

STATE OF NEW YORK
SUPREME COURT : COUNTY OF TOMPKINS

In the Matter of the Application THE CITY OF ITHACA,
THE TOWN OF ITHACA, , THE TOWN OF ULYSSES,
THE VILLAGE OF UNION SPRINGS, John V Dennis, individually and as President of
CAYUGA LAKE
ENVIRONMENTAL ACTION NOW (CLEAN), an
Unincorporated Association ,
ALFRED THOMAS VAWTER, JOSHUA J. and JENNIFER L.
LAPENNA, RODNEY and CYNTHIA HOWELL, KENT and
HEATHER STRUCK, JUDITH R. SCOTT, WILLIAM HECHT

Petitioners,

For a Judgment Pursuant to Article 78 of the
New York Civil Practice Laws and Rules

VERIFIED PETITION

vs.

Index No. _____

THE NEW YORK STATE DEPARTMENT OF ENVIRONMENTAL
CONSERVATION, THE NEW YORK STATE OFFICE OF GENERAL SERVICES,
and CARGILL INCORPORATED

Respondents.

Petitioners by their attorneys, Lippes & Lippes, Richard J. Lippes, of counsel,
respectfully allege as follows:

I. INTRODUCTION

1. Petitioners are commencing this special proceeding challenging the August 16, 2017, modified mining permit issued to Cargill Incorporated (hereinafter cited as “Cargill”) for its Cayuga Salt Mine, issued by Respondent New York State Department of Environmental Conservation (hereinafter cited as “DEC”), allowing construction of a new vertical shaft that will extend about 2,500 feet from the land surface to a new one mile tunnel connecting to Cargill’s Cayuga Salt Mine. Petitioners

claim that in issuing the modified mining permit, the DEC violated the New York State Environmental Quality Review Act, § 101, et. seq. of the Environmental Conservation Law (hereinafter cited as “SEQRA”), by not requiring an Environmental Impact Statement prior to issuing the modified mining permit, and by segmenting the consideration of the modified mining permit for the shaft from the tunnel and from the consideration of Cargill’s ongoing mining within their permitted northern reserves, which are dependent upon each other. Therefore, due to the violation of SEQRA, Petitioners seek to void the grant of the modified mining permit, and enjoin any construction of the shaft and tunnel until such time as SEQRA has been appropriately complied with.

II. PARTIES

2. The municipal petitioners described below have each passed resolutions urging the DEC to require an Environmental Impact Statement (EIS) prior to Shaft No. 4 being built. Upon information and belief, underlying each municipality’s participation in this proceeding is a concern for the ecological health of Cayuga Lake and the closely associated ecotourism in the entire Cayuga Lake region, as well as the health and drinking water supplies of its citizens.

3. The City of Ithaca is located at 108 East Green Street, Ithaca, New York. The water supply of about 145 households on West Hill is sourced from Cayuga Lake through Bolton Point Municipal Water. These residents are concerned about the health risks and potential safety hazards associated with ongoing salt mining under Lake Cayuga as are the remaining residents of the City of Ithaca who rely on Bolton Point Municipal Water as an alternative supply on certain days of each year. Cayuga Lake water is more saline than it would be without Cargill’s decades of releases of salt dust and brine into

Cayuga Lake and onto the adjacent watershed. Sodium levels in Cayuga Lake are more than twice as high as the level that EPA and health authorities recognize as hazardous for persons with hypertension. If there is a mine collapse, if the reaming of Shaft No. 4 leads to mine flooding, if the mine is intentionally flooded at decommissioning, if mine-related brine and salt dust releases into the lake continue and/or if mining-related subsidence perturbs any saline artesian aquifer under the lake, the existing salinity problems in Cayuga Lake may be exacerbated. Such outcomes would adversely affect those City of Ithaca residents who rely on lake water for their water supply.

