

BEFORE THE MINNESOTA PUBLIC UTILITIES COMMISSION

Katie J. Sieben	Chair
Valerie Means	Commissioner
Matthew Schuerger	Commissioner
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In the Matter of a Commission Investigation
into Potential Rule Amendments Related to
Liquefied Carbon Dioxide

ISSUE DATE: June 15, 2022

DOCKET NO. U-999/CI-21-847

ORDER FINDING AUTHORITY

PROCEDURAL HISTORY

On December 21, 2021, the Commission issued a Notice of Comment Period on a Potential Carbon Dioxide Pipeline Rulemaking.

By the initial comment deadline of January 31, 2022, the Commission had received comments from the Minnesota Department of Commerce - Energy Environmental Review and Analysis unit, Minnesota Department of Transportation (MnDOT), Minnesota Department of Natural Resources, Minnesota Department of Agriculture, Upper Sioux Community, Fond Du Lac Band of Lake Superior Chippewa, Laborers’ International Union of North America - Minnesota & North Dakota (LIUNA), International Union of Operating Engineers Local 49 (IUOE), Summit Carbon Solutions, LLC (Summit), Navigator Heartland Greenway, LLC (Navigator), Clean Up the River Environment (CURE), Public Employees for Environmental Responsibility (PEER), Minnesota Interfaith Power & Light, and 24 individual commenters.

On April 22, 2022, the Commission held a Special Planning Meeting to discuss potential CO2 pipeline rulemaking with Minnesota tribal nations. Representatives and leaders from the Bois Forte Band of Chippewa, Fond du Lac Band of Lake Superior Chippewa, Grand Portage Band of Lake Superior Chippewa, Lower Sioux Indian Community, and the Mille Lacs Band of Ojibwe attended the meeting.

By the reply comment deadline of March 4, 2022, the Commission had received comments from the Minnesota Office of Pipeline Safety, IUOE, LIUNA, Lower Sioux Indian Community, Navigator, Summit, Valero Renewable Fuels Company LLC (Valero), PEER, CURE, MN350, Science for the People, Minnesota Interfaith Power & Light, Great Plains Institute (GPI), Minnesota Environmental Partnership, Minnesota Center for Environmental Advocacy, and 19 individual commenters.

Between March 11 and May 18, 2022, the Commission received comments from Science for the People – Twin Cities, and two individual commenters.

On May 19, 2022, the Commission met to consider the matter.

FINDINGS AND CONCLUSIONS

I. Background

Nationally, there has been increasing interest in carbon capture, usage, and storage technologies involving the transportation of carbon dioxide (CO₂) through a pipeline system. End uses of CO₂ include underground storage, sequestration, and other methods to reduce atmospheric CO₂. CO₂ is commonly transported through pipelines at a pressure of approximately 1200–2800 pounds per square inch (psi).

There has also been increasing concern about safety risks that may be associated with CO₂ pipelines. CO₂ is odorless, colorless, and heavier than air. If CO₂ is released from a pipeline, it settles along the ground, displacing oxygen, and can asphyxiate people and animals. Additionally, when CO₂ mixes with water, it creates carbonic acid, potentially harming drinking water sources and aquatic environments.

Two separate carbon capture projects have been announced that would transport CO₂ in pipelines in Minnesota and surrounding states. The two projects are the Midwest Carbon Express, in development by Summit, and the Heartland Greenway, in development by Navigator. Permit applications have not been filed for either project.

Minn. Stat. § 216G.02, subd. 2, states that a pipeline may not be constructed without a routing permit from the Commission. Subdivision 1 defines a “pipeline” as a “pipe with a nominal diameter of six inches or more that is designed to transport hazardous liquids . . .” or a “pipe designed to be operated at a pressure of more than 275 pounds per square inch and to carry gas.”

Minn. R. part 7852.0100 defines “hazardous liquid” as “petroleum, petroleum products, or anhydrous ammonia,” and defines “gas” as “natural gas, flammable gas, or gas which is toxic or corrosive.”

