IN THE COURT OF APPEALS OF FRANKLIN COUNTY, OHIO Tenth Appellate District

State of Ohio, *ex. rel.* () Concerned Ohio River () Residents, () P.O. Box 135 () Bridgeport, Ohio 43912, () FreshWater Accountability () Project () P.O. Box 473 () Grand Rapids, Ohio 43522, () Buckeye Environmental ()

Network P.O. Box 824 Athens, Ohio 43123,

and

Sierra Club 503 S. Front St. Suite 210 Columbus, Ohio 43215

Relators,

-vs-

Mary Mertz, Director, in her official capacity

Case No._____

Original Action in Mandamus

ORAL ARGUMENT REQUESTED

)

Ohio Department of Natural)
Resources)
2045 Morse Rd.	Ĵ
Columbus, OH 43229-6693))
and)
Eric Vendel, Chief, in his)
official capacity)
Ohio Department of Natural)
Resources, Division of Oil and)
Gas Resource Management)
2045 Morse Rd., Bldg F2)
Columbus, OH 43229-6693)
)
)
Respondents.)
F •)
)
	Ś
	Ś
)

VERIFIED PETITION FOR WRIT OF MANDAMUS

Relators Concerned Ohio River Residents, Buckeye Environmental Network, FreshWater Accountability Project, and Sierra Club (collectively "Relators") hereby submit, by and in the name of the State of Ohio, the following Petition for Writ of Mandamus:

PRELIMINARY STATEMENT

- Relators seek a writ of mandamus to compel Respondents, officers within the Ohio Department of Natural Resources ("ODNR"), to vacate, invalidate, or otherwise cancel the three drilling permits that Respondents issued to Powhatan Salt Company to drill new solution mining wells in Salem Township, Monroe County, Ohio ("Proposed Wells").
- 2. ODNR's Division of Oil and Gas Resources Management ("DOGRM") issued permits to Powhatan Salt Company to drill three solution mining wells to create underground storage caverns for the storage of natural gas liquids ("NGLs") originating from the Marcellus and Utica-Point Pleasant shale plays.

- 3. To issue a permit to drill a solution mining well, DOGRM must find that the solution mining project (1) complies with the requirements of Ohio Admin.Code 1501:9-7-07; (2) will not be in violation of law; and (3) will not jeopardize public health or safety.
- 4. The Proposed Wells meet none of these requirements.
- 5. Powhatan would install these solution mining wells, and associated NGL storage caverns, along the Ohio River in an area that has experienced and continues to experience intensive surface and subsurface activities, including hydraulic fracturing operations, underground coal mining, and solution mining.
- 6. The solution mining wells, and associated NGL storage caverns, would be located approximately one mile upstream of the Village of Clarington's drinking water wells.
- 7. Issues with well integrity at solution-mined NGL storage caverns have resulted in explosions, fires, extensive property damage, severe injuries, and loss of human life, jeopardizing public health and safety.
- 8. People living near the Proposed Wells will face increased risks to their health and safety as a result of the lack of diligence in

DOGRM's permitting of the Proposed Wells. These risks include, without limitation, exposure to hazardous material releases into air, soil, ground and surface water; property damage from sinkholes and subsidence; stress and disruptions to work, sleep, and daily life due to evacuations; injury from explosions and fires; and death.

- 9. The American Petroleum Institute ("API") has recommended practices specific to siting, constructing, monitoring, solution mining, and operating wells for underground NGL storage and underground storage caverns designed to reduce risks to public safety.
- Proper siting, construction, monitoring, and solution mining is necessary to ensure functional integrity of future NGL storage operations and protect public safety.
- 11. DOGRM ignored the intended use—NGL storage—when evaluating impacts to health and safety of the Proposed Wells. Hence the permits allow Powhatan to construct NGL storage caverns without consideration of the recommended practices for solution mining wells for NGL storage caverns to protect health and safety.
- 12. No other permitting process will consider these risks.

- DOGRM also issued the three drilling permits for the Proposed Wells without considering information required under the Safe Drinking Water Act, R.C. 1509.221, and Ohio Admin.Code 1501:9-7-07.
- 14. Further, DOGRM relied upon incomplete and inaccurate permit applications in issuing permits for the Proposed Wells.
- 15. The applications did not include the information necessary to reasonably determine that the Proposed Wells do not endanger underground sources of drinking water or jeopardize public health and safety.
- 16. DOGRM acted unlawfully and abused its discretion when it issued final permits for the Proposed Wells based on an inadequate, incomplete, and in some cases, inaccurate review.
- 17. DOGRM's unlawful and unreasonable permitting of the Proposed Wells jeopardizes the health and safety of Relators' members and harms their aesthetic, environmental, economic, and social interests, and subjects them to unreasonable and unnecessary public health and safety risks.

18. Relators, four nonprofit organizations with members and activities in Ohio, bring this action on behalf of their respective members, some of whom are Ohio residents and taxpayers, who have a beneficial interest in ensuring that DOGRM carries out its legal duties in permitting the Proposed Wells.

JURISDICTION AND VENUE

- 19. Jurisdiction lies with this court pursuant to R.C. Chapter 2731, which governs mandamus proceedings and gives the court of appeals original jurisdiction over mandamus actions. This petition has been verified by affidavit in accordance with R.C. 2731.04.
- 20. The claims in this matter arise from Relators' clear legal rights and the clear legal duty of the Chief of DOGRM, overseen by the Director of ODNR, to uphold and carry out the statutory and regulatory requirements in place for the permitting of solution mining wells.
- 21. Relators have no plain and adequate remedy at law to appeal to correct an abuse of discretion by DOGRM, overseen by ODNR, in the unlawful issuance of permits to drill the Proposed Wells, and their bringing of this petition for a writ of mandamus is thus appropriate.

22. Pursuant to Ohio Civ.R. 3(C), venue is proper becauseRespondents' principal offices are located in Franklin County.

THE PARTIES

- 23. Concerned Ohio River Residents ("CORR") is a non-profit organization headquartered in Bridgeport, Ohio with a mission to protect the Ohio River basin and advocate for a healthy and sustainable Ohio Valley. CORR has approximately 1,500 members, including members who live, work, recreate, and worship in Monroe County and Clarington, Ohio, nearby the Proposed Wells. CORR's members are Ohio taxpayers who have a beneficial interest in DOGRM adhering to Ohio's laws regarding solution mining wells. Pursuant to R.C. 2731.02, CORR is a party beneficially interested in this matter, and has standing to commence this action.
- 24. FreshWater Accountability Project ("FreshWater") is a non-profit organization headquartered in Grand Rapids, Ohio with a mission to preserve and protect Ohio's freshwater resources. FreshWater has members throughout the state of Ohio, including members who live, work, recreate, and worship in Monroe County and Clarington, Ohio,

nearby the Proposed Wells. FreshWater has members who are Ohio taxpayers who have a beneficial interest in DOGRM following Ohio's laws regarding the permitting of solution mining wells. Under R.C. 2731.02, FreshWater is a party beneficially interested in this matter, and has standing to commence this action.

- 25. Buckeye Environmental Network ("BEN") is a non-profit organization headquartered in Athens, Ohio with a mission of protecting communities and Ohio's environment from economic and environmental exploitation. BEN has members throughout the state of Ohio, including members who frequent Monroe County and Clarington, Ohio for work and recreation. BEN's members are Ohio taxpayers who have a beneficial interest in DOGRM following Ohio's laws regarding the permitting of solution mining wells. Under R.C. 2731.02, BEN is a party beneficially interested in this matter, and has standing to commence this action.
- 26. Sierra Club is a national nonprofit organization of approximately 800,000 members nationwide dedicated to exploring, enjoying, and protecting the wild places of the earth; to practicing and promoting

the responsible use of the earth's ecosystems and resources; to educating and enlisting humanity to protect and restore the quality of the natural and human environment and to using all lawful means to carry out these objectives. The Ohio Chapter of the Sierra Club has a little over 23,000 members, including fifteen members who live and recreate in Monroe County. As part of its mission, Sierra Club advocates for a just transition to renewable energy. The Proposed Wells and associated storage caverns, by encouraging and subsidizing the production of fracked gas, undermine this transition. The Sierra Club's members, especially those who live in Monroe County, would be endangered by the storage caverns' potential explosiveness, and would be threatened by the air and water pollution from the Proposed Wells and storage caverns. Sierra Club has members who are Ohio taxpayers who have a beneficial interest in DOGRM following Ohio's laws regarding the permitting of solution mining wells. Under R.C. 2731.02, Sierra Club is a party beneficially interested in this matter, and has standing to commence this action.

- 27. Relators all filed timely extensive written comments on the applications and draft permits for the Proposed Wells, outlining numerous substantial objections to the solution mining projects.
- Relators have members who frequent Clarington to enjoy meals 28. and social gatherings. These members travel by the Proposed Wells every one to two days to run errands, visit with friends and family members, and enjoy surrounding restaurants and gathering places. While in Clarington, Relators' members consume water from Clarington's public water supply. Relators also have members who regularly drive by the site of the Proposed Wells to travel to and from work, to social events, and to shopping centers for groceries and other necessities. In addition, these member value the scenic qualities of the area surrounding the Proposed Wells. These members' health and safety, environmental, aesthetic, and social interests are threatened by the increased risks associated with the Proposed Wells. Relators have members who are extremely afraid that the Proposed Wells, or subsequent storage caverns, will cause releases of contaminants into the Ohio River or into underground sources of drinking water, and

that these releases will adversely impact their health and the health of their friends and family members. These members desire for Relators to participate on a public hearing on the Proposed Wells to express the objections and concerns they have regarding the applications and the Proposed Wells. DOGRM's abdication of its legal duties under Ohio Admin.Code Chapter 1501:9-7 has deprived Relators of the ability to do that on behalf of these members.

