

**IN THE COURT OF APPEALS
ELEVENTH APPELLATE DISTRICT
TRUMBULL COUNTY, OHIO**

STATE OF OHIO ex rel. AWMS WATER SOLUTIONS, LLC, et al.,	:	PER CURIAM OPINION
	:	
Relators,	:	CASE NO. 2016-T-0085
	:	
- VS -	:	
	:	
JAMES ZEHRINGER, DIRECTOR OHIO DEPARTMENT OF NATURAL RESOURCES, et al.,	:	
	:	
Respondents.	:	
	:	

Original Action for Writ of Mandamus.

Judgment: Petition denied.

Thomas J. Wilson, Comstock, Springer & Wilson Co., L.P.A., 100 Federal Plaza East, Suite 926, Youngstown, OH 44503; *Matthew G. Vansuch*, Brouse McDowell Co., LPA, 6550 Seville Drive, Suite B, Canfield, OH 44406; and *Kyle A. Shelton*, Brouse McDowell Co., LPA, 388 South Main Street, Suite 500, Akron, OH 44311 (For Relators).

Dave Yost, Ohio Attorney General, State Office Tower, 30 East Broad Street, 16th Floor, Columbus, OH 43215; *W. Scott Myers* and *Brett A. Kravitz*, Assistant Attorneys General, Environmental Enforcement Section, 2045 Morse Road, A-3, Columbus, OH 43229; and *Curtis J. Amrosy*, Manchester Newman & Bennett, LPA, 144 North Park Avenue, Suite 200, Warren, OH 44481 (For Respondents).

PER CURIAM.

{¶1} Respondents, James Zehringer, Director, Ohio Department of Natural Resources, et al., have moved this court for summary judgment on the petition for writ

of mandamus filed by Relators, AWMS Water Solutions, LLC, et al. Relators seek the underlying writ to compel Respondents to commence appropriations proceedings based upon their allegation that Respondents' regulatory actions have eliminated the economic viability of certain real property and, as a result, Respondents have effectuated either a categorical-regulatory taking or a partial-regulatory taking, in violation of the United States and Ohio Constitutions. Respondents maintain there are no genuine issues of material fact to be litigated on Relators' allegations and therefore they are entitled to judgment as a matter of law. Relators have opposed the motion, asserting there are issues of material fact to be litigated on both of their takings claims and, as a result, their petition to compel appropriations on the subject real estate survives Respondents' motion.

Factual Background

{¶2} Relator, AWMS Water Solutions, LLC, is a company involved in disposing waste from oil and gas production sites and drilling sites. Relator, AWMS Holdings, LLC, is a holding company for a series of wholly-owned subsidiaries that own and operate brine disposal wells and facilities. Relator, AWMS Rt. 169, LLC, is a company that is a wholly-owned subsidiary of AWMS Holdings, LLC, and was formed to own and operate two salt-injection wells in Weathersfield Township, Trumbull County, Ohio. Respondents are James Zehringer, the Director of the Ohio Department of Natural Resources ("Director"); the Ohio Department of Natural Resources ("ODNR"); Richard Simmers, Chief of the Division of Oil and Gas Resources Management ("Chief"); and the Division of Oil and Gas Resources Management ("Division").

{¶3} Relators secured a lease on property in an industrial area in Weathersfield Township, which it acquired for the purpose of constructing two salt-water injection wells. On December 23, 2011, Relators applied to the Division for a permit to construct the wells, designated AWMS #1 Well and AWMS #2 Well. Also in December 2011, two seismic events of varying magnitudes were detected in Youngstown, Ohio near the Northstar #1 injection well, operated by a third party not connected to this matter. The first, on December 24, 2011, a 2.7 magnitude earthquake was recorded within one mile of the well. The Division found that Northstar #1 Well likely induced the earthquake after reviewing the seismic data. One day after the Northstar #1 Well voluntarily ceased operations at the Division's request, a 4.0 magnitude event was recorded within one mile of the well. The Northstar #1 Well is located approximately seven miles from the AWMS #2 Well. After the second seismic event, the Division temporarily halted the issuance of permits through November 2012. During the pause in permit issuances, the Division drafted emergency rules to protect the public health and safety.