The Commission’s pipeline routing rules, including these definitions, were developed in 1988 and have not since then been amended. Because of the increasing national and regional interest in CO₂ pipelines, the Commission solicited public comments on whether its pipeline routing rules should be amended.¹

II. Comments

The Commission received comments from a variety of state agencies, tribal governments, businesses, labor unions, organizations, and individuals. A wide majority of commenters

¹ The Notice of Comment Period issued December 21, 2021, asked: “Should the definition of “hazardous liquid” in Minnesota Rule 7852.0100, subpart 18, be amended to include liquified carbon dioxide?” However, during the initial comment period, several commenters argued that, because of the nature of CO₂ when compressed for pipeline transport, CO₂ pipelines should actually be regulated under the definition of a gas pipeline.

recommended that the Commission initiate a rulemaking related to CO2 pipelines, and several commenters also addressed the applicability of the Commission's *existing* authority over CO2 pipelines. These comments are discussed in further detail below.

A. State Agencies

The Departments of Commerce, Agriculture, Natural Resources, Transportation, and the Office of Pipeline Safety submitted comments in the docket. Overall, the agencies supported the Commission's regulation of CO2 pipeline routing, reasoning that it is important to have a transparent and comprehensive permitting process for statewide evaluation of pipeline impacts and potential mitigation measures. MnDOT noted that a CO2 pipeline would have the same impacts as any other type of pipeline for which the Commission issues route permits and stated that the Commission's processes help protect the public, as well as landowners, in the routing of large-scale energy projects.

B. Tribal Governments

Tribal governments also supported the Commission's regulation of CO2 pipelines. Tribal governments generally indicated that it is important for the Commission to provide uniform regulatory oversight, including opportunities for public input. Several tribes expressed concern that CO2 pipelines may rupture over long distances due to the high pressure inside the pipeline, posing serious risks to people and the environment over a large area. In particular, tribes emphasized potential impacts to their communities near future pipeline routes, including ancestral lands with sources of traditional medicines, archaeological materials, and cultural resources. Additionally, during the April 22 Special Planning Meeting, tribes raised concerns about potential acidification of important water resources in the event of a pipeline rupture, since supercritical CO2 becomes a corrosive acid when mixed with water.

C. Businesses

Navigator and Summit both contended that CO2 pipeline routes could be adequately regulated by each county in which the pipeline would be located. Navigator, Summit, and Valero² did not explicitly recommend rulemaking but commented on the timing of a potential rulemaking. All three companies expressed concern that confusion or delays could result if rules are amended after the companies have begun some pre-permitting work. Navigator recommended that, if the Commission initiates a rulemaking on this topic, the Commission exempt Navigator's relatively small project from the amended rules to avoid confusion. Navigator stated that it planned to submit permit applications in summer and fall of 2022; Summit did not offer an anticipated date for permit applications.

Additionally, Summit argued that CO2 pipelines are unique because of the nature of the compressed CO2 being transported, and therefore any change to pipeline routing rules should be left to the legislature. Summit also argued that the definition of "pipeline" in Minn. Stat. § 216G.01 does not include CO2, and therefore CO2 does not fall within the Commission's

² Valero is the owner of an ethanol plant that would be connected to Navigator's planned Heartland Greenway pipeline.

regulatory authority under the different definitions in Minn. Stat. § 216G.02.³ Finally, Summit argued that, if the Commission has routing authority over CO₂ pipelines, this would mean that CO₂ pipeline developers “would ostensibly be presumed to” have eminent domain authority under Minn. R. 7852.3200, subp. 3; the company argued that this would be an expansion of condemnation authority that should be made by the legislature.⁴

Valero argued that it is important to ensure timely permitting for the Heartland Greenway pipeline in order to take advantage of federal tax credits and expressed concern that any delays due to rulemaking or regulatory uncertainty could impact the tax status of the project.