29. DOGRM's failure to carry out the permitting requirements of the Federal Safe Drinking Water Act and Ohio Admin.Code Chapter 1501:9-7 has deprived Relators members of the diligence in permitting necessary to ensure the Proposed Wells do not result in explosions, contamination of underground sources of drinking water, and contamination of the Ohio River. A Writ of Mandamus revoking the Final Permits and mandating that DOGRM complete the legally required permitting process in the Federal Safe Drinking Water Act and Ohio Admin.Code Chapter 1501:9-7 would redress Relators members' injuries by ensuring permitting is done with a level of diligence sufficient to ensure that the Proposed Wells will not jeopardize public health and safety or endanger underground sources of drinking water.

30. Relators FreshWater, CORR, and Sierra Club bring this petition of behalf of their members, including Robert Reed, who resides in Bridgeport, Ohio and is an Ohio taxpayer. Mr. Reed travels past the site of the Proposed Wells when conducting his work in appliance repairs. He also has work appointments in the area surrounding the Proposed Wells. Mr. Reed is worried that the Proposed Wells and associated infrastructure will harm his safety and wellbeing as he works in the area, meets with people in the area, and travels through it. Mr. Reed is specifically worried about subsidence and explosions from the Proposed Wells and their associated infrastructure. Mr. Reed is also worried about spills that could harm the Ohio River and ground water in the surrounding communities to which he travels for work and occasionally dines in. Mr. Reed appreciates the environment of his community and is beneficially interested in ensuring it is protected and restored, and not subjected to further pollution from extractive industry. Mr. Reed is concerned about

ensuring his community is a safe and healthy place for his children to live and believes the Proposed Wells jeopardize a safe and healthy future for his community. As a small business owner, Mr. Reed has an economic interest in the community surrounding the Proposed Wells being maintained as a safe environment where he can conduct his business and customers are able to continue to safely live.

- 31. Mr. Reed has a beneficial interest in ensuring that due diligence has been performed in the permitting of the Proposed Wells and all concerns, objections, and information have been thoroughly considered. Mr. Reed desires for FreshWater, CORR, and Sierra Club to participate in a public hearing on the Proposed Wells to express the objections and concerns he and other members have regarding the applications and the Proposed Wells. DOGRM's abdication of its legal duties under Ohio Admin.Code Chapter 1501:9-7 have deprived FreshWater, CORR, and Sierra Club of the ability to do that on behalf of Mr. Reed.
- 32. DOGRM's failure to carry out the permitting requirements of the Federal Safe Drinking Water Act and Ohio Admin.Code Chapter

1501:9-7 has deprived Robert Reed of the diligence in permitting necessary to ensure the Proposed Wells do not result in explosions, contamination of underground sources of drinking water, and contamination of the Ohio River.

- 33. A Writ of Mandamus revoking the Final Permits and mandating that DOGRM complete the legally required permitting process in the Federal Safe Drinking Water Act and Ohio Admin.Code Chapter 1501:9-7 would redress Mr. Reed's injuries by ensuring permitting is done with a level of diligence sufficient to ensure that the Proposed Wells will not jeopardize public health and safety or endanger underground sources of drinking water.
- 34. Relators CORR and BEN also bring this petition on behalf of their members, including Robert Morris, who is a 60-year resident of Monroe County, Ohio and is an Ohio taxpayer. Mr. Morris regularly travels past the site of the Proposed Wells on trips to and from Wheeling, West Virginia, where he shops for groceries and other supplies, attends church services, and enjoys concerts and other social and cultural events. Mr. Morris is extremely concerned about the

potential for explosions and impacts to public safety from the Proposed Wells, and about the risk of contamination to the Ohio River and groundwater resources from the Proposed Wells. He is emotionally distressed by the environmental harm that would be caused by the Proposed Wells and associated activities and by the safety risks created by the Proposed Wells. Mr. Morris also owns property in Hannibal, Ohio, downstream of the Proposed Wells. Mr. Morris is concerned that spills and accidents at the Proposed Wells will harm the Ohio River and his property downstream, including by diminishing his property value. The increased risks associated with the Proposed Wells, including risks of explosion, subsidence, and ground and surface water contamination, endanger Mr. Morris's health and safety. Mr. Morris frequently enjoys kayaking in the Ohio River downstream from the Proposed Wells. He is concerned that spills and releases from the Proposed Wells will adversely impact the Ohio River, including the fish, plants, trees, and animals that he enjoys observing while kayaking. Robert Morris is an avid painter and takes inspiration from the Ohio River and its surroundings near

the Proposed Wells. Mr. Morris's paintings are a source of income, and social and cultural connection for him. The Proposed Wells will diminish the area's aesthetic qualities, which are currently a source of inspiration for Robert Morris's paintings, and that would hinder his ability to paint. Mr. Morris has also enjoyed hiking in Sunfish State Park nearby the Proposed Wells and would like to continue hiking in Sunfish State Park. The construction and operation of the Proposed Wells will eliminate the scenic beauty of the area, which is currently visible on Mr. Morris's hikes. Mr. Morris's recreational, economic, social, cultural, and aesthetic interests will be harmed by the construction and operation of the Proposed Wells.

35. DOGRM's failure to carry out the permitting requirements of the Federal Safe Drinking Water Act and Ohio Admin.Code Chapter 1501:9-7 has deprived Robert Morris of the diligence in permitting necessary to ensure the Proposed Wells do not result in explosions, contamination of underground sources of drinking water, and contamination of the Ohio River.

17

- 36. A Writ of Mandamus revoking the Final Permits and mandating that DOGRM complete the legally required permitting process in the Federal Safe Drinking Water Act and Ohio Admin.Code Chapter 1501:9-7 would redress Mr. Morris's injuries by ensuring permitting is done with a level of diligence sufficient to ensure that the Proposed Wells will not jeopardize public health and safety or endanger underground sources of drinking water.
- 37. Mr. Morris has a beneficial interest in ensuring that due diligence has been performed in the permitting of the Proposed Wells and all concerns, objections, and information have been thoroughly considered. Mr. Morris desires for CORR to participate in a public hearing on the Proposed Wells to express the objections and concerns he and other members have regarding the applications and the Proposed Wells. DOGRM's abdication of its legal duties under Ohio Admin.Code Chapter 1501:9-7 have deprived CORR of the ability to do that on behalf of Mr. Morris.
- Relator CORR also brings this petition on behalf of its members, including Ronald Blattler, who is a resident of Salem Township,

Monroe County, Ohio and an Ohio taxpayer. Mr. Blattler drives by the site of the Proposed Wells two to four times a week, traveling to get groceries and other provisions, to visit friends and family, and for social and cultural events. Mr. Blattler is endangered by the increased risks associated with the Proposed Wells and associated storage caverns, including risks of explosions, subsidence, and release of hazardous materials.

- 39. DOGRM's failure to carry out the permitting requirements of the Federal Safe Drinking Water Act and Ohio Admin.Code Chapter 1501:9-7 has deprived Ronald Blattler of the diligence in permitting necessary to ensure the Proposed Wells do not result in explosions, contamination of underground sources of drinking water, and contamination of the Ohio River.
- 40. A Writ of Mandamus revoking the Final Permits and mandating that DOGRM complete the legally required permitting process in the Federal Safe Drinking Water Act and Ohio Admin.Code Chapter 1501:9-7 would redress Mr. Blattler's injuries by ensuring permitting

is done with a level of diligence sufficient to ensure that the Proposed Wells will not jeopardize public health and safety.

- 41. Mr. Blattler has a beneficial interest in ensuring that due diligence has been performed in the permitting of the Proposed Wells and all concerns, objections, and information have been thoroughly considered. Mr. Blattler desires for CORR to participate in a public hearing on the Proposed Wells to express the objections and concerns he and other members have regarding the applications and the Proposed Wells. DOGRM's abdication of its legal duties under Ohio Admin.Code Chapter 1501:9-7 have deprived CORR of the ability to do that on behalf of Mr. Blattler.
- 42. Relators all have members who are citizens of the State of Ohio and who are seeking to procure the enforcement of the public right to the protections afforded in the solution mining permitting process for the Proposed Wells. The public, including Relators' members, is entitled to this public right under Ohio Admin.Code Chapter 1501:9-7. As Ohio citizens, these members are interested in the execution of the laws of this state. DOGRM has created a rare and extraordinary

case where an agency has failed to follow the clear requirements set forth in its own regulations when permitting activities that carry immense risk to public health, safety, and welfare, and the environment. Accordingly, Relators, through their respective members who are Ohio citizens, have standing to bring this action pursuant to the public-right doctrine.

- 43. Respondent Mary Mertz is sued in her official capacity as the Director of the Ohio Department of Natural Resources ("ODNR"). Respondent Mertz is required to ensure that all laws governing activities of the ODNR are faithfully executed.
- 44. Respondent Eric Vendel is sued in his official capacity as the Director of the Division of Oil and Gas Resource Management ("DOGRM") of ODNR. Chief Vendel oversees DOGRM staff involved in the permitting of solution mining wells and is required to ensure that all laws governing DOGRM permitting of solution mining wells are faithfully executed.

STATUTORY AND REGULATORY FRAMEWORK

The Safe Drinking Water Act—Underground Injection Control Programs

- 45. Congress enacted the Safe Drinking Water Act ("SDWA"), 42 U.S.C. 300f *et seq.*, to ensure the quality of the nation's drinking water and to protect it from contamination. As part of achieving these goals the SDWA includes, among other things, an underground injection control ("UIC") program that governs the permitting, operation, and closure of injection wells that place fluids underground for storage, disposal, or enhanced oil and gas recovery.
- 46. While the EPA is ultimately responsible for administering the SDWA, Congress anticipated that the states could serve as the primary entities responsible for operating an underground injection control program. *See* 42 U.S.C. 300h–1(b)(2).
- 47. The SDWA sets minimum standards that a state must adopt in order to operate an underground injection control program. 42 U.S.C. 300h.

- 48. States must operate programs in accordance with these minimum requirements, except States are not precluded from omitting or modifying any provisions in order to impose *more stringent* requirements. 40 C.F.R. 145.11(a).
- 49. The SDWA establishes five classes of wells: Class I wells inject hazardous wastes, non-hazardous industrial wastes, or municipal wastewater; Class II wells inject brines and other fluids associated with oil and gas production and hydrocarbons for storage; Class III wells inject fluids associated with the solution mining of minerals; Class IV wells inject hazardous or radioactive wastes; Class V wells include all injection wells not covered in Classes I-IV; and Class VI wells inject carbon dioxide for long term storage. 40 C.F.R. 144.6.
- 50. Solution mining wells are Class III wells.