4. The Town of Ithaca is located at 215 North Tioga Street, Ithaca, New York. The water supply of about 96% of its residents (>19,000 people) is sourced from Cayuga Lake. These residents are concerned about the health risks and potential safety hazards associated with ongoing salt mining under Lake Cayuga as described in Section 3 above. Moreover, part of Cargill's mining reserves underlie a portion of Cayuga Lake that is within the Town's jurisdiction.

5. The Town of Ulysses is located at 10 Elm Street, Trumansburg, New York. The Town of Ulysses encompasses lakefront land with the town boundary going out to the middle line of Cayuga Lake and overlying about 630 acres of Cargill's un-mined reserves and already mined voids. Many of their shoreline residents draw water directly from Cayuga Lake. Additionally, Ulysses has four municipal water districts; two use Bolton Point Municipal Water sourced from Cayuga Lake, and the other two use municipal water supplied by the Village of Trumansburg from a near lake aquifer within the Taughannock Falls State Park delta and from a near lake well in the Town of Covert. Residents relying on lake-sourced water are concerned about the health risks and

potential safety hazards associated with ongoing salt mining under Lake Cayuga as described in Section 3 above.

6. The Village of Union Springs is located at 28 Chapel Street, Union Springs, New York and is also on the Lake, but draws no drinking water from the Lake. However, village residents that recreate on the lake and village businesses that rely on tourism, including sport fishing, would be damaged in the event of a mine collapse or mine flooding under the lake. The value of shoreline properties may drop as lake water becomes more saline.

7. Petitioner, Cayuga Lake Environmental Action Now (hereinafter cited as “CLEAN”) is an unincorporated association that was formed in April 2017 for the express purpose of protecting Cayuga Lake from man-made sources of pollution, and from damage to the lake that may be incurred through Cargill mining under the lake, through Cargill’s brine and salt dust releases into the lake, and through mine flooding or mine collapse. Members of CLEAN use and recreate on Cayuga Lake and its shoreline. John Dennis is a co-founder and president of CLEAN, and brings this action on his own behalf and on behalf of the association membership. Petitioner Dennis resides in the Village of Lansing at 893 Cayuga Heights Road, Ithaca, New York.

8. Petitioner Thomas Vawter resides at 107 Ross Road, Lansing, New York. His residence and water well are located within about 0.1 miles of the proposed Shaft No. 4 and as such his property values are vulnerable to the industrialization that the project will bring to the area. Harmful factors may include subsidence, noise, dust, damage to the scenery, increased traffic, lowering of the local water table and possible adverse impacts on groundwater quality.

9. Petitioner Rodney and Cynthia Howell reside at 984 Ridge Road, Lansing, New York. They reside within 0.15 miles from the entrance to the proposed Shaft No. 4 and the one mile tunnel connecting to it. Their property values are vulnerable to the industrialization that the project will bring to the area. Harmful factors may include subsidence, noise, dust, damage to the scenery, increased traffic, lowering of the local water table and possible adverse impacts on groundwater quality.

10. Petitioner Joshua and Jennifer LaPenna reside at 97 Sweazey Road, Lansing, New York. Their new residence (expected completion in April 2018) is believed to be directly over a side tunnel of the one-mile tunnel that would connect Shaft No. 4 to the mine under the lake. Their property values are vulnerable to the industrialization that the project will bring to the area. Harmful factors may include subsidence, increased run off, noise, dust, damage to the scenery, increased traffic, lowering of the local water table and possible adverse impacts on groundwater quality.

11. Petitioner Kent and Heather Struck reside at 236 Bill George Road, Lansing, New York, for about half the year. Their residence lies within the subsidence zones of both Cayuga Salt Mine and the Shaft No. 4 tunnel. The value of their property is threatened by the Shaft No. 4 project, mining under the land, and especially by subsidence related to ongoing closure of the mine and tunnel voids whether flooded or unflooded.