D. Labor Unions

LIUNA and IUOE both supported the Commission’s regulation of CO₂ pipelines. Both labor unions noted that carbon capture, transportation, and storage projects offer important environmental and economic benefits, and they supported the construction of CO₂ pipelines and related facilities using union labor. Both also argued that Commission regulation of CO₂ pipeline routing throughout the state would best support the orderly, consistent, and responsible development of CO₂ infrastructure, while protecting the safety of pipeline workers and other individuals and communities. LIUNA emphasized the Commission’s statewide jurisdiction and extensive experience with pipeline routing dockets, and IUOE noted that state-level regulatory review maximizes public participation and increases regulatory certainty.

LIUNA argued that the Commission has legal authority over CO₂ pipeline routing under Minn. Stat. § 216G.02, which does not place any limitation on the definition of “hazardous liquid” or “gas.” According to LIUNA, it would be appropriate to define CO₂ as a gas since this is the phase in which CO₂ exists under normal atmospheric conditions. Furthermore, LIUNA noted that in the event of a pipeline breach, CO₂ would be released from the pipeline as a gas and could settle in a nearby trench or other excavation, potentially threatening the safety of workers who may be working underground near the pipeline. However, LIUNA stated that this risk could be mitigated through appropriate construction, operations, and maintenance practices, including a properly trained workforce.

Both unions supported potentially exempting small projects such as the Heartland Greenway pipeline from Commission review, since the project is located in only one county and is of minimal length. The unions noted that, in this situation, the project could be regulated by the single county’s land use regulations and would not pose problems with statewide uniformity or confusing public input opportunities.

E. Organizations

Overall, a strong majority of organizations commented in support of the Commission’s regulation of CO₂ pipelines. Several organizations expressed concern with the potential for disjointed or inconsistent regulation of CO₂ pipelines, as well as a lack of opportunity for public participation in routing decisions, if pipeline developers did not obtain route permits from the

³ Summit initial comments, at 2 (January 31, 2022).

⁴ *Id.*, at 2–3.

Commission. Various organizations also pointed out the dangers potentially associated with CO2 pipeline leaks and noted that a number of other states regulate CO2 pipelines.

CURE asserted that the current definition of “hazardous liquid” was adopted at a time when carbon capture technology was relatively unknown, and the possibility of CO2 pipelines was remote. Therefore, CURE argued, it is unsurprising that the Commission’s pipeline routing rules do not explicitly name CO2, even though CO2 is hazardous. However, CURE stated that, in the 34 years since adoption of the Commission’s pipeline routing rules, there has been significant growth in the carbon capture industry, and CURE supported modernization of the Commission’s rules for this reason.

GPI opposed the classification of CO2 as “hazardous,” arguing that CO2 pipelines have historically had a good safety record and a “hazardous” designation may have unintended consequences. GPI stated that carbon capture and storage are necessary to achieve climate goals and expressed concern that procedural obligations may delay implementation of CO2 pipelines.

PEER asserted that CO2 pipelines should be regulated by the Commission because they transport a toxic or corrosive gas. PEER argued that, according to scientific data, although pipeline developers use the phrase “liquified carbon dioxide” to refer to the state in which CO2 is transported through a pipeline, the CO2 in the pipeline is technically in a supercritical state and has properties of both a liquid and a gas. PEER explained that CO2 in a gaseous form is the same substance as supercritical CO2 transported through a pipeline, with the primary difference being that the supercritical CO2 is subjected to a specific temperature and pressure to achieve the supercritical state.

PEER noted that in the event of a pipeline rupture and subsequent depressurization, the released CO2 would most likely create a vapor cloud; therefore, PEER argued that it is reasonable to regulate CO2 as a gas. Additionally, PEER explained that CO2 is both toxic, because a pipeline rupture would result in a low-lying vapor cloud that could suffocate people and animals, and corrosive, because when supercritical CO2 mixes with water it becomes a corrosive acid.