Minimum Federal Standards for Permitting UIC Wells

51. As part of the minimum standards set by EPA, the SDWA
prohibits the construction of any well that is required to have a permit
under the SDWA prior to the permit being issued. 40 C.F.R. 144.11;
40 C.F.R. 144.31(a).

52. Under the SDWA, "no owner or operator shall construct, operate, maintain, convert, plug, abandon, or conduct any other injection activity in a manner that allows

the movement of fluid containing *any* contaminant into underground sources of drinking water, if the presence of that contaminant *may* cause a violation of any primary drinking water regulation under 40 C.F.R. part 142 *or may otherwise adversely affect the health of persons*. The applicant for a permit shall have the burden of showing that the requirements of this paragraph are met." 40 C.F.R. 144.12(a) (emphasis added).

- 53. The SDWA prohibits the Director from issuing a permit before receiving a complete application. 40 C.F.R. 144.31(d).
- 54. The SDWA includes specific requirements for what the Director must review prior to issuing a permit for a Class III well. 40 C.F.R. 146.34(a).
- 55. Where a state operates its own approved Class III program, "Director" means "State Director." *See* 40 C.F.R. 146.3.

- 56. The Director of the Ohio Department of Natural Resources is the"State Director" overseeing the operations of Ohio's permittingprogram for Class III wells.
- 57. Prior to issuing a permit for a Class III well, the Director must consider, among other things, the information required under 40 C.F.R. 146.31; maps and cross sections indicating the vertical limits of all underground sources of drinking water within the area of review; maps and cross sections detailing the geologic structure of the local area; generalized maps and cross sections illustrating the regional geologic setting; proposed operating data; plans for meeting monitoring requirements; and contingency plans. 40 C.F.R. 146.34(a).
- 58. Whenever the Director finds "on the basis of requests, a significant degree of public interest in a draft permit," the SDWA requires that the Director hold a public hearing. 40 C.F.R. 124.12(a)(1).
- 59. The SDWA requires that specific conditions be included in all underground injection control ("UIC") permits, including those for Class III wells. *See* 40 C.F.R. 144.51

- 60. The conditions must be expressly included in the permit or can be included by reference, but the reference must be explicit and contained in the permit. *Id*.
- 61. These conditions include protections pertaining to reporting, record keeping, monitoring, access to information, proper operation and maintenance, certification, plugging, noncompliance notification, and mechanical integrity, among other things. *Id*.
- 62. The presence of these conditions in the permit makes them federally enforceable under the Safe Drinking Water Act as permit terms. *Id.*

Ohio's Underground Injection Control Program for Class III Wells

- 63. Ohio has primary enforcement authority over its underground injection control ("UIC") program for Class III wells under Section 1422 of the Safe Drinking Water Act.
- 64. R.C. 1509.221(A) states that "no person, without first having obtained a permit from the division of oil and gas resource management, shall drill a well or inject a substance into a well ... for

the solution mining of minerals..... The permit shall be in addition to any permit required by section 1509.05 of the Revised Code."

- 65. "To implement the goals of the Safe Drinking Water Act," DOGRM cannot issue a permit for a solution mining project, "unless the chief concludes that the applicant has demonstrated that the drilling, injection of a substance, and extraction of minerals or energy will not result in the presence of any contaminant in underground water that supplies or can reasonably be expected to supply any public water system, such that the presence of the contaminant may result in the system's not complying with any national primary drinking water regulation or may otherwise adversely affect the health of persons." R.C. 1509.221(A).
- 66. R.C. 1509.05 prohibits the drilling of any new well without having a permit to do so issued by the chief of DOGRM.
- 67. R.C. 1509.06 governs applications for permits to drill new wells generally.
- 68. The term "well," as used throughout R.C. Chapter 1509 and Ohio Admin.Code 1501:9 is defined to mean "any borehole, whether

drilled or bored, within the state for production, extraction, or injection of any gas or liquid mineral, excluding potable water to be used as such, but including natural or artificial brines and oil field waters." R.C. 1509.01.

- 69. In addition to R.C. 1509.221 and R.C. 1509.06, Ohio Admin.Code Chapter 1501:9-7 governs solution mining projects.
- 70. Ohio Admin.Code 1501:9-7-07 applies to the permitting of wells to be used for the solution mining of minerals.
- 71. Ohio Admin.Code 1501:9-7-07(A) provides that "[u]nless an appropriate application has been received by the chief and a permit issued by the division, no person shall drill, reopen, deepen, plug, rework, or use a well for the solution mining of minerals..."
- 72. "New applicants, permittees with expiring permits, and any person required to have a permit shall complete, sign, and submit an application to the chief as described in this rule [Ohio Admin.Code 1501:9-7-07]". Ohio Admin.Code 1501:9-7-07(D).
- 73. Permit applications must include, among other things, a description of the nature of the business associated with the project;

the activity or activities conducted by the applicant that require obtaining a permit under Ohio Admin.Code Chapter 1501:9-7-07; qualitative analysis and ranges in concentrations of all constituents of injected fluids; plans for meeting monitoring requirements; and contingency plans to cope with all well failures or shut-ins so as to prevent the migration of the contaminating fluids into underground sources of drinking water. Ohio Admin.Code 1501:9-7-07(G)(4).

- 74. Once an application has been publicly-noticed, "[a]ny person desiring to comment or to make an objection with reference to an application for a permit for a solution mining project" must file written comments or objections with DOGRM within thirty calendar days after the publication of the legal notice in a newspaper of general circulation in the area of review. Ohio Admin.Code 1501:9-7-07(H)(4)(a).
- 75. If ODNR receives objections during the thirty-day comment period, "the chief shall rule upon the validity of the objection." Ohio Admin.Code. 1501:9-7-07(H)(4)(c). "If in the opinion of the chief, such objection is not relevant to the issues of public health or safety,

or is without substance, a permit shall be issued." *Id.* If the chief considers any objection to be of substance or relevant to issues of public health or safety, a hearing may be called within 30 days of receipt of the objection. *Id.*

- 76. If, after a hearing or upon consideration of the evidence and application, the chief finds that the following conditions have been met, ODNR must approve the application and issue a permit; *"otherwise the chief shall reject the application"*:
 - a. The application complies with the requirements of Ohio Admin.Code 1501:9-7-07;
 - b. The proposed solution mining project will not be in violation of law;
 - c. The proposed solution mining project will not jeopardize public health or safety. Ohio Admin.Code. 1501:9-7-07(H)(4)(d) (emphasis added).
- 77. Ohio statute allows "[a]ny person adversely affected by an order by the chief of the division of oil and gas resources management may appeal to the oil and gas commission for an order vacating or

modifying the order." R.C. 1509.36. However, the issuance of a permit under section 1509.06 "*shall not be considered an order of the chief*" (emphasis added). R.C. 1509.06(F). Therefore, the issuance of a permit under section 1509.06 cannot be appealed to the Oil and Gas Commission.

- 78. Under R.C. Chapter 119, generally, any party adversely affected by any order of an agency issued pursuant to an adjudication may appeal to the court of common pleas of Franklin County. R.C. 119.12(B).
- 79. Generally, "[e]very order issuing, denying, or modifying a permit under [Chapter 1509] and described as such shall be considered an adjudication order for purposes of Chapter 119." R.C. 1509.03(B)(1). However, R.C. 1509.03(B)(1) *"does not apply* to a permit issued under section 1509.06 of the Revised Code." *Id.* (emphasis added). Therefore, a permit issued under R.C. 1509.06 is not considered an adjudication order for purposes of Chapter 119. R.C. 1509.03(B)(1).

Pipeline and Hazardous Material Safety Administration Regulation of the Transportation of Natural Gas Liquids

- 80. The Federal Pipeline and Hazardous Materials Safety
 - Administration ("PHMSA") is charged with carrying out "duties and powers related to pipeline and hazardous materials transportation and safety ... vested in the Secretary [of Transportation] by chapters 51, 57, 61, 601, and 603; and...other duties and powers prescribed by the Secretary." 49 U.S.C.A. 108.
- 81. Chapter 51 pertains to the transportation of hazardous material and gives the Secretary authority "to prescribe regulations for the safe transportation, including security, of hazardous material in intrastate, interstate, and foreign commerce." 49 U.S.C.A. 5103(b).
- 82. Regulations issued under PHMSA's Chapter 51 authority apply to a person who: (1) transports hazardous material in commerce; (2) causes hazardous material to be transported in commerce; (3) designs, manufactures, or inspects a package or container for use in transporting hazardous material in commerce; (4) prepares or accepts hazardous material for transportation in commerce; or (5) is

responsible for the safety of transporting hazardous material in commerce. 49 U.S.C.A. 5102.

- 83. The purpose of Chapter 601 "is to provide adequate protection against risks to life and property posed by pipeline transportation and pipeline facilities." 49 U.S.C.A. 60102(a)(1).
- 84. Chapter 601 directs the Secretary to prescribe "minimum safety standards for pipeline transportation and for pipeline facilities." 49
 U.S.C.A. 60102(a)(2).
- 85. A "pipeline facility means a gas pipeline facility and a hazardous liquid pipeline facility." 49 U.S.C.A. 60101(a)(18).
- 86. A hazardous liquid pipeline facility "includes a pipeline, a right of way, a facility, a building, or equipment used or intended to be used in transporting hazardous liquid." 49 U.S.C.A. 60101(a)(5).
- 87. The definition of "hazardous liquid" includes petroleum and petroleum products. 49 U.S.C.A. 60101(a)(4).
- 88. Petroleum includes natural gas liquids. 49 CFR 195.2.
- 89. "Transporting hazardous liquid" "means (i) the movement of hazardous liquid by pipeline, or the storage of hazardous liquid

incidental to the movement of hazardous liquid by pipeline, in or affecting interstate or foreign commerce; and (ii) the movement of hazardous liquid through regulated gathering lines." 49 U.S.C.A. 60101(a)(22)(A).