{¶4} Ultimately, on July 18, 2013, the Division issued a drilling permit to AWMS and, on March 24, 2014, an operational permit was issued. Full commercial operations of the wells commenced in May and June of 2014. During the time the wells were operating, AWMS #1 Well represented 5% of total injections between the two wells, while AWMS #2 Well represented 95% of total injections.

{¶5} On July 28, 2014, a seismic event, measuring a magnitude 1.7, occurred in Trumbull County in the vicinity of Relators' wells. On August 31, 2014, another seismic event occurred in the vicinity of the wells measuring 2.1. The earthquakes were connected in time and space with injections at AWMS #2 Well and experts agreed that

the events were likely induced by Relators' operations. On September 3, 2014, the Division issued Chief's Order No. 2014-372, amended by Chief's Order No. 2014-374 ("Suspension Order"), ordering relators to: (1) immediately suspend all operations at AWMS #2 Well, and (2) submit a written plan to the Division for evaluating certain "seismic concerns associated with the operation of the AWMS #2 salt water injection well." The Division also suspended operations at AWMS #1 Well, but subsequently terminated this suspension after Relators submitted additional information that AWMS Well #1 did not contribute to the earthquake activity.

{¶6} Relators submitted a plan to restart its operations at AWMS #2; the Division found, however, that the plan was deficient, that it was "generic and inadequate," and did not support terminating the Suspension Order. AWMS #2 Well has not operated since imposition of the Suspension Order.

{¶7} Relators appealed the Suspension Order to the Ohio Oil & Gas Commission ("Commission"). A hearing was held and, on August 12, 2015, the Commission found the Chief's issuance of the Suspension Order was not unlawful or unreasonable and affirmed the Division's issuance of the Suspension Order. On September 8, 2015, Relators filed an appeal of the Commission's affirmance of the Suspension Order to the Franklin County Court of Common Pleas. After various procedural rulings relating to whether Relators properly filed their notice of appeal, the administrative appeal proceeded on June 30, 2016. And, on December 23, 2016, the Court of Common Pleas found that the Suspension Order was lawful, but reversed the judgment of the Court of Common Pleas, concluding the Order was unreasonable. The Division appealed this decision to the Tenth District Court of Appeals.

{¶8} Meanwhile, on August 26, 2016, Relators filed the instant petition for writ of mandamus alleging the continued enforcement of the Suspension Order had substantially interfered with Relators' property rights by depriving them of all or, at least partial, economically-viable use of the property. In light of the appeal to the Tenth Appellate District, this court stayed the underlying proceedings due to the possibility of rendering an inconsistent ruling contrary to the jurisdictional priority rule.

{¶9} On July 31, 2018, the Tenth District reversed the judgment of the court of common pleas, concluding, *inter alia*, the lower court based its decision on impermissible evidentiary inferences made between experts who testified before the division *and* because the trial court drew conclusions regarding the likelihood of seismic risk without reliable evidentiary support. *See Am. Water Mgt Servs., LLC v. Div. of Oil & Gas Resources Mgt.*, 10th Dist. Franklin No. 17AP-145, 2018-Ohio-3028. The Tenth District therefore determined the Suspension Order was reasonable and reinstated the same. Relators filed a jurisdictional appeal with the Supreme Court of Ohio and, on November 21, 2018, in *Am. Water Mgt. Servs., LLC v. Div. of Oil & Gas Resources Mgt.*, 2018-Ohio-3028, the Court declined jurisdiction. And, on December 26, 2018, the Court denied Relators' motion for reconsideration. *See* 2018-Ohio-3028. This court subsequently lifted the stay and we now consider Respondents' motion for summary judgment and Relators' memorandum in opposition.

Mandamus

{¶10} In order for a writ of mandamus to issue, Relators must establish a clear legal right to compel Respondents to initiate appropriation action, Respondents' corresponding duty to institute the action, and the lack of an adequate remedy for

relators in the ordinary course of law. See, e.g., *State ex rel. Duncan v. Mentor City Council*, 105 Ohio St.3d 372, 2005-Ohio-2163, ¶10.

{¶11} “[M]andamus is the vehicle for compelling appropriation proceedings by public authorities where an involuntary taking of private property is alleged.” *State ex rel. Levin v. Sheffield Lake*, 70 Ohio St.3d 104, 108 (1994), citing *State ex rel. McKay v. Kauer*, 156 Ohio St. 347 (1951), paragraph three of the syllabus. “In such actions, the court, as the trier of fact and law, must determine whether any property rights of the owner have been taken by the public authority.” *Levin, supra, citing Akron-Seller v. Akron*, 49 Ohio App.2d 128, 130 (9th Dist.1974).