PEER stated that, if the Commission did not regulate CO2 pipelines under the definition of a toxic or corrosive gas, this would create a loophole not intended by the Legislature. PEER argued that, if CO2 pipelines are not regulated under the definition of a toxic or corrosive gas, the Commission would theoretically have routing authority over CO2 pipelines operating at 276 psi, but not CO2 pipelines carrying the same substance but operating at much higher pressure. In other words, according to PEER, it would be an absurd result to create a loophole where CO2 traveling through a pipeline in its natural gaseous state would be regulated by the Commission, but it could be pressurized to a point where it was no longer regulated by the Commission.

F. Individuals

Individual commenters were uniformly in favor of Commission regulation of CO2 pipelines. Commenters noted that CO2 pipelines can pose safety risks to human health and natural resources in the event of a pipeline breach. Many individuals referred to an incident in Sartaria, Mississippi in 2020, in which dozens of people were hospitalized with CO2 poisoning after a

pipeline breach and many have reported ongoing health issues related to CO2 exposure.⁵ Individuals also noted that CO2 pipelines are regulated by several other states and argued that the Commission should likewise regulate CO2 pipelines in Minnesota.

III. Commission Action

A. Existing Authority

The Commission finds that it has existing authority to regulate CO2 pipeline routing under Minn. Stat. § 216G.02 and Minn. R. Ch. 7852. CO2 compressed to a supercritical state for pipeline transport falls under the definition of a “gas” in Minn. R. 7852.0100, subp. 16, which includes gas that is toxic.

The Commission concurs with PEER and LIUNA that compressed CO2 meets the definition of a toxic gas. CO2 compressed for pipeline transport has properties of both a liquid and a gas; however, the natural state of CO2 under normal atmospheric conditions is a gas, and if a CO2 pipeline ruptures, the result would most likely be a cloud of gas denser than air. Furthermore, compressed CO2 is toxic. “Toxic” is not defined in the Commission’s statutes or rules, but it is informative to consider definitions that have been adopted by other state agencies and other sources. Elsewhere in Minnesota Rules, agencies have defined “toxic” as “able to produce personal injury or illness to a person through ingestion, inhalation, or absorption through any body surface”⁶ or “having an adverse physiological effect on humans,”⁷ and it is defined in the Merriam-Webster dictionary as “containing or being poisonous material especially when capable of causing death or serious debilitation.”⁸

As discussed above, CO2 is 1.5 times denser than air.⁹ If a CO2 pipeline ruptures, the most likely result is a cloud of CO2 gas that settles in low-lying areas, displacing oxygen. Breathing oxygen-depleted air caused by high concentrations of CO2 can lead to adverse health effects, including death by suffocation.

Clearly, a low-lying CO2 gas cloud could cause personal injury or illness, have an adverse physiological effect, and be capable of causing death or serious debilitation. Therefore, it is reasonable and in the public interest to define CO2 as a toxic gas for purposes of the Commission’s pipeline routing rules.

⁵ After the Commission’s meeting on this docket, the U.S Department of Transportation’s Pipeline and Hazardous Materials Safety Administration initiated a rulemaking in response to the Satartia incident, to strengthen CO2 pipeline safety standards. PHMSA Announces New Safety Measures to Protect Americans From Carbon Dioxide Pipeline Failures After Satartia, MS Leak (May 26, 2022), <https://www.phmsa.dot.gov/news/phmsa-announces-new-safety-measures-protect-americans-carbon-dioxide-pipeline-failures>.

⁶ Minn. R. 2630.0100, subp. 17 (rules of the Department of Commerce).

⁷ Minn. R. 4720.4100, subp. 8 (rules of the Department of Health).

⁸ *Toxic*, Merriam-Webster Dictionary, <https://www.merriam-webster.com/dictionary/toxic>.

⁹ PEER initial comments, at 4 (January 31, 2022).

Alternatively, CO₂ can be defined as a corrosive gas. When supercritical CO₂ comes into contact with water, it creates carbonic acid.¹⁰ This can corrode metal equipment, creating a risk of pipeline failure; furthermore, a CO₂ pipeline breach could acidify nearby bodies of water, posing a risk to aquatic environments and potentially to irrigated crops. Therefore, CO₂ could alternatively be defined as a corrosive gas for purposes of the Commission's pipeline routing rules.