12. Petitioner Judith Scott resides at 64 Sweazey Road, Lansing, New York. Ms. Scott's property is located about 30 yards north of Cargill's permitted mineral reserve area and about 80 yards north of the north boundary of one of the proposed side tunnels for the one mile tunnel connecting Shaft No. 4 to the mine under the lake. Ms.

Scott's residence and water well are another 20 yards further north on the north side of Sweazey Road and they are about a third of a mile north of the likely location of Shaft No. 4. As such, both Ms. Scott's home and water well are within the 35-degree angle of draw subsidence zone of the Shaft No. 4 one-mile tunnel and the well is close enough to the proposed shaft to be affected by adverse impacts to shallow aquifers both during and after shaft construction. Ms. Scott's property values are vulnerable to the industrialization that the project will bring to the area. Harmful factors may include traffic impacts, subsidence, noise, dust, damage to the scenery, lowering of the local water table and adverse impacts on groundwater quality.

13. Petitioner William Hecht resides at 5525 State Route 90, Fire Lane 20, Union Springs, New York. Mr. Hecht resides directly on the shoreline of Cayuga Lake, and as such, regularly hikes and also recreates on the shoreline and on the lake.

14. Petitioner John V. Dennis resides in the Village of Lansing at 893 Cayuga Heights Road, Ithaca, New York. Mr. Dennis is one of the >30,000 persons who relies on Bolton Point Municipal Water which is drawn exclusively from Cayuga Lake. He is an avid kayaker and also sails and motorboats on the lake.

15. Each of the individual Petitioners enjoys the lake for aesthetic and recreational purposes. In the event of a mine collapse or flooding their use and enjoyment of the lake would be severely and adversely impacted, as further indicated herein.

16. Respondent New York State Department of Environmental Conservation's headquarters is located at 625 Broadway, Albany, New York. They are the New York State agency responsible for approving or denying mining permits under Environmental

Conservation Law, Article 23, Sections 2701 et. seq. As such, they have jurisdiction over the respondent Cargill and its salt mining operation and are responsible for assuring that SEQRA is fully complied with prior to a determination to approve or deny a permit.

17. Respondent New York State Office of General Services is located at 41st Floor, Corning Tower, Empire State Plaza, Albany, New York. They are a New York State Agency responsible for leasing of mineral resources under land and bodies of land belonging to the People of the State of New York under Public Lands Law of the State. As such, this Agency, upon information and belief, should assure that all lands leased by it to Respondent Cargill are in compliance with relevant laws and regulations, including compliance with laws and regulations required in order for DEC to grant any permits to operate.

18. Cargill, Inc. is a corporation incorporated under the laws of the State of Delaware. Their headquarters are located at Wayzata, Minnesota. As the applicant and recipient of the mining permit and mineral rights lease, they are made a Respondent herein as a party necessary to effectuate the equitable relief requested in this proceeding.

III. FACTS

A. GENERAL FACTS

19. Cargill requested a modified mining permit to construct a vertical shaft, called Shaft No. 4, because Cargill claims that the shaft is necessary to provide better ventilation and emergency egress for miners working in the Cayuga Salt Mine. Ventilation and emergency egress are currently provided by existing shafts that connect

to older parts of the mine, located as much as 6 miles south of current mining operations and about four miles south of the Shaft No. 4 site.

20. While the site of Shaft No. 4 as well as three older existing shafts and the pre-1984 portions of the Cayuga Salt Mine are all located under land along the east shore of Cayuga Lake in the Town of Lansing, County of Tompkins, almost all of Cargill's mining since 1984 has been conducted under Cayuga Lake itself. Under-the-lake salt beds, where mineral rights are held by the State of New York, are located partly in the Town of Lansing and partly in the Town of Ulysses (both in Tompkins County), as well as in the Town of Covert in Seneca County, New York. Mining of these beds by Cargill is conducted under a lease agreement between Cargill and the New York State Office of General Services.