- 90. The term "Transporting hazardous liquid" does not include storage of hazardous liquids. *See* 49 U.S.C.A. 60101(a)(22)(B).
- 91. Following the five-month long gas leak near Aliso Canyon,
 California that released approximately 4.62 billion cubic feet of natural gas, Congress required PHMSA to enact minimum federal safety standards for underground gas storage facilities. 49 U.S.C.A. 60141.
- 92. An "underground natural gas storage facility" is defined as "a gas pipeline facility that stores natural gas in an underground facility including . . . a solution-mined salt cavern reservoir." 49 U.S.C.A. 60101(a)(26)(C).
- 93. "Gas pipeline facility" is defined to "include a pipeline, a right of way, a facility, a building, or equipment used in transporting gas or

treating gas during its transportation." 49 U.S.C.A. 60101(a)(3). This definition does not include NGLs. *Id*.

- 94. "Gas means natural gas, flammable gas, or toxic or corrosive gas."49 U.S.C.A. 60101(a)(2).
- 95. In February 2020, PHMSA issued a final rule for underground gas storage facilities.
- 96. The final rule incorporates American Petroleum Institute's ("API") Recommended Practices ("RP") 1170 and 1171 by reference.
- 97. PHMSA regulations define "petroleum" to include "natural gas liquids." 49 C.F.R. 195.2.
- 98. PHMSA regulations define "petroleum products" to include "flammable, toxic, or corrosive products, obtained from distilling and processing of...natural gas liquids." 49 C.F.R. 195.2.
- 99. The mandate in 49 U.S.C.A. 60141 requiring PHMSA to create minimum federal safety standards for underground gas storage facilities does not apply to underground storage of petroleum and petroleum products, including NGLs. *See* 49 U.S.C.A. 60141.

- 100. PHMSA currently has no regulations pertaining to the underground storage of NGLs.
- 101. PHMSA lacks statutory authority to address the underground storage of NGLs. *See* 49 U.S.C.A. 60101(a)(22)(A).

PROCEDURAL BACKGROUND

- 102. Relators previously challenged permits issued for the Proposed Wells on the basis that DOGRM failed to require public notice and comment periods on the permit applications and failed to prepare draft permits. *See State ex rel. Concerned Ohio River Residents v. Mertz*, Franklin County Court of Appeals Case No. 20-AP-000390.
- 103. DOGRM cancelled the permits that were the subject of Relators' previous lawsuit at the request of Powhatan Salt Company, and Relators subsequently voluntarily dismissed their related legal action.
- 104. DOGRM received new permit applications from Powhatan Salt for the Proposed Wells on September 29, 2020.
- 105. DOGRM received revised permit applications for the ProposedWells on October 29, 2020. The revised Applications
("Applications") are attached and incorporated herein at Exhibit E of Exhibit 1.

- 106. Powhatan Salt published a public notice of the Applications on January 6, 2021, and a 30 day comment period followed.
- 107. Relators submitted extensive written comments during this comment period objecting to the Proposed Wells.
- 108. Relators' comments raised substantial concerns regarding the Applications.
- 109. Relators' comments requested that DOGRM hold a public hearing.
- 110. Relators' comments included extensive technical comments by Dr.Dominic DiGiulio and Dr. Rob Rossi that supported the objectionsraised by Relators. Exhibit 1 at Exhibit A.
- 111. Dr. DiGiulio's expertise is in subsurface migration, transportation of contaminants in soil and groundwater, Safe Drinking Water Act permitting and compliance, well construction, groundwater sampling methodology, and geologic characterization. Dr. DiGiulio's curriculum vitae is included in Exhibit 1 at Exhibit B, and incorporated herein.

- 112. Dr. Rossi's expertise is in surface and groundwater hydrology, soil biogeochemistry, the impact of land use and human activities on hydrologic regimes, and the environmental legacy of industrial activities. Dr. Rossi's curriculum vitae is included in Exhibit 1 at Exhibit B, and incorporated herein.
- 113. Dr. DiGiulio and Dr. Rossi submitted 58 sets of comments, delineated in a table by topic, regarding the drilling, solution mining, and NGL storage activities associated with the Proposed Wells.
- 114. DOGRM issued draft permits for the Proposed Wells ("Draft Permits") without holding a public hearing.
- 115. DOGRM publicly noticed the Draft Permits on March 11, 2021, and a 30-day public comment period followed.
- 116. Relators again submitted extensive written comments objecting to the Proposed Wells, including the comments attached and incorporated herein as Exhibit 1.
- 117. Relators raised substantial concerns regarding the Applications and the Draft Permits.

- 118. Of the 58 sets of comments made by Dr. DiGiulio and Dr. Rossi during the first comment period, DOGRM provided *no response* to 42 sets of comments. Exhibit 1 at p.5.
- 119. Of these 58 sets of comments, DOGRM gave an insufficient response to at least 6 sets of comments. Exhibit 1 at p.5.
- 120. Relators again requested that DOGRM hold a public hearing on the Applications and the Draft Permits.
- 121. During the two public comment periods, DOGRM received over200 comments objecting to the Proposed Wells and requesting apublic hearing.
- 122. During the two public comment periods, DOGRM also received petitions objecting to the Proposed Wells, collectively containing a total of over 1,000 signatures, that raised concerns regarding the Draft Permits, and requested a public hearing.
- 123. DOGRM staff described "the exceptionally high volume of comments received on Powhatan," in an email to concerned community member Roxanne Groff, attached and incorporated herein at Exhibit 2.

- 124. On August 30, 2021, DOGRM issued final permits ("Final Permits") for the Proposed Wells without holding a public hearing. The Final Permits are attached and incorporated herein as Exhibit 3.
- 125. DOGRM issued the Final Permits under R.C. 1509.06, and thus the Final Permits are not appealable to the Oil and Gas Commission or under R.C. Chapter 119.
- 126. DOGRM released a Response to Comments document at the time of issuing the Final Permits. DOGRM's Response to Comments is attached and incorporated herein as Exhibit 4.
- 127. In its Response to Comments document, in lieu of responding to numerous safety concerns raised in Relators' comments, DOGRM repeatedly stated that the authority to regulate the underground storage of natural gas liquids rests with PHMSA.

FACTS

The Community

128. The Proposed Wells would be located in Salem Township, Monroe County, Ohio.

- 129. Salem Township has a population of approximately 1,000 people, including the population of the Village of Clarington.
- 130. Salem Township and Clarington are located on the Ohio River.
- 131. Route 7 passes through Salem Township and Clarington and is regularly used by people traveling to the region's population centers, as well as for transporting materials, goods, and services through the region.
- 132. Route 7 is also known as the Ohio River Scenic Byway.
- 133. Route 7 is traveled regularly by tourists and community members for its scenic qualities.
- 134. Clarington's public drinking water wells are located approximately one mile south of the site of the Proposed Wells. Exhibit 1 at p.46.
- 135. The Clarington's water supply relies on shallow groundwater wells that are hydrologically connected to the Ohio River. *See* Exhibit 5, attached and incorporated herein.
- 136. Clarington's public water supply serves approximately 384 individuals. Exhibit 4 at p.2.

- 137. The majority of the remaining population in Salem Township,Monroe County, Ohio relies on private water wells for drinking water.
- 138. These private water wells draw from the shallow aquifers in the region that are hydrologically connected to the Ohio River.
- 139. SunFish Creek State Forest is located within a mile radius of the Proposed Wells.
- 140. There is a history of coal mining in Salem Township.
- 141. There are multiple abandoned underground coal mines in SalemTownship, including mines of unknown extents. *See* Exhibit 1 at p.30.
- 142. There is a former coal mine located less than a mile from theProposed Wells. *See* Exhibit 1 at p.30.
- 143. Salem Township, and the surrounding areas, are subject to intensive oil and gas development.
- 144. There are at least 70 unconventional oil and gas wells located within a 7-mile radius of the Proposed Wells. *See* Exhibit 1 p.30.
- 145. An unconventional oil and gas well pad sits on the hill above the Proposed Wells. A horizontal lateral extending from this well runs

approximately one quarter of a mile from SMP Well No. SALT-3. *See* Exhibit 1 at p.29.

Powhatan Salt Company

- 146. Powhatan Salt Company proposes to construct the Proposed Wells.
- 147. Powhatan Salt Company is a wholly owned subsidiary of EnergyStorage Ventures LLC. Exhibit 1 at Exhibit E, p. 2.
- 148. Energy Storage Ventures was "formed in 2016 to develop, construct, and operate bulk hydrocarbon storage facilities," Exhibit 1 at p.3.
- 149. Mountaineer NGL Storage LLC is a wholly owned subsidiary of Energy Storage Ventures LLC. Exhibit 1 at Exhibit E, p. 2.
- 150. John Hooker is the President of Energy Storage Ventures,
 Powhatan Salt Company, and Mountaineer NGL Storage. *See* Exhibit
 6 at p.5-6, attached and incorporated herein. *See* Exhibit 1 at Exhibit
 E, Form 206 Supplemental Responses.
- 151. Powhatan Salt Company was created to mitigate the brine disposal needs of the Mountaineer NGL Storage Project. Exhibit 1 at p.3; See Exhibit 7, a screenshot of Energy Storage Ventures' website

describing the two subsidiary companies, attached and incorporated herein.

The Solution Mining Projects

- 152. The Proposed Wells include three solution mining wells, Salt-1;Salt-2; and Salt-3, to be located between Route 7 and the Ohio River on the site of a former coal washing operation and coal mine. Exhibit 1 at p.2.
- 153. Once in operation, the Proposed Wells will require 1,728,000 gallons of fresh water per well per day to create salt caverns in the Salina Formation. Exhibit 1 at Exhibit E, Form 1.
- 154. Powhatan Salt Company plans to use the Proposed Wells for solution mining to create underground storage caverns. Exhibit 1 at Exhibit A, p.3.
- 155. The purpose of Powhatan Salt Company's cavern creation is to store natural gas liquids ("NGLs"). Exhibit 1 at Exhibit A, p.3
- 156. NGLs are hazardous liquids derived from the production of oil and gas, and are particularly prevalent in the "wet gas" associated with the Marcellus and Utica-Point Pleasant shale plays. Exhibit 1 at p.3.

