34 Fed. Reg. 15473, 75, 79 (Oct. 4, 1969). The Final Rule changed the chapter number from 180 to 195, converted both subparts (a) and (b) to the passive voice, and reduced the amount of additional cover required when pipelines are constructed near buildings from 24 inches to 12 inches. In explaining the change, the DOT made clear that the goal of the cover requirement was to protect against excavation damage or unusual external loads. 34 Fed Reg. 15473, 15475. The final rule states in full:

> **§ 195.210 Pipeline Location.**
>
> (a) Pipeline right-of-way must be selected to avoid, as far as practicable, areas containing private dwellings, industrial buildings, and places of public assembly.
>
> (b) No pipeline may be located within 50 feet of any private dwelling, or any industrial building or place of public assembly in which persons work, congregate, or assemble, unless it is provided with at least 12 inches of-cover in addition to that prescribed in § 195.248.

The current Code of Federal Regulations version is identical to the Final Rule, except for the addition of metric units:

> **§ 195.210 Pipeline location.**
>
> (a) Pipeline right-of-way must be selected to avoid, as far as practicable, areas containing private dwellings, industrial buildings, and places of public assembly.

> (b) No pipeline may be located within 50 feet (15 meters) of any private dwelling, or any industrial building or place of public assembly in which persons work, congregate, or assemble, unless it is provided with at least 12 inches (305 millimeters) of cover in addition to that prescribed in § 195.248.

49 C.F.R. § 195.210 (2024). Thus, the location-related language in 49 C.F.R. § 195.210 was originally adopted in 1969, but the rulemakings that produced it contained no discussion of federal jurisdiction to regulate location or route. The Department of Transportation did not propose to modify this language following enactment of 49 U.S.C. § 60104(e). Thus, there appears to be no regulatory history discussing § 195.210 in light of the DOT's jurisdictional limitation to prescribe location or route.

The DOT has never proposed to modify the 1969 "location" language contained in 49 C.F.R. § 195.210 to account for the 1994 enactment of 49 U.S.C. § 60104(e), suggesting that it recognized that its authority to regulate pipeline safety never changed. Nonetheless, the regulation must be interpreted in accordance with § 60104(e).

With regard to subpart (b), there is no conflict between the statute and the regulation, because the regulation does not prescribe the location or route of hazardous liquid pipelines. It merely requires that when a pipeline is constructed within 50 feet of a structure, then it must be provided with another foot of cover. If it is constructed further away, it must comply with the depth

of cover rules in § 195.248. That is, subpart (b) does not prescribe that a pipeline cannot be built within 50 feet of a structure or otherwise limit location. Its effect is solely on depth of cover. As such, this subpart does not conflict with § 60104(e).

The language in subpart (a) instead offers an acknowledgment that it is better to construct a pipeline away from people when practicable. Conventional regulatory interpretation directs the court that provisions like this should be read narrowly so as to avoid conflicting with the statute. Thus, 40 C.F.R. § 195.210(a) should have no effect under federal law. And as discussed above, § 195.210(a) is a construction standard, not a location or routing standard and should be interpreted as such.

Moreover, if § 195.210(a) were a location or routing standard, it would conflict with the long-standing and undisputed right of state, tribal, and local governments to determine the location or route of hazardous liquid pipelines. These non-federal governments have a right to order the location and route of pipelines and to order pipeline developers to comply, regardless of § 195.210(a).

It could be argued that § 195.210(a) would have residual effect in states that do not regulate pipeline routes. However, PHMSA has no route permitting process through which it could enforce § 195.210(a) proactively. Even if

PHMSA attempted to prescribe location or route through an enforcement action, a pipeline developer could bring legal action to bar such action.

Accordingly, § 195.210(a) is void as a matter of law, whereas § 195.210(b) is not void provided it is interpreted as not prescribing location or route.