Summary Judgment Standard

{¶12} Pursuant to Civil Rule 56(C), summary judgment is proper when (1) the evidence shows “that there is no genuine issue as to any material fact” to be litigated; (2) “the moving party is entitled to judgment as a matter of law;” and (3) “it appears from the evidence * * * that reasonable minds can come to but one conclusion and that conclusion is adverse to the party against whom the motion for summary judgment is made, that party being entitled to have the evidence * * * construed most strongly in the party’s favor.” *Id.*

“Takings”

{¶13} Frequently referred to as the “Just Compensation Clause,” the final clause of the Fifth Amendment to the United States Constitution provides: “nor shall private property be taken for public use, without just compensation.” The prohibition against takings applies equally to the states and the federal government. *Chicago, B. & Q. Co. v. Chicago*, 166 U.S. 226, 239, 241 (1896). Two forms of regulatory acts are deemed

per se unconstitutional takings: (1) governmental actions that cause an owner to experience a permanent physical invasion of the property. *State ex rel. Shelly Materials v. Clark Co. Bd. of Comm'rs*, 115 Ohio St.3d 337, 2007-Ohio-5022 ¶18, citing *Loretto v. Teleprompter Manhattan CATV Corp.*, 458 U.S. 419, 435-440 (1982); and (2) governmental regulations that completely deprive the owner of all economically beneficial use of the property. *Shelly, supra*, citing *Lucas v. South Carolina Coastal Council*, 505 U.S. 1003, 1019 (1992).

{¶14} Beyond these two narrow categories, temporary takings are governed by the standards set forth in *Penn Cent. Transp. Co. v. New York City*, 438 U.S. 104 (2005). *Shelly, supra*. “*Penn Cent.* recognizes an ad hoc, factual inquiry that requires the examination of the following three factors to determine whether a regulatory taking occurred in cases in which there is no physical invasion and the regulation deprives the property of less than 100 percent of its economically viable use: (1) the economic impact of the regulation on the claimant, (2) the extent to which the regulation has interfered with distinct investment-backed expectations, and (3) the character of the governmental action.” *Shelly, supra*, at ¶19, citing *Penn Cent., supra*, at 124.

{¶15} We shall first address Respondents’ arguments that Relators have failed to establish a clear legal right to relief or Respondents’ concomitant duty to perform the requested actions as it relates to their categorical taking claim. Relators attached the transcript of the hearing before the Commission to their original petition. At the hearing, testimony established that, even though operations of AWMS #2 Well have been suspended, AWMS #1 Well is operational. Moreover, at the time of the hearing, the well-site property still processed, stored, recycled, treated, and disposed of brine. As a

result, AWMS president Steve Kilper testified at the hearing, the property “generates revenue.”

{¶16} Although Relators ceased operations of the AWMS #1 Well in 2015, this does not imply the property is without value. Mr. Kilper testified during deposition that certain third parties had expressed an interest in using the property, but no agreement was finalized. This suggests the property could be sub-let to other parties and thus revenue could be passively earned, despite the voluntary shutdown of AWMS #1 Well and the regulatory shutdown of AWMS #2 Well.

{¶17} Moreover, Andrew Adgate, Underground Injection Control Manager of Division of Oil and Gas Resources Management, submitted a report on potential alternative uses of Relators’ property. Mr. Adgate opined that the property and its existing structures could be used to operate waste facilities to store, treat, process, or dispose of brine or other substances associated with oil and gas operations. Accordingly, even though Relators voluntarily ceased operations of AWMS #1 well, they have not been completely deprived of all economically beneficial use of the property. The foregoing demonstrates that, notwithstanding the order suspending operations of AWMS #2 Well, there has not been a complete elimination of the property’s value. Viewing the evidence in Relators’ favor, there is no genuine issue of material fact relating to their categorical taking claim. As such, they are not entitled to require Respondents to commence appropriation proceedings on this basis and Respondents are therefore entitled to judgment as a matter of law on that issue.

{¶18} We shall next address Respondents' position that the Suspension Order did not result in a partial regulatory taking and thus Relators are not entitled to relief in mandamus on that issue.