- 157. Caverns created by Powhatan Salt Company would store liquid petroleum, including propane, butane/isobutene, ethane, and other Ygrade or blended natural gas liquids. Exhibit 1 at Exhibit A, p.3
- 158. Powhatan Salt Company plans to create the underground storage caverns for use by Mountaineer NGL Storage LLC. Exhibit 1 at p.2.
- 159. Once a cavern reaches a size of 500,000 barrels, Mountaineer NGLStorage LLC ("Mountaineer") will use the caverns to store NGLs.Exhibit 7.
- 160. The storage of NGLs in the caverns created using the Proposed Wells will also require a reservoir for the storage of recycled salt water and the construction of a dam to create that reservoir. Exhibit 1 at p.3; *see* Exhibit 5.
- 161. The reservoir poses a risk to underground sources of drinking water and the Ohio River. *See* Exhibit 5.
- 162. A pipeline will transport salt water that is solution-mined from the Proposed Wells to a facility in Natrium, West Virginia, where it will be used to make chlorine-based products. The pipeline will extend from the Proposed Wells southward along the Ohio River and under

the Ohio River, ultimately ending in Natrium, West Virginia. *See* Exhibit 1 at Exhibit E, Form 206 Supplemental Responses.

- 163. The Ohio Environmental Protection Agency ("Ohio EPA") has stated, in records in DOGRM's possession prior to the issuance of the Final Permits, that the operation proposed by Powhatan Salt Company and Mountaineer has the potential to adversely impact a public water supply, and that "spills and other releases of saltwater have the potential to have long term impact on ground water quality." *See* Exhibit 5.
- 164. The Ohio EPA, the Ohio Department of Transportation, and ODNR have also expressed concern that there is potential for the caverns created by the Proposed Wells to interact with existing solution mining taking place in West Virginia. *See* Exhibit 1 at Exhibit A, p.19-20.
- 165. The site of the Proposed Wells is located in the floodplain of theOhio River in a Special Flood Hazard Area. *See* Exhibit 1 at ExhibitA, p.22.

- 166. The Proposed Wells penetrate an underground source of drinking water ("USDW"). *See* Exhibit 4 at p.8. *See* Exhibit 10, containing the plug report for Core Hole 1, attached and incorporated fully herein.
- 167. The Proposed Wells are located in an area subject to subsidence.*See* Exhibit 8, excerpt from Ohio's 2014 Enhanced Hazard MitigationPlan, attached and incorporated fully herein.
- 168. The installation of salt caverns will result in some level of subsidence at the ground surface. Exhibit 1 at p.7; Exhibit A at p.23.
- 169. The Applications list "Salina" as the geological formation of the proposed injection zone, without any further specification. Exhibit 1 at Exhibit E, Form 206 Supplemental Responses.
- 170. The Salina Group consists of interbedded dolomite, anhydrite, shale, and halite. These layers are subdivided into seven stratigraphic intervals, units A-G. Halite is found in units B, D, E, and F, while anhydrites are found within A, C, and G. *See* Exhibit 1 at Exhibit A, p.8.
- 171. Not all of these units are suitable for solution mining, particularly for the creation of storage caverns. *See* Exhibit 1 at at Exhibit A, p.8.

- 172. The Applications do not specify the stratigraphic intervals that the Proposed Wells will solution-mine. Exhibit 1 at Exhibit A p.8-9.
- 173. Mountaineer NGL Storage completed "Core Hole 1" (API #34111246660000) in 2016. See Exhibit 10.
- 174. The completion report for Core Hole 1 generally lists "Salt Section," as spanning from 6,596 feet to 6,738 feet, without identifying stratigraphic intervals. Exhibit 1 at Exhibit A, p.9. Exhibit 10, p.12.
- 175. The Applications list 6600 feet to 7000 feet as the injectioninterval for the proposed injection zone. Exhibit 1 at Exhibit E, Form206 Supplemental Responses.
- 176. Thus, the injection interval described in the Applications exceeds the "Salt Section" identified in Core Hole 1.
- 177. The Salina F4 is the thickest salt within the Salina Group. Exhibit1 at Exhibit A, p.9.
- 178. The Salina F4 Salt appears to be less than 100 feet thick in the area surrounding the Proposed Wells. Exhibit 1 at Exhibit A, p.9.

- 179. Information contained in Core Hole 1 does not identify the vertical extents of the Salina F4 Salt. Exhibit 1 at Exhibit A, p.9.
- 180. There have been no other test boreholes completed at the site of the Proposed Wells.
- 181. At least two boreholes are necessary to create a cross section.
- 182. Core Hole 1 is located on the opposite side of Route 7 from Salt-1, Salt-2, and Salt-3, and is approximately 0.5 miles from Salt-1, 0.3 miles from Salt-2, and 0.2 miles from Salt-3. *See* Exhibit 1 at Exhibit E, Figure GW02.
- 183. Core Hole 1 is located outside the Area of Review of Salt-1 and Salt-2. See Exhibit 1 at Exhibit E, Figure GW02.

This Court should issue a Writ of Mandamus directed to Respondents ordering them to vacate the permits to drill Salt-1, Salt-2, and Salt-3 because ODNR disregarded the requirements of the federal Safe Drinking Water Act, R.C. 1509.221, and Ohio Admin.Code Chapter 1501:9-7 when it issued the permits without

identifying Underground Sources of Drinking Water in the project area.

- 184. The Relators restate and reiterate all preceding paragraphs of this petition as if fully rewritten herein and additionally allege the following:
- 185. The Safe Drinking Water Act requires that prior to issuing a permit to construct a new Class III well, "the Director must consider maps and cross sections indicating the vertical limits of all underground sources of drinking water within the area of review, their position relative to the injection formation, and the direction of water movement, where known, in every underground source of drinking water which may be affected by the proposed injection." 40 C.F.R. 146.34(a)(4).
- 186. The Proposed Wells are Class III wells.
- 187. Ohio Admin.Code 1501:9-7-08 requires that surface casing be set at least 50 feet below the deepest USDW.

- 188. The Applications for the Proposed Wells did not include maps and cross sections indicating the vertical extents of USDWs. *See* Exhibit 1 at Exhibit B; Exhibit A at p.11.
- 189. DOGRM did not review maps and cross sections indicating the vertical extents of USDWs in the project area prior to issuing the Final Permits. *See* Exhibit 4 at p.13.
- 190. In its Response to Comments, DOGRM stated that "the Division has identified the deepest USDW by using the ODNR Geological Survey Map EG-6 and requiring the surface casing to be set at least 50 feet through the deepest USDW." *Id.*
- 191. ODNR Geological Survey Map EG-6 ("Map EG-6"), attached and incorporated herein as Exhibit 9, does not map deepest USDWs for southeastern Ohio, including the area of review for the Proposed Wells.
- 192. The key for Map EG-6 states that the "area of southeastern Ohio is underlain primarily by sandstone, shale, coal, and freshwater limestone of Mississippian and Pennsylvanian ages. The lenticular, braided, intertwining nature of these deposits prohibits reliably

naming and mapping a lowest USDW *across any appreciable portions of this area*. Casing depths in this area are set on a *various* USDWs." Exhibit 9 (emphasis added).

- 193. Another paragraph on mapping conventions contained in Map EG6 states that the deepest USDW was not mapped in southeastern Ohio
 "because the complex stratigraphic nature of these deposits prohibits
 reliably naming and mapping a lowest USDW *across the area*."
 Exhibit 9 (Emphasis added).
- 194. It is possible for DOGRM to map the vertical limits of the USDW in the project area and area of review for the Proposed Wells. *See* Exhibit 1 at Exhibit A, p.11-12.
- 195. It is possible for the Applicant to identify the vertical limits of the USDW in the project area and the area of review for the Proposed Wells. *See* Exhibit 1 at Exhibit A, p.11-12.
- 196. API Recommended Practice ("RP") 1170 and RP 1115 recommend identification of the base of a USDW using spontaneous potential or resistivity logging. *See* Exhibit 1 at Exhibit A, p.11-12.

- 197. DOGRM's review failed to meet the requirement in 40 C.F.R. 146.34(a)(4) that the Director considers maps and cross sections indicating the vertical limits of all underground sources of drinking water within the area of review.
- 198. Identifying the vertical extents of the USDW is necessary to determine whether Powhatan Salt has met the requirement of Ohio Admin.Code 1501:9-7-08, which requires surface casing to be at least 50 feet below the deepest USDW.
- 199. DOGRM violated Ohio Admin.Code 1501:9-7-08 when it failed to determine the depth of the deepest USDW in the project area.
- 200. Identifying the vertical extents of the USDWs in the area of review is necessary to ensure the solution mining projects do not endanger USDWs. *See* Exhibit 1 at Exhibit B, p.6; Exhibit A at p.11.
- 201. Specifically, by failing to consider the vertical limits of the USDW, DOGRM has not considered potential migration pathways into USDWs from the Proposed Wells.
- 202. Relators have members who rely on sources of drinking water nearby the Proposed Wells.

- 203. Relators would reasonably and foreseeably benefit from DOGRM considering maps and cross sections indicating the vertical extents of USDWs in its review of the Applications.
- 204. DOGRM's decision to not consider maps and cross sections indicating the vertical extents of the USDWs has deprived Relators and their members of protections to which they are entitled under the SDWA and Ohio's implementing regulations.
- 205. DOGRM acted unreasonably, arbitrarily, and unconscionably when it determined that the proposed solution mining projects do not endanger underground sources of drinking water without identifying the vertical limits of USDWs in the project area.
- 206. DOGRM abused its discretion when it issued the final permits without identifying the vertical limits of the USDW.

This Court should issue a Writ of Mandamus directed to Respondents ordering them to vacate the permits to drill Salt-1, Salt-2, and Salt-3 because DOGRM disregarded the requirements of the federal Safe Drinking Water Act, R.C. 1509.221, and Ohio Admin.Code Chapter 1501:9-7 when it relied on applications that did not disclose the nature of the associated business and intended use of the Proposed Wells and failed to consider that intended use in its review of the Applications.