In addition, PHMSA regulations require the pipeline company to have an emergency response plan. 49 C.F.R. § 195.402(e). The plan must include procedures for actions put in place by the pipeline company to provide safety when an emergency condition occurs. But there is nothing in § 195.402(e) that prohibits a county from having its own emergency response plan as long as that plan does not conflict with the federally imposed plan of the pipeline company.

To clarify the interplay between federal safety standards and state and local requirements, PHMSA sent a letter to the pipeline companies that are proposing pipelines in Iowa, on September 15, 2023, explaining the extent of PHMSA's jurisdiction. The letter stated, in part:

> PHMSA continues to support and encourage all three levels of government—federal, state, and local—working collaboratively to ensure the nation's pipeline systems are constructed and operated in a manner that protects public safety and the environment.
>
> While the Federal Energy Regulatory Commission has exclusive authority to regulate the siting of interstate gas transmission pipelines, **there is no equivalent federal agency that determines siting of all**

other pipelines, such as carbon dioxide pipelines. Therefore, the responsibility for siting new carbon dioxide pipelines rests largely with the individual states and counties through which the pipelines will operate and is governed by state and local law.

In the case of local governments that are not subject to federal certification of pipeline safety authority, they may still exercise other powers granted to them under state law but none that adopt or enforce pipeline safety standards or contradict federal law.

However, PHMSA cannot prescribe the location or routing of a pipeline and cannot prohibit the construction of non-pipeline buildings in proximity to a pipeline. Local governments have traditionally exercised broad powers to regulate land use, including setback distances and property development that includes development in the vicinity of pipelines. Nothing in the federal pipeline safety law impinges on these traditional prerogatives of local—or state—government, so long as officials do not attempt to regulate the field of pipeline safety preempted by federal law. PHMSA recognizes local governments have implemented authorities under state law that contribute in many ways to the safety of their citizens. We have seen localities consider measures, such as:

1. Controlling dangerous excavation activity near pipelines.

2. Limiting certain land use activities along pipeline rights-of-way.

3. Restricting land use and development along pipeline rights-of-way through zoning, setbacks, and similar measures.

4. Requiring the consideration of pipeline facilities in proposed local development plans.

5. Designing local emergency response plans and training with regulators and operators.

6. Requiring specific building code design or construction standards near pipelines.

> 7. Improving emergency response and evacuation plans in the event of a pipeline release.
>
> 8. Participating in federal environmental studies conducted under the National Environmental Policy Act (NEPA) and similar state laws for new pipeline construction projects.
>
> Each state treats these issues differently, so **pipeline operators should be prepared to deal directly with each locality and state body interested in the siting and construction process.**
>
> PHMSA believes pipeline safety is the shared responsibility of federal and state regulators as well as all other stakeholders, including pipeline operators, excavators, property owners, and local governments.

Found at https"//www.phmsa.dot.gov/sites/phmsa.dot.gov/files/2023-09-PHMSA%20Letters%20to20Wolf%20Carbon%2C%20Summit%2C%20and%20Navigator%20Calrifying%20Federal%2C%20State%2C%20and%20Local%20Government%20Pipeline%20Authorities.pdf.

Courts have long recognized that the Pipeline Safety Act does not preempt local ordinances involving the location of pipelines. In *Texas Midstream Gas Services LLC v. City of Grand Prairie*, 608 F.3d 200 (5th Cir. 2010), the court held that a setback requirement is not a safety standard. The court said:

> A local rule may incidentally affect safety, so long as the effect is not "direct and substantial," [citing *Schneidewind v. Paul*].
>
> **********
>
> However, the PSA [Pipeline Safety Act] itself only preempts *safety* standards. Section 192.163, and administrative regulation, touches on compressor station location as a means of effectuating this legislative directive. . . . But TMGS has not shown that the setback

> requirement hinders Congress's intent by reducing safety, nor that it is "physically impossible" to comply with Section 10 and § 192.163(a). . . . TMGS raises the prospect that an operator of a compressor station may have to acquire more land to comply with both requirements. This may cost TMGS money, but it does not thwart "the full purposes and objectives of Congress."