21. While Petitioners recognize that ventilation and emergency egress are needed for the health and safety of miners, Petitioners' own injuries from Shaft No. 4 construction have not been properly addressed and balanced against the interests of Cargill. Under the terms of the permit, the construction of Shaft No. 4 is expected to take 18 months and include the drilling of a pilot hole approximately 18 inches in diameter. Subsequent enlargement of the pilot hole will be dug to a shaft diameter of approximately 18 feet and will include an elevator system within the shaft. There will also be construction of a headframe structure 94 feet tall at the land surface, and construction of ancillary facilities such as a parking lot, office and sanitary facilities for commuting miners at the surface. The permitted location for Shaft No. 4, its headframe and sanitary facilities is in the Town of Lansing.

22. CLEAN and its experts have repeatedly made the point that hydrogeology in the vicinity of Corehole 18/Shaft No. 4 is not adequately characterized and cannot support an informed decision on the safety, stability, and dewatering impacts of Shaft No. 4. CLEAN and its experts have expressed similar concerns for structural stability of the bedrock in the vicinity of Shaft No. 4.

23. Geologist Raymond Vaughan, in a letter to DEC dated January 31, 2017, attached as Exhibit A, commented on structural stability issues within the bedrock at the Shaft No. 4 location and above the mine generally, and on whether there are unrecognized water flow pathways within the bedrock. His comments pointed out that additional investigation is needed to determine whether an old and apparently inactive fault intersects Corehole 18. Evidence he presented for such a fault consists of 1) an unexplained gamma “spike” indicative of a repeated section on the gamma log for Corehole 18 and 2) an unexplained increase in stratigraphic thickness (about 50 feet greater thickness in the Bertie-to-Onondaga interval) relative to nearby gas well 31-109-26039. Upon information and belief, any fault that intersects Corehole 18 would likely be relevant to both Shaft No. 4 and continued northward mining, thus adding to the logic that Shaft No. 4 and additional mining need to be treated as a single SEQRA review.

24. Logging of oil and gas wells is a routine practice and can be considered a sufficiently mature technology that an unexplained gamma spike of the magnitude seen in Corehole 18 cannot simply be dismissed without further investigation. On information and belief, even if the fault were old and currently inactive, it could not reasonably be dismissed without identifying whether it is a zone of weakness or a pathway for fluid flow, and especially whether the fault may be reactivated as a result of ongoing settling

and subsidence that occur in the overlying bedrock as the mine and connecting tunnel slowly close. As noted in Vaughan's letter, one consequence may be sporadic slippage along the fault, producing microseismic events, and more substantial reactivation of an inactive fault may be triggered by the ongoing deformation of bedrock above a continually closing mine. Faults such as the Cayuga Lake Fault are already known to exist in the general vicinity of the mine. Upon information and belief, DEC has neither acknowledged nor addressed the comments in Vaughan's letter despite their relevance to structural-stability and flow-pathway issues for Shaft No. 4.

25. Hydrogeologist Andrew Michalski, in a separate letter to DEC dated January 31, 2017, also commented on structural stability issues within the bedrock at the Shaft No. 4 location and above the mine generally, and on whether there are unrecognized water flow pathways within the bedrock. He emphasized the importance of discrete fracture flow, meaning the flow of groundwater through the predominantly bedding plane fractures that exist in bedrock, and also the failure of Cargill and DEC to investigate and characterize this well-known type of groundwater flow. He noted that the isotopic and geochemical evidence leaves no doubt about modern meteoric recharge (post-1960 water) being the major component of water in the Corehole 18 inflow at the Onondaga/Oriskany contact. Upon information and belief, this bedrock contact at the base of the Onondaga Formation is a well-known regional unconformity and groundwater flow pathway. Based on information and belief, the flow of post-1960 meteoric water along this contact/unconformity at Corehole 18 demonstrates a hydraulic connection of the Onondaga/Oriskany aquifer to a huge water reservoir in the valley fill aquifers and Cayuga Lake itself. Given the essentially unlimited water source of the lake, Michalski

pointed out that the meteoric (halite under-saturated) water flowing along the Onondaga/Oriskany contact presents a serious risk of flooding both Shaft No. 4 and the mine, and that the risk of mine flooding from this water source becomes greater as mining progresses northwards in the up-dip direction beneath the lake, and as bedding plane separations are increased by mine subsidence resulting in disproportionately large increase of inflows, in accordance with the “cubic law.” (As he noted, the same unconformity at the base of the Onondaga was a major source of the water that flooded the Retsof Mine.)