- 207. The Relators restate and reiterate all preceding paragraphs of this petition as if fully rewritten herein and additionally allege the following:
- 208. Safe Drinking Water Act regulations require that an application for a Class III well include a "description of the nature of the business."
 40 C.F.R. 144.31(e)(8).
- 209. Ohio Admin.Code 1501:9-7-07(G)(1)(d) requires that an application for a permit for a solution mining project include a description of the "nature of the business associated with the project."
- 210. The Applications do not include any mention of the fact that Powhatan Salt is solution mining to create underground storage caverns for NGLs.

- 211. The relationship between Energy Storage Ventures, Mountaineer NGL Storage LLC, and Powhatan Salt Company has been communicated publicly and directly to DOGRM. Exhibit 1, p.2; Exhibit 7; Exhibit 6.
- 212. DOGRM is aware that the intended use of the Proposed Wells is to create underground storage caverns to store NGLs.
- 213. DOGRM did not consider the intended use of the solution mining wells to create underground storage caverns for NGLs in its review of the Applications. *See* Exhibit 4 at p.13.
- 214. The fact that the Proposed Wells are intended to be used to create underground storage caverns for NGLs has implications for where the wells should be sited, how the wells should be constructed, and what tests and monitoring should be completed to protect public safety. *See* Exhibit 1 at Exhibit A, p.4-6.
- 215. American Petroleum Institute ("API") Recommended Practice ("RP") 1115 sets forth industry standards for the storage of NGLs in caverns, including industry standards for the location, installation, construction, and operation of solution mining wells used for the

purpose of creating underground storage caverns. Exhibit 1 at Exhibit A, p.5.

- 216. API RP 1170 and API 1171 set forth industry standards for the storage of natural gas in caverns. Exhibit 1 at Exhibit A, p.5.
- 217. API RP 1115, API RP 1170, and API 1171 are fully integrated industry standards that together provide prescriptive practices for well siting, installation, and solution mining. *See* Exhibit 1 at Exhibit A, p.5-6.
- 218. API RP 1115, API RP 1170, and API 1171 are designed to reduce known risks associated with solution mining projects and protect public health and safety. *See* Exhibit 1, at Exhibit A, p.5-6.
- 219. API RP 1115, API RP 1170, and API 1171 together provide prescriptive practices for how an operator must develop, implement, and document a program to manage risks that can affect the functional integrity of an underground cavern storage operation. *See* Exhibit 1 at Exhibit A, p.5-6.

- 220. Multiple accidents related to NGL storage in solution-mined underground caverns have occurred as the result of problems with well integrity and well siting. Exhibit 1 at p.12-13.
- 221. Some of these accidents have caused extensive property damage, severe injuries, and loss of human life. *See* Exhibit 1 at p.12-13.
- 222. DOGRM did not consider the industry standards contained in API RP 1115 when determining whether the solution mining projects would jeopardize public health and safety. *See* Exhibit 4 at p.16-28.
- 223. DOGRM did not consider the industry standards contained in API RP 1170 when determining whether the solution mining projects would jeopardize public health and safety. *See* Exhibit 4 at p.16-28.
- 224. DOGRM did not consider the industry standards contained in API RP 1171 when determining whether the solution mining projects would jeopardize public health and safety. *See* Exhibit 4 at p.16-28.
- 225. Considering the end use of the Proposed Wells is necessary to determine whether the solution mining project jeopardizes public health and safety. *See* Exhibit 1 at Exhibit A, p.5-7.

- 226. DOGRM did not consider that the purpose of the solution mining projects is to create underground storage caverns for NGLs when determining whether the solution mining projects would jeopardize public health and safety. *See* Exhibit 4 at p.13.
- 227. Without considering the intended use of the solution mining projects to create underground storage caverns for NGLs, DOGRM cannot determine that the solution mining projects would not jeopardize public health and safety.
- 228. Thus, DOGRM violated Ohio Admin.Code 1501:9-7-07(H)(4)(d)(iii) when it issued the Final Permits without considering the intended use of the Proposed Wells.
- 229. By withholding the fact that the solution mining would be done for the purpose of creating underground storage caverns for NGLs, the Applications fail to describe the nature of the business associated with the project, in violation of 40 C.F.R. 144.31(e)(8) and Ohio Admin.Code 1501:9-7-07(G)(1)(d).
- 230. Without a complete and accurate description of the nature of the business associated with the project, including the disclosure of the

intended use of the solution mining wells to create caverns for the underground storage of NGLs, the Applications are incomplete.

- 231. DOGRM disregarded the requirements of Ohio Admin.Code 1501:9-7-07(D) and 40 C.F.R. 144.31(d) when it issued the final permits based on incomplete applications.
- 232. In issuing the Final Permits without an accurate description of the nature of the business associated with the solution mining projects, DOGRM disregarded the requirements of Ohio Admin.Code 1501:9-7-07(H)(4)(d)(i) and Ohio Admin.Code 1501:9-7-07(H)(4)(d)(ii)— which require that DOGRM only issue a permit for a solution mining project when an application complies with the requirements of Ohio Admin.Code 1501:9-7-07 and the solution mining project will not be in violation of law.
- 233. By failing to describe that the Proposed Wells would be constructed for the purpose of creating underground caverns to store NGLs, the Applications misrepresent the nature of the business as purely a salt mining operation.

- 234. Presenting the Proposed Wells as purely a salt-mining operation is inaccurate and misleading to the public, the communities who stand to be impacted by the solution mining projects, and Relators and their members.
- 235. By failing to consider the intended use of the Proposed Wells to create underground storage caverns, DOGRM deprived Relators and their members of the diligent permitting review required by law.
- 236. Relators and their members have been harmed by DOGRM's failure to consider the intended use of the Proposed Wells to create storage caverns prior to issuing Final Permits.
- 237. Relators and their members have been harmed by DOGRM failing to consider safety standards included in API RP 1115, API RP 1170, and API 1171 in its review of the proposed solution mining projects.
- 238. Relators and their members could reasonably and foreseeably benefit from DOGRM considering the Proposed Wells' intended use to create underground storage caverns in evaluating the Applications.

- 239. Relators and their members could reasonably and foreseeably benefit from DOGRM applying industry recommended practices API RP 1115, API RP 1170, and API 1171 in evaluating the Applications.
- 240. The omission of any mention of underground storage cavern creation in the Applications and Final Permits harms Relators and their members' ability to educate the general public and their members about the nature of the permitted solution mining projects.
- 241. DOGRM abused its discretion and acted unreasonably, arbitrarily, and unconscionably when it issued the final permits without considering the intended use of the Proposed Wells to create underground storage caverns.

This Court should issue a Writ of Mandamus directed to Respondents ordering them to vacate the permits to drill Salt-1, Salt-2, and Salt-3 because ODNR disregarded the requirements of the federal Safe Drinking Water Act, R.C. 1509.221, and Ohio

Admin.Code Chapter 1501:9-7 when it issued the permits without requiring monitoring wells.

- 242. The Relators restate and reiterate all preceding paragraphs of this petition as if fully rewritten herein and additionally allege the following:
- 243. The Proposed Wells penetrate at least one USDW. *See* Exhibit 4 at p.8.
- 244. The Proposed Wells are located in an area subject to subsidence.*See* Exhibit 8.
- 245. There have been numerous subsidence events in southeast Ohio, including in Monroe County. *See* Exhibit 8.
- 246. The Proposed Wells are located in close proximity to abandoned underground mines. Exhibit 1 at Exhibit A; Exhibit B at p.28 (Figure 7). *See* Exhibit 3.
- 247. The Proposed Wells' location in the vicinity of abandoned mines, including some mines of unknown extents, creates the potential for an

increased risk of subsidence. *See* Exhibit 1 at Exhibit A; Exhibit D. *See also* Exhibit 8.

- 248. Upon information and belief, there are no other solution mining projects permitted in southeastern Ohio.
- 249. Upon information and belief, there are no other solution mining projects permitted in Monroe County, Ohio.
- 250. Significant subsidence has occurred at ground level above other solution mining projects in the state of Ohio. Exhibit 8 at p.306.
- 251. Significant subsidence has occurred above solution mining projects in other states. Exhibit 8 at p.306.
- 252. Federal Regulations under the SDWA require that, where injection wells penetrate an USDW in "an area subject to subsidence or catastrophic collapse an adequate number of monitoring wells shall be completed into the USDW to detect any movement of injected fluids, process by-products, or formation fluids into the USDW." 40 C.F.R. 146.32(g).

- 253. Ohio Admin.Code 1501:9-7-07 requires that applications for permits for solution mining wells include plans for meeting the monitoring requirements of Ohio Admin.Code 1501:9-7-09(B).
- 254. Under Ohio Admin.Code 1501:9-7-09(B)(10), the "chief shall require additional monitoring, including construction of monitoring wells, in areas subject to subsidence." *Id*.
- 255. The Final Permits do not include a requirement to install monitoring wells to detect subsurface migration of contaminants associated with the Proposed Wells into USDWs. *See* Exhibit 4 at p.6. *See* Exhibit 3.
- 256. Relators have members who rely on drinking water from sources nearby the Proposed Wells.
- 257. Relators have members who would reasonably and foreseeably benefit from the installation of monitoring wells to detect the movement of fluids associated with the Proposed Wells into USDWs.
- 258. DOGRM violated the requirements of 40 C.F.R. 146.32(g) and 40 C.F.R. 146.32(h) when it issued final permits for the Proposed Wells without requiring monitoring wells.

- 259. DOGRM violated the requirements of Ohio Admin.Code 1501:9-7-07 and Ohio Admin.Code 1501:9-7-09(B) when it issued final permits for the Proposed Wells without requiring monitoring wells.
- 260. DOGRM abused its discretion and acted arbitrarily, unconscionably, and unreasonably when it issued the final permits for the Proposed Wells without requiring monitoring wells.

This Court should issue a Writ of Mandamus directed to Respondents ordering them to vacate the permits to drill Salt-1, Salt-2, and Salt-3 because DOGRM disregarded the requirements of the federal Safe Drinking Water Act, R.C. 1509.221, and Ohio Admin.Code Chapter 1501:9-7 when it relied on inaccurate and incomplete Applications to issue the final permits.