{¶19} *Penn Cent.* requires a court to consider three factors in evaluating whether a partial regulatory taking has occurred; to wit (1) the economic impact of the regulation on Relators, (2) the extent to which the regulation has interfered with Relators distinct investment-backed expectations, and (3) the character of the governmental action. *See Id.* We shall first consider the character of the government action.

Character of the Suspension Order

{¶20} Respondents note that the Division is vested with the statutory authority to regulate oil and gas activities, including the disposal of brine, to promote public health, safety, and welfare. Moreover, Respondents note neither they, nor Relators were aware the injection well site was within 1,000 feet of an earthquake fault line when Relators obtained their permit. They emphasize, however, that "changed circumstances may make what was previously permissible no longer so. So also does the fact that other landowners, similarly situated, are permitted to continue the use denied to the claimant." *Lucas v. S.C. Coastal Carolina*, 505 U.S. 1003, 1031 (1992). Respondents additionally cite to the Tenth Appellate District's decision which upheld the Suspension Order as reasonable and engaged in a lengthy discussion of the character of the order. In light of these points, Respondents maintain, the character of the order militates heavily against Relators' request for writ of mandamus.

{¶21} Relators contend that even though Respondents' actions are purportedly premised upon public health and safety, these concerns do not automatically negate

their taking claim. Relators maintain they have complied with all requirements and conditions placed upon them and Respondents have failed to work with them in re-initiating operations. Relators assert they have proposed conditions to restart operations that are consistent with Respondents' policies and practices; Relators claim, however, Respondents have ignored their proposals. They contend the delay has been unreasonable and the Suspension Order is tantamount to a complete termination of operations. In their view, the character of the order is unreasonably onerous and, as a result, they assert there are genuine issues of material fact on this point precluding summary judgment.

{¶22} In evaluating the character of the Suspension Order, we emphasize that the issue of the reasonableness of the Suspension Order has been fully litigated and the Tenth District's opinion has preclusive effect on that point. The doctrine of res judicata covers two related concepts: claim preclusion and issue preclusion, traditionally known as collateral estoppel. *O'Nesti v. DeBartolo Realty Corp.*, 113 Ohio St.3d 59, 2007-Ohio-1102, ¶6. As relevant to our case, issue preclusion "serves to prevent relitigation of any fact or point that was determined by a court of competent jurisdiction in a previous action between the same parties or their privies." *Fort Frye Teachers Assn., OEA/NEA v. State Emp. Relations Bd.*, 81 Ohio St.3d 392, 395 (1998). Issue preclusion applies even if the causes of action differ. *Id.* The character of the order has been deemed reasonable as a matter of law and that judgment was issued in an action between the same parties. Collateral estoppel therefore bars Relators from challenging the reasonableness of the underlying order.

{¶23} Notwithstanding the preclusive effect of the Tenth District’s opinion on the issue, a few additional points underscoring the reasonable character of the order bear emphasis. Relators’ expert, Michael Hasting, a geophysicist, as well as the Chief agreed that the seismic events in 2014 were likely caused by the injection activities of AWMS #2 Well. And, in his December 2017 report, which addressed the Division’s actions in relation to Relators suspension, the Chief stated:

{¶24} When the Division reviews an application for an injection well, the location and known faults in the immediate area are considered. The Division was not aware of known faults in the immediate area and pre-injection seismic monitoring detected no nearby events. After two seismic events in close proximity to the AWMS #2 injection well, the Division now has evidence of a fault in the immediate area. *The Division does not know the size or energy contained in the fault, but in other similar instances, the energy of the seismicity has increased substantially from one event to another. The urban setting of the AWMS #2 injection well increases the potential for damage resulting from continued seismicity. Nine schools and multiple neighborhoods are located within close proximity of the AWMS #2 injection well.* (Emphasis added.)

{¶25} During his testimony at the hearing before the Commission, the Chief specifically stated that schools, neighborhoods, various forms of infrastructure, as well as the Niles Fire Department are within a two-mile radius of Respondents’ operation. And, after discovering the active fault line in light of the seismic events, which were strongly linked to Respondents’ injection activities, the Chief asserted the Division’s risk assessment changed such that it was unclear that any injection activities could be safe. This was so especially in light of the likelihood that any future induced seismic event would be incrementally more severe than the previous events.