26. Michalski concluded that the estimate of inflows to Shaft No. 4 provided by Cargill's consultant Spectra significantly underestimates the likely inflows; that a greater-than-estimated underground storage capacity is needed to accommodate the halite-unsaturated inflows and shaft drilling fluids; and that Cargill should be required to re-assess the Shaft No. 4 inflows in relation to the pilot hole inflows, in order to gain a better understanding of the impact of increased inflows on the mine storage area needs and the stability of the storage area.

27. As mining continues northward under Cayuga Lake, the strata between the roof of the mine and the lake continually thin. Based on information and belief, as little as 80 feet of geological section remains above the unit termed the “Evaporite Section” in certain sections of the Cayuga Lake glacial valley, which means that the mechanically strong layer called the “Carbonate Beam” has been thinned or possibly eroded out at the center of the lake with only weaker shales above the Evaporite Section. The Evaporite Section contains a salt layer currently being mined. Therefore, upon information and belief, the excavations of mine cavities in the zones which may have water penetration

and weakened strata jeopardize the mine roof's stability, and degrade the capacity of the Evaporite Section to resist water intrusion and ceiling collapses in the mine itself.

28. Due to the thinning nature of the strata between the lake and the mine roof, certain adverse impacts may occur to the residents within the Petitioner municipalities, as well as near Shaft No 4. For example, subsidence will occur associated with Shaft No. 4, the connecting tunnel, and the mine itself.

29. Cargill's consultant, RESPEC did a 2013 study on likely subsidence rates associated with the Shaft No. 4 tunnel, but Cargill sought to have this study treated as a trade secret, and only a redacted version of the study has been released to Petitioners.

30. According to hydrogeologist Andrew Michalski, Shaft No. 4 impacts on groundwater resources within the (unexplored) upper 600 feet of bedrock used for local water supplies include both lowering the potentiometric levels in domestic wells and fresh water salinization due to upwelling of saline water induced by shaft drainage.

31. Additional potential adverse effects of the construction of Shaft No. 4 and its connecting mine tunnel along with the inadequacies of the DEC review were expressed in an analysis of the salt mine and its geology done by seismic expert Angus Ferguson and salt geology expert John K. Warren. Their report, released in June, 2017, is attached hereto as Exhibit B, and was submitted to the DEC by Petitioners. The issues that Ferguson and Warren raised in their report are highly relevant but were neither acknowledged nor addressed by DEC.

B. FACTS AS THEY RELATE TO SEQRA VIOLATIONS

32. On September 17, 1997, Cargill applied to renew its Mined Land Use permit and to expand the mine's permitted reserves by 5,056 acres.

33. Based on information and belief, Cargill took the following positions at an October 29, 1998 meeting with the DEC:

- Cargill's mining operations under Cayuga Lake are not subject to DEC jurisdiction;
- Cargill's request for renewal and expansion was a Type II Action under SEQRA;
- Its application was complete as of October 2nd; and
- DEC should issue an approval of the proposed mine expansion without further submissions or departmental review.

34. On January 14, 2000, Cargill and DEC entered into a stipulated agreement in which DEC effectively acceded to Cargill's assertion that its mining operations were not subject to the legal processes ordinarily required by the agency. Under relevant portions of the Stipulation Agreement (attached as Exhibit C), Cargill agreed to provide some additional information and to fund a Department-selected consultant to review the application and future company annual reports. Cargill stipulated that the information submitted to DEC and the consultant must be exempt from disclosure and must be protected to the maximum extent of the law. It provided the information with the express statement that it was not waiving its claim of not being subject to DEC jurisdiction.