- 261. The Relators restate and reiterate all preceding paragraphs of this petition as if fully rewritten herein and additionally allege the following:
- 262. Under both Ohio and federal law, an application for a solution mining project must include qualitative analysis and ranges in

concentrations of all constituents of injected fluids. Ohio Admin.Code 1501:9-7-07(G)(4)(b); 40 C.F.R. 146.34(a)(7)(iii).

- 263. The nature of the injected fluid must also be considered in determining the number, location, and construction of monitoring wells. C.F.R. 146.32(h).
- 264. Characterization of the injected fluids is important to be able to calculate the volume and efficiency of the solution mining process and to estimate cavern growth. Exhibit 1 at Exhibit A, p.20-21.
- 265. Characterization of injected fluids is also important because some constituents, including higher salinity salts KCl and MgCl2, can undercut upper strata and cause strain or collapse during solution mining. Exhibit 1 at Exhibit A, p.20-21.
- 266. The Applications indicate that Powhatan Salt Company intends to inject Ohio River Water into the Proposed Wells.
- 267. The Applications include a chemical analysis of the source water to be used for solution mining in the Proposed Wells. Exhibit 1 at Exhibit E, Supplemental Form 206 p.2.

- 268. The chemical analysis of source water included in the Application is clearly inaccurate.
- 269. The concentration of arsenic is provided as 100 ppm (mg/L).Exhibit 1 at Exhibit E, Supplemental Form 206 p.2.
- 270. This arsenic concentration is several orders of magnitude higher than nearby water quality measurements made by the U.S. Geological Survey. Exhibit 1 at Exhibit A, p.20.
- 271. Measurements made at a station on the Ohio River (site number 395516080451501) on November 7, 2019, indicate an arsenic concentration of 0.46 ppb (μg/L). Exhibit 1 at Exhibit A, p.20.
- 272. The obviously erroneous reporting of arsenic levels in the fluid characterization demonstrates a lack of diligence in the Applications and DOGRM's review.
- 273. Units included for NaCl, Sulfate, and ClO3 are listed as "GPL" without providing any definition for this acronym. Exhibit 1 at Exhibit A, p.20-21.

- 274. If GPL means "grams per liter," the NaCl concentration provided in the Application is approximately eight times the NaCl level expected in seawater.
- 275. Ohio River Water does not have a NaCl concentration of 290 grams per liter.
- 276. Based on a reasonable reading of information presented in the application, the concentration submitted for NaCl is inaccurate.
- 277. DOGRM did not require Powhatan Salt to submit a revised analysis providing an accurate analysis and ranges of concentrations for all injected fluids and a clear definition of all units.
- 278. Relators raised these concerns regarding erroneous fluid characterization in their comments on the Applications and Draft Permits. Exhibit 1 at Exhibit A, p.20-21.
- 279. An accurate characterization of the fluid to be injected is necessary for DOGRM to assess how the injected fluid will interact with the Proposed Well and the formation to be mined, which is relevant to assessing well integrity and potential migration pathways.

- 280. Relators and their members have been harmed by DOGRM's failure to consider an accurate characterization of the fluid to be injected.
- 281. Relators and their members can reasonably and foreseeably benefit from DOGRM requiring Powhatan Salt to submit an accurate characterization of the fluid to be injected and considering the same in its review of the Applications.
- 282. DOGRM provided no response to Relators' concerns regarding erroneous fluid characterization in its Response to Comments. *See* Exhibit 4.
- 283. Without an accurate characterization of the fluid to be injected, the Applications are incomplete.
- 284. DOGRM violated 40 C.F.R. 146.34(a)(7)(iii) and Ohio Admin.Code 1501:9-7-07(G)(4)(b)(iii) when it relied on an obviously incorrect analysis and range of concentrations of constituents of fluids to be injected in reviewing the Applications.
- 285. DOGRM abused its discretion and acted unreasonably, arbitrarily, and unconscionably when it issued the final permits without requiring

Powhatan Salt to submit an accurate analysis of the fluid to be injected.

COUNT 5

This Court should issue a Writ of Mandamus directed to Respondents ordering them to vacate the permits to drill Salt-1, Salt-2, and Salt-3 because DOGRM abused its discretion and disregarded Safe Drinking Water Act requirements when it refused to hold a public hearing.

- 286. The Relators restate and reiterate all proceeding paragraphs of this petition as if fully rewritten herein and additionally allege the following:
- 287. The Safe Drinking Water Act requires the Director to hold a public hearing "whenever he or she finds, on the basis of requests, a significant degree of public interest in a draft permit." 40 C.F.R. 124.12(a)(1).
- 288. Approximately 540 comments were submitted during the public comment period.

- 289. DOGRM also received petitions during the public comment periods that collectively contained over 1,000 signatures objecting to the Proposed Wells.
- 290. Individuals contacted DOGRM regarding the Proposed Well through written comments, submitted by mail and email, as well as through phone calls.
- 291. At least an additional 19 comments were submitted following the close of the public comment period.
- 292. The number of individuals contacting DOGRM regarding the Proposed Wells and requesting a public hearing demonstrated a significant degree of public interest in the draft permits.
- 293. DOGRM did not hold a public hearing on the Applications or the Draft Permits for the Proposed Wells.
- 294. Relators and their members were harmed by DOGRM's refusal to hold a public hearing on the applications for the Proposed Wells.
- 295. Refusing to hold a public hearing on the applications for the Proposed Wells deprived Relators and their members' of the
opportunity to pose questions directly to DOGRM staff in a public forum.

- 296. Refusing to hold a public hearing on the applications for the Proposed Wells deprived Relators and their members of the opportunity to express their concerns regarding the Applications, the Proposed Wells, and the draft permits in a public forum.
- 297. Relators and their members would foreseeably and reasonably benefit from the holding of a hearing on the Applications, the Proposed Wells, and the draft permits.
- 298. A public hearing would have provided an opportunity for DOGRM to hear the concerns of Relators, their members, and additional community members who stand to be most impacted by the Proposed Wells.
- 299. A public hearing would have provided an opportunity for Relators, their members, and additional community members to hear one another's concerns regarding the Proposed Wells.
- 300. A public hearing would have provided an opportunity for DOGRM to hear directly from those with knowledge about the history of past

and current uses of the area that the Proposed Wells would impact, including Relators' members.

- 301. Information pertaining to past and current uses of the area can have implications for whether or not the Proposed Wells would jeopardize public health and safety or would endanger underground sources of drinking water.
- 302. A public hearing would also have provided DOGRM with an opportunity to hear about and consider environmental justice impacts of the proposed solution mining projects, including impacts to Relators' members and their communities.
- 303. DOGRM abused its discretion when it refused to hold a public hearing despite there clearly being a significant degree of public interest in the draft permits.
- 304. DOGRM violated the requirements of 40 C.F.R. 124.12(a)(1) when it refused to hold a public hearing despite there clearly being a significant degree of public interest in the draft permits.
- 305. DOGRM acted unreasonably and arbitrarily when it determined that all of the objections received lacked validity.

COUNT 6

This Court should issue a Writ of Mandamus directed to Respondents ordering them to vacate the permits to drill Salt-1, Salt-2, and Salt-3 because DOGRM disregarded the requirements of the federal Safe Drinking Water Act by issuing the final permits without including the conditions required by 40 C.F.R. 144.51.

- 306. The Relators restate and reiterate all proceeding paragraphs of this petition as if fully rewritten herein and additionally allege the following:
- 307. Regulations promulgated under the Safe Drinking Water Act require all UIC permits, including all Class III permits, to incorporate certain conditions in each and every permit. 40 C.F.R. 144.51.
- 308. The Permits at issue are UIC permits subject to 40 C.F.R. 144.51.
- 309. The regulations at 40 C.F.R. 144.51 must be either expressly written into each permit or incorporated by reference. *Id.* If incorporated by reference, "a specific citation to [the] regulations (or

the corresponding approved State regulations) must be given in the permit." *Id.*

- 310. The conditions listed in detail at 40 C.F.R. 144.51 include 16 separate conditions which require proper operation and maintenance of each well, monitoring and recordkeeping, reporting of present or anticipated noncompliance, corrective action in the event of violations, and other measures. *See id.* at 144.51(a)-(q).
- 311. Pursuant to 40 C.F.R. 144.51(a), the owner or operator of a permitted injection well must comply with all of these conditions, which must be in the UIC permit, and each failure to comply with such conditions constitutes a violation of the applicable underground injection control program and the SDWA.
- 312. The Permits contain a section titled "PERMIT CONDITIONS –
 CLASS III SOLUTION MINING INJECTION WELL DRILL
 NEW WELL" that contains nineteen (19) numbered conditions. *See*Exhibit 3. None of the 16 conditions required by 40 C.F.R. 144.51 are included in this section.

- 313. The Permits do not contain the condition listed at 40 C.F.R. 144.51(a), which states that any permit noncompliance constitutes a violation of the Safe Drinking Water Act and is grounds for enforcement action; for permit termination, revocation and reissuance, or modification; or for denial of a permit renewal application.
- 314. The Permits do not contain the condition listed at 40 C.F.R. 144.51(b), which states that if the permittee wishes to continue any activity regulated by the permit after the expiration date of the permit, the permittee must apply for and obtain a new permit.
- 315. The Permits do not contain the condition listed at 40 C.F.R. 144.51(c), which states that it shall not be a defense for a permittee in an enforcement action that it would have been necessary to halt or reduce the permitted activity in order to maintain compliance with the conditions of the permit.
- 316. The Permits do not contain the condition listed at 40 C.F.R.144.51(d), which states that the permittee shall take all reasonable

77

steps to minimize or correct any adverse impact on the environment resulting from noncompliance with the permit.