Furthermore, Summit's argument that the definition of a pipeline in Minn. Stat. § 216G.01 does not apply to CO₂ pipelines is unpersuasive. Minn. Stat. § 216G.02 is the statute governing pipeline routing. Subdivision 1 establishes definitions of terms used in section 216G.02 and states: "[f]or purposes of this section and *notwithstanding section 216G.01, subdivision 3*, "pipeline" means. . . pipe designed to be operated at a pressure of more than 275 pounds per square inch and to carry gas." (emphasis added).

"Notwithstanding" means "in spite of" or "although."¹¹ Therefore, the plain meaning of the statute is that in spite of the definition in section 216G.01, subdivision 3, a pipe designed to be operated at a pressure of more than 275 pounds per square inch and to carry gas is a pipeline. The language is unambiguous – the definition of "pipeline" in section 216G.01 has no bearing on the definition of "pipeline" in section 216G.02.

Additionally, interpreting the statute differently would be inconsistent with the plain language of the statute and would produce an absurd result. The plain language of the statute indicates that the Commission has route permitting authority over pipelines that transport toxic or corrosive gas at high pressure. That objective should not be frustrated simply because CO₂ enters a supercritical state at extremely high pressure; the statute does not restrict the Commission's authority once a gas reaches a higher level of pressure. Requiring a permit for CO₂ transported at low pressures, but not for CO₂ transported at pressures high enough to cause a supercritical state, would be inconsistent with legislative intent.

Finally, the Commission's pipeline routing rules were established to provide a uniform and orderly review process, to ensure statewide environmental review, to provide broad public notice, and to enhance public participation in routing proceedings.¹² These interests apply to CO₂ pipelines to the same degree as any other type of pipeline. It is in the public interest, and within both the letter and intent of the statutes and rules, for the Commission to regulate CO₂ pipeline routing.

The Commission need not address Summit's arguments about eminent domain. While eminent domain is related to its permitting authority, the Commission does not enforce eminent domain statutes and eminent domain authority is not before the agency at this time.

¹⁰ *Id.*, at 7-8.

¹¹ *See In re Capitol American Life Ins. Co. Fixed Indem. Policy Forms*, No. C4-98-1266, 1999 WL 185197 (Minn. Ct. App. April 6, 1999).

¹² Minnesota Environmental Quality Board, *In the Matter of the Proposed Permanent Rules Relating to Pipeline Routing*, R-01316, Statement of Need and Reasonableness (September 30, 1988), <https://www.leg.mn.gov/archive/sonar/SONAR-01316.pdf>.

B. Timing of Permit Review

Summit, Navigator, and Valero expressed concern that any changes to the Commission’s rules once permits are underway may delay pipeline construction or endanger the tax status of their projects in development. However, no permit applications have been filed as of the date of this order and the Commission is unaware of any imminent filings. Regardless, the Commission finds that it has existing and exclusive permitting authority over CO2 pipeline routes. This alleviates the developers’ concerns by eliminating uncertainty around the route permitting process and ensuring regulatory consistency for all CO2 pipeline projects going forward, regardless of their location within the state. This finding implies no judgment on the merits of future permit applications, which will be subject to full record development and review by the Commission.

C. Possible Rule Changes

Summit also argued that compressed CO2 is unique compared to other substances transported through pipelines, and therefore any change to CO2 pipeline routing rules should be addressed through legislation. The Commission disagrees. CO2 pipelines are not unique with respect to their potential impacts and the importance of protecting the public through consideration and mitigation of potential route impacts, development of robust permit conditions, and opportunities for significant public input. In that context, the public interest in CO2 pipeline routing is no different than any other type of pipeline.

While the legal basis for Commission authority over CO2 pipeline routing is clear, there is broad support for consideration of possible rule amendments. The Commission will therefore consider public input on modernizing its pipeline routing rules through a rulemaking as described in the ordering paragraphs below.