{¶26} Relators nevertheless contend that, regardless of the various circumstances surrounding the Suspension Order, Respondents have acted in an

unreasonably dilatory fashion in addressing what conditions must be satisfied to reinitiate operations of AWMS #2 Well. At the hearing before the Commission, the Chief detailed the highly-involved process in creating a state-wide policy. He stated:

{¶27} We're in the process of trying to develop those criteria. We're not there yet. Back in September of 2013, I approached the executive director of the Interstate Oil and Gas Compact Commission, which is a commission of state governors for oil and gas-producing states. Ohio is a member state. I represent our governor in that organization.

{¶28} And I also approached the executive director of Ground Water Protection Council. That's a national organization where states that run injection programs are for the most part members of that organization, and it's probably the leading organization for groundwater protection and injection activities in general.

{¶29} So I approached those directors and asked them if they would help me get a group going through what they have as states' first initiatives. They pull states together to help states decide how states should address and handle problems like induced seismicity. So in September I approached them. In March of 2014, we held our first face-to-face meeting. Mr. Warstal and I flew to Oklahoma. We met with our counterparts from Oklahoma, Kansas, Texas, and Arkansas, and we began the group.

{¶30} * * *

{¶31} The risk assessment. Part of the group is creating, how do we communicate the seismic data? How do we make it available to people so they can review it as well? How do we communicate the seismic event? Essentially what we're creating is a toolbox of scientific methodology to evaluate the technical and risk-based issues associated with this. We're creating a process where all these experts from all around the country are saying, like on the seismic equipment, here are the types of seismic equipment, here's its limitations, here's its advantages, here are costs, here's where I would use it, here's where I wouldn't use it, so that people like me can make better decisions when we evaluate these problems.

{¶32} We have a goal, and I'm extremely confident we will meet this goal. In May, the Interstate Oil and Gas Compact Commission has its business meeting. We're going to present a draft document to them that has all this information in it, all this advice to regulatory

programs. In September, the Ground Water Protection Council and Interstate Oil and Gas Compact Commission are having a combined meeting. We hope to present a final document to those two organizations to be used as a reference by all regulatory programs, including us.

{¶33} From that, and in parallel with that development, we in Ohio will develop the Ohio-specific version of that document. That will then turn into an Ohio Specific guideline. It will be a guideline for industry. It will be a guideline for our staff. It will make things known and more predictable. And then we will wrap a policy around that that says this is how we're going to implement it and this is what it means.

{¶34} The foregoing demonstrates that the procedure for developing a state-wide policy for seismic regulation is a complicated and time-consuming process. It involves meeting with various regulatory bodies and information sharing with officials from other states. After working with various state regulators, industry experts, and consultants, the Chief, in his December 2017 report, stated the Division's knowledge relating to induced seismicity increased significantly. As a result of this increased knowledge, the Division determined that a policy on induced seismicity for injection wells could not be applied on a statewide basis. In lieu of the policy, the Division elected to treat each injection-well site on a case-by-case basis. Given this decision, the Chief maintained that operations of AWMS #2 Well should not be resumed until the Division received and approved of a detailed plan, drafted by AWMS, that would include risk assessment criteria. The Chief recognized that AWMS had previously submitted a plan to resume operations, but, after reviewing the plan, the Division found it to be overly generic and inadequate. As of the December 2017 report, our record does not indicate AWMS had submitted an alternative plan that meets the criteria set forth in the Chief's report.

{¶35} In light of the process detailed by the Chief relating to interstate cooperation and information sharing on induced seismicity and the ultimate decision to evaluate each well on an individual basis, as well as Relators' failure to submit a more comprehensive plan, we fail to see how the Division has acted in an unreasonably or unnecessarily dilatory fashion.

{¶36} Next, Relators assert that they are being treated unfairly because similarly situated operations in Washington County have been allowed to continue despite consistent seismic events and those wells' proximity to the city of Marietta, a relatively populated area.