The decision in *Washington Gas Light Co. v. Prince George's County Council*, 711 F.3d 412 (4th Cir. 2013), affirming *Washington Gas Light Co. v. Prince George's County Council,* 2012 WL 832756; 2012 U.S. Dist. LEXIS 31798 (D. Md. 2012), involved the denial of a county zoning permit to site a proposed intrastate liquified natural gas ("LNG") facility. Both the district court and court of appeals considered whether the county land use decision was preempted by the Pipeline Safety Act.

The district court rejected the argument that the Pipeline Safety Act considers location a safety standard, because:

> The PSA recognizes that safety considerations should affect location decisions for LNG facilities and provides that the safety standards established pursuant to the PSA should guide the relevant decision-maker as he makes siting decisions. The PSA does not conflate the two. Moreover, the language of the PSA indicates that some entity other than the Secretary of Transportation (or the MDPSC when it stands in the secretary's place) shall make decisions regarding siting and location of facilities. **When the same statute simultaneously authorizes one entity to set safety standards and does not authorize that entity to make siting decisions, the only logical interpretation is that location is not a safety standard.**

Id. (emphasis added). Thus, the district court recognized that siting decisions and safety standards are distinct fields of law, such that "location is not a safety standard." *Id*.

The district court also rejected the argument that, "the structure of the applicable federal and state laws allows the utility to choose the location for a natural gas facility in the first instance and then requires that federal (or certified state) authorities approve or disapprove that location on safety and other grounds," under Pipeline Safety Act jurisdiction. *Id*. Since the Pipeline Safety Act expressly withholds jurisdiction to determine the location or route of a LNG facility, state or local governments may "apply their own land use laws directly." *Id*.

Finally, the district court reasoned that, "the only plausible way in which Prince George's County's land use laws could be preempted by the PSA is if the land use regulations could be properly classified as safety standards." *Id*. at 9. The court reviewed the purpose of the county ordinance and found that "[c]ertainly safety considerations play a role in all zoning decisions, but in this case they clearly were not the primary motivator for the County in establishing the [local land use plan]. In sum, the [local land use plan] is not a safety standard." *Id*.

In upholding the district court, the circuit court also evaluated the county's right to control local land use in light of § 60104(c) and § 60104(e). 711 F.3d at 422. The Court of Appeals held that, "the PSA does not preempt the County Zoning Plans because the PSA only preempts safety regulations and the County Zoning Plans are not safety regulations . . . ." *Id*. at 426.

Two other cases, *Portland Pipe Line Corp. v. City of South Portland*, 288 F.Supp.3d 321 (D. Me. 2017), and *Bad River Band of the Lake Superior Tribe of Chippewa Indians v. Enbridge Energy Co. Inc.*, 626 F.Supp.3d 1030 (W.D. Wis. 2022), also confirmed that local land use decisions, even for safety reasons, are not "safety standards," which would be preempted by federal law.

It is clear, therefore, that local zoning and land use regulations perform a necessary function in pipeline location that is not preempted by federal law.

B. Iowa State Laws and Regulations

The permitting of the construction, operation and maintenance of carbon dioxide pipelines is controlled by Chapter 479B of the Iowa Code. Section 479B.1 states:

> It is the purpose of the general assembly in enacting this law to grant to the utilities board the authority to implement certain controls over hazardous liquid pipelines to protect landowners and tenants from environmental or economic damages which may result from the construction, operation, or maintenance of a hazardous liquid pipeline . . . within the state, to approve the location and route of hazardous liquid pipelines, and to grant rights of eminent domain where necessary.

A petition to construct, operate and maintain a hazardous liquid pipeline must be submitted by the pipeline company to the Iowa Utilities Board (IUB), and the petition must include a statement of the "relationship of the proposed project to the present and future land use and zoning ordinances." Iowa Code § 479B.5(7). This provision indicates that a permit issued by the IUB must be consistent with county land use and zoning ordinances. Conversely, there is nothing in the Iowa law or regulations that preempts county zoning and land use ordinances.