ORDER

1. The Commission has authority to permit CO2 pipelines.
2. The Commission will initiate a rulemaking under Chapter 14 and include in the Request for Comments the potential amendment of the definition of “gas” in Minn. R. 7852.0100, subp. 16, to include carbon dioxide; and the potential amendment of the definition of “hazardous liquid” in Minn. R. 7852.0100, subp. 18.
3. The Commission authorizes staff to include the following additional topics in the Request for Comments:
 - a. Potential deletion of the definition of liquified gas in Minn. R. 7852.0100, subp. 19.
 - b. Possible de minimis exemptions for CO2 pipelines.

4. This order shall become effective immediately.

BY ORDER OF THE COMMISSION



Will Seuffert
Executive Secretary



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CERTIFICATE OF SERVICE

I, Chrishna Beard, hereby certify that I have this day, served a true and correct copy of the following document to all persons at the addresses indicated below or on the attached list by electronic filing, electronic mail, courier, interoffice mail or by depositing the same enveloped with postage paid in the United States mail at St. Paul, Minnesota.

**Minnesota Public Utilities Commission
ORDER FINDING AUTHORITY**

Docket Number **U999/CI-21-847**
Dated this 15th day of June, 2022

/s/ Chrishna Beard

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Angela	Piner	angela.piner@hdrinc.com	HDR, Inc.	Suite 600 701 Xenia Avenue South Suite 600 Minneapolis, MN 55416	Electronic Service	No	SPL_SL_21- 847_Interested Parties
Kevin	Pranis	kpranis@liunagroc.com	Laborers' District Council of MN and ND	81 E Little Canada Road St. Paul, Minnesota 55117	Electronic Service	No	SPL_SL_21- 847_Interested Parties
Larry	Rebman	larryemls@hotmail.com	EMLS, Inc	PO Box 122 Appleton, MN 56208	Electronic Service	No	SPL_SL_21- 847_Interested Parties
John C.	Reinhardt	N/A	Laura A. Reinhardt	3552 26th Ave S Minneapolis, MN 55406	Paper Service	No	SPL_SL_21- 847_Interested Parties
Generic Notice	Residential Utilities Division	residential.utilities@ag.state.mn.us	Office of the Attorney General-RUD	1400 BRM Tower 445 Minnesota St St. Paul, MN 551012131	Electronic Service	No	SPL_SL_21- 847_Interested Parties
Margaret	Rheude	Margaret_Rheude@fws.gov	U.S. Fish and Wildlife Service	Twin Cities Ecological Services Field Office 4101 American Blvd. E. Bloomington, MN 55425	Electronic Service	No	SPL_SL_21- 847_Interested Parties
Stephan	Roos	stephan.roos@state.mn.us	MN Department of Agriculture	625 Robert St N Saint Paul, MN 55155-2538	Electronic Service	No	SPL_SL_21- 847_Interested Parties
Nathaniel	Runke	nrunke@local49.org		611 28th St. NW Rochester, MN 55901	Electronic Service	No	SPL_SL_21- 847_Interested Parties