35. Pursuant to the Stipulation Agreement, Cargill submitted an "Expanded Environmental Assessment" on December 27, 2000. Because this was not a formally

responsive SEQRA document, it was not subject to public review or comment. It consisted of Volume I (Mined Land Use Plan), Volume II (Expanded Environmental Assessment), Binder 1 which included text, figures, and tables, and Binder 2 which provided plates and maps. This document is still not fully publically available.

36. The renewal application was published in DEC's Environmental Notice Bulletin on August 14, 2002.

37. On June 2, 2009, OGS issued a consent order modification agreement in which a January 12, 1995 consent order was modified "to add two parcels aggregating 5,996 acres to the mine" without having required an environmental review.

38. On April 8, 2015, DEC published in the Environmental Notice Bulletin Cargill's permit modification request to add 150.3 acres to the mine area. The notice stated that "there will be no additional surface development associated with this proposal." However, Cargill was seeking a permit to construct the tunnel from Cargill's mine under Cayuga Lake and, in a clearly associated action, to add a substantial surface development at that location where they purchased land in April 2012 to construct Shaft No. 4. Therefore, the information provided in the Environmental Notice Bulletin was incorrect, and did not provide adequate legal notice of the actual permit request.

39. On April 1, 2015, DEC issued a Negative Declaration relating to the 150.3-acre tunnel portion of this project. The basis for the negative declaration included the specious arguments that "there will be no additional surface development associated with this proposal" and "All other existing operations will remain the same." This latter claim is contradicted by Cargill's subsequently revealed plan to store about 5.5 million gallons of Shaft No. 4 leakage and process waters in the mine under the lake when for the

previous 31 years Cargill has never had permission to store shaft leakage waters in the mine under the lake.

40. On June 2, 2015, Cargill's proposed 150.3-acre permit modification was approved by the DEC.

41. On October 21, 2015, Cargill applied for the permit modification to install the new ventilation and access shaft.

42. On June 30, 2016, DEC issued a Negative Declaration relating to the shaft portion of this project. The basis for the Negative Declaration included the determination that the ventilation shaft would have no impact on Cargill's current and future mining operations under Cayuga Lake.

43. In an August 30, 2016, application to the Tompkins County Industrial Development Agency, Cargill asserted that the Shaft No. 4 project would provide "the infrastructure and fresh air for an additional 30 years of mining at the Cayuga Mine."

C. THE DEC'S LACK OF COMPLIANCE WITH SEQRA

44. The regulations promulgated pursuant to SEQRA state:

"In adopting SEQRA, it was the Legislature's intention that all agencies conduct their affairs with an awareness that they are stewards of the air, water, land and living resources, and that they have an obligation to protect the environment for the use and enjoyment of this and all future generations."

6 NYCRR Section 617.1(b)

45. The regulations contained at 6 NYCRR § 617.7 indicate that an environmental impact statement must be prepared if the proposed action "may include the

potential for at least one significant adverse environmental impact.” 6 NYCRR § 617.7(a)(1) [emphasis added].

46. Conversely, to determine that an EIS will not be required for an action, “the lead agency must determine either that there will be no adverse environmental impacts or that the identified adverse environmental impacts will not be significant.” 6 NYCRR § 617.7(a)(2).

47. Whether or not to approve a permit for the Mine was correctly determined to be a Type I action. As indicated in the regulations at 617.4(a):

“The purpose of the list of Type I actions in this Section is to identify, for agencies, project sponsors and the public, those actions and projects that are more likely to require the preparation of an EIS than unlisted actions. All agencies are subject to this Type I list.