- 317. The Permits do not contain the condition listed at 40 C.F.R. 144.51(e), which describes conditions designed to achieve proper operation and maintenance of all facilities and systems of treatment and control installed or used by the permittee to achieve compliance with the permit.
- 318. The Permits do not contain the condition listed at 40 C.F.R. 144.51(f), which states that the permit may be revoked and reissued, or terminated for cause, and that a request by the permittee for a change to the permit does not stay any permit condition.
- 319. The Permits do not contain the condition listed at 40 C.F.R.144.51(g), which states that the permit does not convey any property rights of any sort, or any exclusive privilege.
- 320. The Permits do not contain the condition listed at 40 C.F.R.144.51(h), which outlines the permittee's duty to provide information and copies of records.

- 321. The Permits do not contain the condition listed at 40 C.F.R.144.51(i), which outlines the inspection and entry rights, including the right to sample and monitor at reasonable times.
- 322. The Permits do not contain the condition listed at 40 C.F.R.144.51(j), which outlines requirements for monitoring and recordkeeping.
- 323. The Permits do not contain the condition listed at 40 C.F.R.144.51(k), which requires that all applications, reports, or information submitted to the agency shall be signed and certified.
- 324. The Permits do not contain the reporting requirements listed at 40C.F.R. 144.51(l), which includes reporting of anticipatednoncompliance, compliance schedules, and twenty-four hoursreporting of noncompliance which may endanger health or theenvironment.
- 325. The Permits do not contain the condition listed at 40 C.F.R.144.51(m), which lists requirements prior to commencing injection.These requirements include an inspection or review of the newinjection well and a finding of compliance with the permit.

- 326. The Permits do not contain the condition listed at 40 C.F.R.144.51(n), which requires notification at such times as the permit requires before conversion or abandonment of the well.
- 327. The Permits do not contain the condition listed at 40 C.F.R.144.51(o), which outlines requirements for plugging and abandonment of the well.
- 328. The Permits do not contain the condition listed at 40 C.F.R.144.51(q), which outlines requirements to establish and maintain mechanical integrity.
- 329. Ultimately, the Permits do not contain the conditions required by40 C.F.R. 144.51 in any manner, neither expressly nor incorporatedby reference.
- 330. To the extent Ohio has adopted regulations that correspond with the conditions listed at 40 C.F.R. 144.51, those corresponding regulations are also not contained in the Permit in any manner, neither expressly nor incorporated by reference.
- 331. Relators are harmed by the omissions of the conditions in thePermit, as the Permit does not contain the protections and information

provided by 40. C.F.R. 144.51, and Relators and their members could reasonably foreseeably benefit from the protections and information provided by those conditions.

- 332. In addition, the SDWA allows citizens to enforce against any violation of a requirement prescribed by the Act. 42 U.S.C.A. 300j-8(a). By failing to include the conditions at 40 CF.R. 144.51, including the condition at 40. C.F.R. 144.51(a), DOGRM has deprived Relators and their members the right to enforce those conditions pursuant to the SDWA citizen suit provision as part of the permit.
- 333. The Chief unreasonably and unlawfully issued the Permits without including the conditions required by 40 C.F.R. 144.51 in the Permits themselves.

<u>COUNT 7</u>

This Court should issue a Writ of Mandamus directed to Respondents ordering them to vacate the permits to drill Salt-1, Salt-2, and Salt-3 because DOGRM disregarded the requirements of the federal Safe Drinking Water Act, R.C. 1509.221, and Ohio

Admin.Code Chapter 1501:9-7 when it failed to consider maps and cross sections detailing the geologic structure of the local area prior to issuing the Final Permit

- 334. The Relators restate and reiterate all preceding paragraphs of this petition as if fully rewritten herein and additionally allege the following:
- 335. The SDWA requires that prior to issuing a permit to construct a solution mining well, the Director must consider "maps and cross sections detailing the geologic structure of the local area." 40 C.F.R. 146.34(a)(5).
- 336. DOGRM did not consider maps detailing the geologic structure of the local area, in violation of 40 C.F.R. 146.34(a)(5).
- 337. DOGRM did not consider cross sections detailing the geologic structure of the local area, in violation of 40 C.F.R. 146.34(a)(5).
- 338. Core Hole 1 provides a limited snapshot of the geologic layers at one location in an area that evidence suggests is highly variable and where the Salt formation is thinning. *See* Exhibit 1 at Exhibit A, p.8-10.

- 339. As a single borehole, Core Hole 1 does not constitute a cross section.
- 340. DOGRM relied on regional and general maps in its review of the Applications.
- 341. DOGRM relied on materials that did not identify the thickness of the Salina F4 Salt at the site of the Proposed Wells. *See* Exhibit 1 at Exhibit A, p.9.
- 342. Verifying that the Salina F4 salt formation is at least 100 feet deep at the site of the Proposed Wells is necessary to ensure that cavern integrity can be maintained and that weak zones and migration pathways will not be created during solution mining, and subsequent NGL storage. Exhibit 1 at Exhibit A, p.9.
- 343. DOGRM relied on materials that did not map the halite units that are the target of mining at the site of the Proposed Wells. *See* Exhibit 1 at Exhibit A, p.9.
- 344. Mapping and cross sections of the halite units within the Salina Formation that are the target of the solution mining projects is

necessary to verify that these units are able to remain structurally sound during solution mining. Exhibit 1 at Exhibit A, p.9.

- 345. DOGRM's review did not determine the vertical or lateral variability within the salt interval at the site of the Proposed Wells. *See* Exhibit 1 at Exhibit A, p.9.
- 346. Understanding the vertical and lateral variability in the salt interval is necessary to assess the formation's ability to store materials and to allow for the accumulation of residual insoluble materials that may accumulate at the base of the caverns over time. Exhibit 1 at Exhibit A, p.9.
- 347. The maps DOGRM reviewed did not identify the formations immediately above and below the Salina Formation at the site of the Proposed Wells. Exhibit 1 at Exhibit A, p.9-10.
- 348. In bedded salt deposits, overlying rock deposits usually have much greater porosity and permeability than rock salt. Exhibit 1 at Exhibit A, p.9.
- 349. It is important to evaluate formations immediately above and below the salt formation to be solution-mined because a breach of

these layers can result in the creation of fluid migration pathways. *See* Exhibit 1 at Exhibit A, p.9.

- 350. Brine, and later NGLs, traveling through these migration pathways can reach underground sources of drinking water and the surface. *See* Exhibit 1 at Exhibit A, p.9.
- 351. By failing to review maps and cross sections of the halite units within the Salina Formation, and the formations immediately above and below the formation to be solution-mined, DOGRM has not reviewed the integrity of these units against fluid migration. Exhibit 1 at Exhibit A, p.9-10.
- 352. Accordingly, DOGRM cannot reasonably find that the Applications demonstrate that the solution mining projects will not result in the migration of fluid into underground sources of drinking water, as required by R.C. 1509.221(A) and 40 C.F.R. 144.12(a).
- 353. DOGRM's review was insufficient to determine that the Proposed Wells do not jeopardize public health and safety, as required by Ohio Admin.Code. 1501:9-7-07(H)(4)(d)(iii).

- 354. DOGRM abused its discretion and acted unreasonably, arbitrarily, and violated the requirements of the SDWA when it issued the final permits without reviewing maps and cross sections detailing the geologic structure of the local area.
- 355. Relators' and their members could reasonably and foreseeably benefit from DOGRM reviewing maps and cross sections detailing the geologic structure of the local area.

WHEREFORE, Relators pray the Court issue a writ of mandamus under R.C. Chapter 2731 ordering DOGRM to

- (i) Vacate the final permits to drill Salt-1, Salt-2, and Salt 3 issued on August 30, 2021.
- (ii) Reject the applications for permits to drill Salt-1, Salt-2, and Salt-3 as incomplete.

Relators request to be awarded their costs and such other relief at law or in equity as the Court may deem necessary and proper.

> <u>/s/ Megan M. Hunter</u> Megan M. Hunter (Ohio Bar No. 96035)

/s/ James Yskamp

James Yskamp* (Ohio Bar No. 93095) *not licensed to practice in Illinois

Earthjustice

311 South Wacker Drive, Suite 1400

Chicago, IL 60606

T: 312.800.8331

E: <u>mhunter@earthjustice.org</u>

E: jyskamp@earthjustice.org

Counsel for Relators

I, Jill Hunkler, am the Director of Concerned Ohio River Residents ("CORR") and am empowered to bring the foregoing Verified Petition for a Writ of Mandamus on behalf of CORR's members. I have reviewed the allegations in the Verified Petition and believe them to be true to the best of my knowledge, information, and belief.

Jill Hunkler

State of Ohio County of Belmont

) ss:

Sworn to before me and subscribed in my presence this 20 day of October, 2021.



Notary Public

I, Teresa Mills, am Executive Director of Buckeye Environmental Network ("BEN") and am empowered to bring the foregoing Verified Petition for a Writ of Mandamus on behalf of BEN's members. I have reviewed the allegations in the Verified Petition and believe them to be true to the best of my knowledge, information, and belief.

deese & Me

Teresa Mills

State of Ohio)) County of Franklin) ss:

Sworn to before me and subscribed in my presence this **20** day of October, 2021.



JOSHUA T McKEE Notary Public, State of Ohio My Comm. Expires 11/08/2023 Recorded in Franklin County

Notary Public

I, Leatra Harper, am Managing Director of FreshWater Accountability Project ("FreshWater") and am empowered to bring the foregoing Verified Petition for a Writ of Mandamus on behalf of FreshWater's members. I have reviewed the allegations in the Verified Petition and believe them to be true to the best of my knowledge, information, and belief.

Leatra Harper

State of Ohio County of Wood

Sworn to before me and subscribed in my presence this 20 day of October, 2021.

Notary Public

AMANDA L. TAYLOR Notary Public, State of Ohio My Comm. Expires April 9, 2022 Recorded in Wood County

1511

I, Ankit Jain, am an Associate Attorney for the Sierra Club and am empowered to bring the foregoing Verified Petition for a Writ of Mandamus on behalf of Sierra Club's members. I have reviewed the allegations in the Verified Petition and believe them to be true to the best of my knowledge, information, and belief.

Ankit Jain

District of Columbia

SS:

Sworn to before me and subscribed in my presence this 25^{n} day of October, 2021.

Kum Ma

Notary Public