First Name	Last Name	Email	Company Name	Address	Delivery Method	View Trade Secret	Service List Name
Elizabeth	Schmiesing	eschmiesing@winthrop.com	Winthrop & Weinstine, P.A.	225 South Sixth Street Suite 3500 Minneapolis, MN 55402	Electronic Service	No	SPL_SL_21- 847_Interested Parties
Will	Seuffert	Will.Seuffert@state.mn.us	Public Utilities Commission	121 7th PI E Ste 350 Saint Paul, MN 55101	Electronic Service	No	SPL_SL_21- 847_Interested Parties
Tom	Slukich	tom@nationalconductor.com	National Conductor Constructors	18119 Hwy 371 North Braiderd, MN 56401	Electronic Service	No	SPL_SL_21- 847_Interested Parties
Adam	Sokolski	adam.sokolski@edf-re.com	EDF Renewable Energy	10 Second Street NE Ste 400 Minneapolis, MN 55410	Electronic Service	No	SPL_SL_21- 847_Interested Parties
Cheyenne	St. John	cheyenne.stjohn@lowersioux.com	Lower Sioux Tribal Community	39527 Reservation Hwy 1 Morton, MN 56270	Electronic Service	No	SPL_SL_21- 847_Interested Parties
Mark	Strohfus	mstrohfus@greenergy.com	Great River Energy	12300 Elm Creek Boulevard Maple Grove, MN 553694718	Electronic Service	No	SPL_SL_21- 847_Interested Parties
Carl	Stroh	cjsmg@sbcglobal.net	SBC Global	105 East Edgewood Ave Indianapolis, IN 46227	Electronic Service	No	SPL_SL_21- 847_Interested Parties
Tom	Swafford	tswafford@umsi.us	Utility Mapping Services, Inc	3947 E Calvary Rd Suite 103 Duluth, MN 55803	Electronic Service	No	SPL_SL_21- 847_Interested Parties
Eric	Swanson	eswanson@winthrop.com	Winthrop & Weinstine	225 S 6th St Ste 3500 Capella Tower Minneapolis, MN 554024629	Electronic Service	No	SPL_SL_21- 847_Interested Parties

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Lynnette	Sweet	Regulatory.records@xcelenergy.com	Xcel Energy	414 Nicollet Mall FL 7 Minneapolis, MN 554011993	Electronic Service	No	SPL_SL_21-847_Interested Parties
Todd	Tadych	ttadych@atcllc.com	American Transmission Company LLC	5303 Fen Oak Dr Madison, WI 53718	Electronic Service	No	SPL_SL_21-847_Interested Parties
Jayne	Trusty	execdir@swrdc.org	SWRDC	2401 Broadway Ave #1 Slayton, MN 56172	Electronic Service	No	SPL_SL_21-847_Interested Parties
Amelia	Vohs	avohs@mncenter.org	Minnesota Center for Environmental Advocacy	1919 University Avenue West Suite 515 St. Paul, Minnesota 55104	Electronic Service	No	SPL_SL_21-847_Interested Parties
Caren	Warner	caren.warner@state.mn.us	Department of Commerce	85 7th Place East Suite 280 St. Paul, MN 55101-2198	Electronic Service	No	SPL_SL_21-847_Interested Parties
Cynthia	Warzecha	cynthia.warzecha@state.mn.us	Minnesota Department of Natural Resources	500 Lafayette Road Box 25 St. Paul, Minnesota 55155-4040	Electronic Service	No	SPL_SL_21-847_Interested Parties
Elizabeth	Wefel	eawefel@flaherty-hood.com	Flaherty & Hood, P.A.	525 Park St Ste 470 Saint Paul, MN 55103	Electronic Service	No	SPL_SL_21-847_Interested Parties
Kenneth	Westlake	westlake.kenneth@epa.gov	US Environmental Protection Agency	Environmental Planning & Evaluation Unit 77 W Jackson Blvd. Mailstop B-19J Chicago, IL 60604-3590	Electronic Service	No	SPL_SL_21-847_Interested Parties
Alan	Whipple	sa.property@state.mn.us	Minnesota Department Of Revenue	Property Tax Division 600 N. Robert Street St. Paul, MN 551463340	Electronic Service	No	SPL_SL_21-847_Interested Parties

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Deanna	White	dwhite@cleanwater.org	Clean Water Action & Water Fund of MN	330 S 2nd Ave Ste 420 Minneapolis, MN 55401	Electronic Service	No	SPL_SL_21-847_Interested Parties
Jonathan	Wolfgram	Jonathan.Wolfgram@state.mn.us	Office of Pipeline Safety	445 Minnesota St Ste 147 Woodbury, MN 55125	Electronic Service	No	SPL_SL_21-847_Interested Parties
Joni H.	Zich	joni.h.zich@xcelenergy.com	Xcel Energy	414 Nicollet Mall Minneapolis, MN 55401	Electronic Service	No	SPL_SL_21-847_Interested Parties