The IUB can issue a permit to the pipeline company if the Board determines that the proposed services claimed by the pipeline company will promote the public convenience and necessity. Iowa Code § 479B.9. The permit will contain terms, conditions, and restrictions as to location and route as it determines to be just and proper. *Id*. County ordinances can certainly inform the Board as to the just and proper location and route of the pipeline.

C. The Statutory Framework Envisions Multiple Stakeholders to Achieve Pipeline Safety.

Congress carved a framework in which many stakeholders would work towards achieving pipeline safety within the relevant scope of authority for that body. PHMSA's authority begins at the design stage and terminates at abandonment, whereas state and local governments have authority on liquid

pipelines at the siting stage, before PHMSA ever becomes involved. As explained above, federal laws and regulations do not affect the route of a proposed pipeline. While the design and construction of the pipeline itself certainly contribute to the safety of the pipeline, pipelines still leak and rupture, and it is critical that states and local governments use powers within their scope of their authority to address harms that may arise from such a failure.

Powers traditionally vested with state and local governments, such as zoning, setbacks, and emergency response compliment federal law, and allow local knowledge to benefit communities. For example, in the event of a rupture on a carbon dioxide pipeline, the climatic and topographic conditions can affect the severity of an event. In the 2020 rupture on Denbury's carbon dioxide pipeline in Mississippi, the temperature and humidity that evening resulted in an oxygen-deprived plume of carbon dioxide, which traveled downhill and impacted the community of Satartia. The event sent 45 people to the hospital and a mass evacuation. Failure Investigation Report – Denbury Gulf Coast Pipelines LLC (2020), found at www.phmsa.dot.gov/sites/phmsa.dot.gov/files/2022-05/Failure%20Investigation%20Report%20-%20Denbury%20Gulf%20Coast%20Pipeline.pdf.

In the Midwest, environmental and topographic conditions are just as relevant as they are in Mississippi. With cold temperatures for large portions of the year, carbon dioxide plumes may dissipate at a slow rate, meaning that the importance of setbacks and emergency response are of the utmost importance.

The Shelby County ordinance attempts to address these concerns. It states that a hazardous liquid pipeline is a conditional use. The ordinance further states that hazardous liquid pipelines pose a threat to public health and welfare, to the productivity of agricultural lands, and to property values, justifying certain restrictions. Those restrictions include the following separation distances:

- two miles from city limits
- one half mile from a church, school, nursing home, long-term care facility, or hospital
- one fourth mile from a public park or public recreation area
- 1,000 feet from an occupied structure or animal feeding operation

The Story County ordinance likewise addresses these concerns. It states that a hazardous liquid pipeline is a permitted use in an area zoned for agricultural use. The ordinance imposes certain restrictions on hazardous liquid pipelines, including the following separation distances:

- one fourth mile from structures and public areas

● one fourth mile from city limits

Both county ordinances also require the pipeline company to provide the county with the company's emergency management plan. The ordinances do not impose any requirements on the company's emergency management plan. The ordinances are therefore consistent with the acknowledged relationship between federal, state and local regulation of carbon dioxide pipelines.

Although the IUB, pursuant to Iowa Code § 479B.9, approves a pipeline route if a permit is granted, the Board cannot know the unique location and routing considerations for each county. The county supervisors who adopt an ordinance, on the other hand, know the unique aspects of their county. Furthermore, a county ordinance is adopted only after input from the county's zoning department and public comments. Therefore, a county ordinance provides the IUB with invaluable information it would not otherwise have and should rely upon. That is obviously why the Iowa Code and IUB regulations require a pipeline permit petition to include a statement of the relationship of the proposed project to the present and future land use and zoning ordinances.