{¶37} At the hearing before the Commission, the Chief testified that, in its investigations of the Washington County seismic activity, the Division concluded the operations were not inducing seismicity. Alternatively, upon evaluating the activity occurring near Relators' operations, the Division, along with the Geologic Survey and a separate consultant, concluded there was strong evidence that Relators' Well #2 induced the seismic events. The Chief noted that the proximity of well construction to the Precambrian basement rock in the earth's crust is an important factor in evaluating whether injection induces seismicity. He stated that the Washington County site had just under a one-mile separation from the Precambrian rock, whereas AWMS #2 Well was significantly closer, less than 500 feet from the Precambrian rock. And, in his December 2017 report, the Chief stated that the Division's actions are consistent with responses to other incidents of seismicity. To wit, he observed:

{¶38} Comparing AWMS's events to others like Washington County and Northstar [Well #1, Youngstown] events, reveals that the Division's approach is consistent given the circumstances of each case. In both the AWMS and Northstar incidents, the injection wells

penetrate the deepest formation above the Precambrian basement rock, inject through an open-hole well construction, and detected events occurred in an escalating nature at depths within the Precambrian basement rock. This can be contrasted with the incident in Washington County, where the injection well is completed as perforations through casing in a formation separated from the basement by more than 5050 feet.

{¶39} According to the Chief, the relative depths of the wells in question and their proximity to the Precambrian basement are pivotal factors for the Division's risk assessment and the measures it takes to regulate the operations. Pursuant to statute, "[t]he division has sole and exclusive authority to regulate the permitting, location, and spacing of oil and gas wells and production operations within the state." R.C. 1509.02. Given the above points, we conclude there are sufficient differences between Relators' operations and the Washington County operations to reasonably justify the Division's different treatment of the relative injection sites.

{¶40} In light of (1) the Tenth Appellate District's legal conclusion that the Suspension Order is reasonable as a matter of law; (2) the temporal and spatial relationship of the seismic events and Relators' activities; (3) the proximity of the operations to an actual fault line and the Precambrian basement rock; (4) the views of the experts, including the Chief, regarding the causal relationship between Relators' operations and the seismic events (induced seismicity); (5) the empirical likelihood that induced seismic activity could amplify if operations are continued; (6) the proximity of the injection sites to populated urban areas; and (7) the Chief's proclamation that the Division would work with AWMS if it provided a sufficiently detailed, scientific plan to re-initiate operations, we conclude the character of the Suspension Order is neither unfair nor arbitrary. Thus, considering the totality of the circumstances, there is no genuine

issue of material fact that the character of the order at issue protects the public's health and safety from the realistic potential of increased induced seismicity resulting from injection activities on AWMS #2 Well.

Distinct Investment-Backed Expectations

{¶41} Relators, in their memorandum in opposition, acknowledge the distinct-investment-backed-expectations analysis encompasses two prongs. The first looks at Relators' actual expectation, i.e., an expectation "would not really be 'investment-backed' unless they actually believed in a certain outcome and entered the program in reliance on it." *Cienega Gardens v. United States*, 331 F.3d 1319, 1346 (Fed.Cir. 2003). The second is whether those expectations are objectively reasonable. *CCA Associates v. United States*, 667 F.3d 1239, 1247 (Fed. Cir. 2011).

{¶42} In this matter, Relators have established they actually had a subjective expectation their operations would make a profit. And, after obtaining the necessary permits and adhering to all conditions imposed by the Division, they reasonably expected to earn an economic return on their investments. The issue therefore turns on whether their subjective expectations, in light of the surrounding circumstances that existed at the time they sought investors as well as the circumstances that developed once operations commenced, were objectively reasonable.

{¶43} In 2011, a near-4.0 event occurred at the Northstar Well #1, near Youngstown. This well was approximately seven miles from Relators' injection site. Although this event was not in the immediate vicinity of Relators' property, it placed Relators on notice that some significant seismic activity had occurred within the region.

{¶44} In a Confidential Offering Memorandum submitted by AWMS Holdings, LLC to prospective investors in September 2013, Relators identified “risk factors” emphasizing that the securities at issue “involve a high degree of risk” and prospective investors should be aware of these risks. The Memorandum highlights the “continuing risk” of “seismic events similar to the one that occurred in the Youngstown, Ohio area.” Relators were consequently not only aware that, even though their site was not adjacent to the Youngstown-event site, there were dangers posed by the operations and, significantly, that such dangers were sufficiently foreseeable that they must be disclosed.

{¶45} The Memorandum also noted that, due to the inherent risks of operating a well site, there is a possibility that well operations could be suspended and/or terminated by the OEPA and/or the ODNR. Relators were thus aware that their business investment was subject to heightened oversight and regulation. And, by investing in the business, investors were assuming an acknowledged and significant risk.

{¶46} Furthermore, the Memorandum also outlined certain geologic risks. It stated that AWMS had performed no “subsurface testing.” As a result, the Memorandum disclosed that the adequacy of the geology and the suitability of the wells “will only be known upon drilling, completion, and operation of the wells.” This indicates that AWMS had no ability to predict that the well site(s) would be viable; in effect, investors would have to have “faith,” in light of the significant risks, that after construction and commencement of operations, the wells would perform without a potentially environmentally catastrophic incident.

{¶47} Ultimately, after the two events had occurred in 2014 on Relators' site, Respondents determined there was a fault line in the immediate area. As the Memorandum recognized, Relators did not conduct any subsurface testing and additionally acknowledged that the suitability of the wells would be known after operations commenced. Upon commencement of AWMS #2 Well, the events occurred, Respondents (along with Relators' expert) acknowledged that the events were likely induced by the operations, and suspended operations. Each of these eventualities were foreseen in the Memorandum and duly noted as "risk factors."

{¶48} Relators must demonstrate they had a reasonable investment-backed expectation that they would not be subject to the restraints imposed upon them when they commenced their enterprise by leasing the property. Given the acknowledgements in the Memorandum, in conjunction with the Chief's explanation for entering the Suspension Order, we conclude they could not have possessed such expectations. Relators knew they were embarking on a business venture that is highly regulated, pursuant to Ohio statute, and designed to protect the health and safety of the public. Their disclosures in the Memorandum demonstrate they did not expect they would be free from regulatory oversight with regard to seismic events. And, because they had conducted no subsurface testing, they recognized the suitability of the wells and, by implication, the investment, depended upon how the geology of the area responded to their actual drilling. Of course, Relators hoped that, after obtaining the permits, their operations would persist free of further regulation. This hope, however, was a speculative possibility, not an objectively reasonable expectation. See *Guggenheim v. Goleta*, 638 F.3d 1111, 1120 (9th Cir.2010) ("Speculative possibilities of windfalls do not

amount to ‘distinct investment-backed expectations.’”); see also *Rith Energy, Inc. v. United States*, 247 F.3d 1355, 1365 (Fed. Cir.2001) (Coal lessee could not show reasonable investment-backed expectation that it would not be subject to type of regulation imposed when it acquired leases.); *M & J Coal Co. v. United States*, 47 F.3d 1148, 1154 (Fed.Cir.1995), (Mining company “knew or should have known that it could not mine in such a way as to endanger public health or safety and that any state authorization it may have received was subordinate to the national standards that were established by SMCRA[, the Surface Mining Control and Reclamation Act] and enforced by OSM[, the United States Department of Interior].” See generally *Good v. United States*, 189 F.3d 1355, 1362 (Fed.Cir.1999) (holding that the property owner had no reasonable investment-backed expectations because he “had both constructive and actual knowledge that either state or federal regulations could ultimately prevent him from building on the property”); *Creppel v. United States*, 41 F.3d 627, 632 (Fed.Cir.1994) (stating that one who buys with knowledge of regulatory restrictions on the use of property “assumes the risk of economic loss.”)

{¶49} Although the materialization of the business risks (of which Relators were aware upon seeking investors) may have interfered with their subjective expectations for profit, the manifestation of the risks cannot provide a basis for the inference that Relators’ *reasonable* investment-backed expectations were thwarted by regulations designed to ameliorate the dangers caused by such risks. We therefore conclude Relators have failed to demonstrate a genuine issue of material fact that they possessed reasonable investment-backed expectations that they would not be subject

to restraints, in the form of regulations, that could foreseeably cause their operations to be suspended, perhaps indefinitely, due to induced seismic activity.

{¶50} In light of the foregoing analysis, even assuming the economic impact of the regulation has been severe, Relators have failed to demonstrate (1) the character of the regulation, in light of the circumstances, was unreasonable or unfair; and (2) that the regulation interfered with Relators' objectively reasonable investment-backed expectations. We therefore conclude that no genuine issue of material fact remains to be litigated in mandamus. Relators are not entitled to require Respondents to initiate appropriations proceedings as a matter of law.

{¶51} It is hereby ordered and adjudicated that Respondents are entitled to summary judgment on Relators' petition for writ of mandamus.

THOMAS R. WRIGHT, P.J., CYNTHIA WESTCOTT RICE, J., TIMOTHY P. CANNON, J., concur.