II. CARBON DIOXIDE PIPELINES POSE UNIQUE ISSUES THAT ARE APPROPRIATE FOR COUNTY ORDINANCES TO ADDRESS.

Although the Shelby County and Story County ordinances apply to all hazardous liquid pipelines, Summit's challenge in this case relates to a carbon

dioxide pipeline. It is therefore important to discuss how the county ordinances address the unique issues posed by carbon dioxide pipelines.

A discussion of these issues is set forth in Richard B. Kuprewicz, *Accufacts' Perspectives on the State of Federal Carbon Dioxide Transmission Pipeline Safety Regulations as it Relates to Carbon Capture Utilization and Sequestration within the U.S.* (2022), found at https://pstrust.org/3-23-22-Final-Accufacts-CO2-Pipeline.pdf. The report makes the following points:

> Pure CO_2 has a critical temperature of about 88º F (33º C) and a critical pressure of approximately1070 psia, or pounds per square inch absolute.
>
> **********
>
> CO_2 supercritical fluid transmission pipeline operating pressures usually range from 1,200 to 2,200 pounds force per square inch gauge.
>
> **********
>
> While there are many cost/efficiency advantages to moving CO_2 in a supercritical state, there is one well known threat associated with supercritical state operation. A CO_2 pipeline operating in a supercritical state can be more prone to pipe running ductile fractures than hazardous liquids or natural gas pipelines. . . . Although current federal regulations recognize this risk, they do not contain any detailed requirements that specifically identify how to address fracture propagation threats . . . The current regulations do not adequately address these CO_2 fracture leaks.
>
> [Footnote 19 – 49 CFR § 195.111 Fracture propagation. The regulation states in full: "A carbon dioxide pipeline system must be designed to mitigate the effects of fracture propagation." Thus, pipeline safety law contains no detailed standards to prevent running ductile fractures leaving much room for misinterpretation.]

Carbon dioxide gas is odorless, colorless, doesn't burn, is heavier than air, and is an asphyxiant and intoxicant, making CO_2 pipeline releases harder to observe and avoid especially as a released plume spreads and migrates well off the pipeline right-of-way. . . . CO_2 pipeline releases significantly increase the possible "affected" or "potential impact" area identified in federal regulations addressing hydrocarbon transmission pipelines upon pipeline rupture release, and CO_2 pipeline ruptures have a greater potential to endanger the public. . . . CO_2 transmission pipelines have many unique failure dynamics such that a rupture may impact significantly greater geographic areas than hydrocarbon pipelines. In particular, a combination of CO_2 phase/temperature changes may result in explosive pipe release forces as the CO_2 converts to gas.

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The CO_2 released from a pipeline will be heavier than air, and the high-rate release from a pipe rupture will form cold dense gas fog clouds comprised of dry ice particles and visible water vapor as the humidity in the air condenses from the extreme cooling. . . . It is vitally important to not underestimate the potential distance that a CO_2 pipeline rupture plume can reach and affect, especially in nonlevel terrain. Additional safety margins should be employed in populated areas when using dispersion modeling results for CO_2 pipeline releases.

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[A] CO_2 pipeline's impact area may be measured in miles, not feet. This is likely because:

- CO_2 pipeline ruptures can release many tons of CO_2,
- the compressed CO_2 will expand into gas phase upon pipeline rupture and fill a much larger volume than it did inside the pipe, and
- the CO_2 may not disperse quickly because it is heavier than air, meaning that it will tend to flow toward and settle in low lying areas including ravines, valleys, and basements.

Summit has refused to share its dispersion modeling, but dispersion modeling placed in evidence in Illinois by the Navigator carbon dioxide pipeline established that property owned within 1,825 feet of an 8" pipeline and 1,240 feet of a 6" pipeline may be impacted in the event of a rupture. IUB Docket No. HLP-2021-0001, Jorde Landowner Hrg. Ex. 645, at https://efs.iowa.gov/filing/4544957. Navigator's dispersion modeling is set out in the following table:

Nominal Pipe Diameter	Hazard Level 4	Hazard Level 3	Hazard Level 2	Hazard Level 1
6"	321'	[redacted]	1,240'	1,971'
8"	417'	[redacted]	1,855'	2,753'
12"	[redacted]	[redacted]	[redacted]	3,291'
16"	[redacted]	[redacted]	[redacted]	3,644'
20"	1,029'	[redacted]	2,920'	4,250'

To interpret this table the Navigator dispersion modeling report explains Hazard Level 1 is a carbon dioxide concentration of 30,000 ppm; Hazard Level 2 is a concentration of 40,000 ppm; Hazard Level 3 is a concentration of 63,000 ppm; and Hazard Level 4 is a concentration of 105,000 ppm.

Sierra Club witness Dr. Ted Schettler explained at the hearing that a 4% (40,000 ppm or Level 2) carbon dioxide concentration is immediately dangerous to life and health. IUB Docket No. HLP-2021-0001, Schettler Direct Testimony, p. 4 (July 24, 2023), at https:// efs.iowa.gov/filing/4511083. Based on the Navigator table above, the dispersion of carbon dioxide to that

level would range from 1,240 feet for a 6" pipeline to 2,920 feet for a 20" pipeline. Landowner testimony at the hearing clearly showed that a significant number of occupied structures will be well within the hazard zone.

In addition, Dr. John Abraham, a recognized expert in dispersion modeling, testified in the Summit proceeding in South Dakota before the Public Utility Commission regarding two scenarios for a carbon dioxide pipeline rupture. IUB Docket No. HLP-2021-0001, Jorde Landowner Ex. 641, p. 28-30, at https://efs.iowa.gov/filing/4543819. He said that in the first scenario, if it were an 8 inch diameter pipe, buried 5 feet deep, the dispersion distance at 30,000 ppm would be 2,600 feet, and the dispersion distance at 40,000 ppm would be 1,850 feet. For a 20 inch diameter pipe buried 5 feet, the dispersion distance at 30,000 ppm would be 4,000 feet, and the dispersion distance at 40,000 ppm would be 2,800 feet.

So, based on these facts, it is important to ensure that carbon dioxide pipelines are located far enough away from occupied structures to avoid any damage or injury. It is also important as a land use consideration to require a buffer around city limits to allow cities to expand in the future. If a carbon dioxide pipeline is constructed within that buffer zone, development would be prevented because no one would want to take the risk of developing in an area where a pipeline rupture would cause damage or injury.

The county ordinances also required the pipeline companies to share with the counties the companies' emergency response plans. It is important to emphasize that the ordinances do not place any requirements on the companies' emergency response plans. The counties just want to be able to coordinate their emergency response plans with those of the pipeline companies. PHMSA's regulation for pipeline companies to have emergency response plans requires coordination with local emergency responders. 49 C.F.R. § 195.402(e). On the state level, Chapter 29C of the Iowa Code envisions coordination between the various levels of government. Specifically, Iowa Code § 29C.1(3) states that it is the policy of Iowa:

> To provide for the rendering of mutual aid among the political subdivisions of the state and with other states, to cooperate with the federal government with respect to the carrying out of emergency management functions, and to ensure the state government and its departments and agencies facilitate the rapid response of businesses and workers in the state and other states to a disaster.

Based on the foregoing, county ordinances do not impinge on federal law or regulations, nor is there any aspect of state law that preempts the ordinances with respect to the unique issues presented by carbon dioxide pipelines.

CONCLUSION

Given the impacts of hazardous liquid pipelines, and carbon dioxide pipelines in particular, it is important to give local ordinances their rightful place in protecting the public from those impacts. The district court clearly erred in determining that the county ordinances at issue in these cases were preempted by federal and state law. The district court decisions must be reversed.

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CERTIFICATE OF SERVICE

I hereby certify that on March 15, 2024, I electronically filed the foregoing with the Clerk of Court for the United States Court of Appeals for the Eighth Circuit by using the CM/ECF system. I certify that all participants in this case are registered CM/ECF users and that service will be accomplished by the CM/ECF system.

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