(1) This Type I list is not exhaustive of those actions that an agency determines may have a significant adverse impact on the environment and requires the preparation of an EIS. However, the fact that an action or project has been listed as a Type I action, carries with it the presumption that it is likely to have a significant adverse impact on the environment and may require an EIS. For all individual actions which are Type I or Unlisted, the determination of significance must be made by comparing the impacts which may be reasonably expected to result from the proposed action with the criteria listed in subdivision 617.7(c) of this part.”

6 NYCRR 617.4(a)

48. Therefore, in determining whether or not there may be significant adverse environmental impacts, the regulations at 6 NYCRR § 617.7 list the following factors, among others, which if they exist, would require the preparation of an environmental impact statement [hereinafter cited as “EIS”]:

“(i) A substantial adverse change in existing air quality, ground or surface water quality or quantity, traffic or noise levels; a

substantial increase in solid waste production; a substantial increase in potential for erosion, flooding, leaching or drainage problems;

•••

(vii) The creation of a hazard to human health;

(viii) A substantial change in the use, or intensity of use, of land including agricultural, open space or recreational resources, or in its capacity to support existing uses;

•••

(xi) Changes of two or more elements of the environment, no one of which has a significant impact on the environment, but when considered together result in a substantial adverse impact on the environment....”

6 NYCRR § 617.7(c)(1).

49. The lead agency is required to apply a “hard look standard” in fulfilling its SEQRA responsibilities, which requires an agency to:

- “(1) Identify all areas of environmental concerns and
- (2) Take a hard look at the environmental issues identified; and
- (3) Provide a reasoned elaboration for the decisions that are made, including whether or not to do an Environmental Impact Statement.”

50. Petitioners allege that in issuing the Negative Declarations on April 1, 2015 and on June 30, 2016, the DEC did not meet the requirements of SEQRA, because they have not met the hard look standard by identifying relevant areas of environmental concern, taking a hard look at those areas and have not made the required reasoned elaboration of the basis for their determinations.

51. Moreover, in the Negative Declarations the DEC merely adopted the applicant’s conclusory statements, and relied solely on the applicant’s submissions, without doing an independent analysis of the potential adverse environmental consequences, as required by SEQRA and its regulations.

52. In spite of the significant comments and information supplied by the Petitioners to the DEC, and the indication that other studies need to be carried out in order for the DEC to be able to assure that there will be no adverse effects on the environment, the DEC ignored the need for those studies as indicated by statements contained in Exhibit B.

53. Therefore, the second Negative Declaration ignores Cargill's \$1.5m seismic study of the project area and of Cargill's mine and salt reserves under Cayuga Lake done by Bay Geophysical in May 2016. While this study remains unreleased by DEC, a subsequent analysis of the salt mine and its geology done by seismic expert Angus Ferguson and salt geology expert John K. Warren and released in June, 2017, is attached hereto as Exhibit B. As noted above, the important issues raised by Ferguson and Warren have not been acknowledged or addressed by DEC.

54. Recommendations within the Ferguson and Warren report indicate that the permit should not be issued because, on information and belief, integration of public domain seismic data from Cayuga Lake with the lake's known geology and cross ties to more regional salt geology, especially those in Himrod and Retsof Mines located in this region of New York State, illustrate the following serious environmental and geological concerns:

(a) Glacial downcutting in Cayuga Lake has cut into the seismic unit known as the "Carbonate Beam";

(b) In certain sections of the Cayuga Lake glacial valley, as little as 80 feet of geological section remains above the unit termed the "Evaporite Section."

This means that the carbonate beam has been thinned or possibly even eroded

out at the center of the lake with only weaker shales of the Camillus Formation above the evaporate unit. The evaporate unit contains the ore level salt layer currently exploited in the Cayuga Salt Mine, as well as younger salt layers and their remnants above;

- (c) Penetration of ice flexure driven groundwater likely explains the long-term mechanical weakness zones in the Evaporite Section in the vicinity of the mine workings in the former Himrod and Retsof mines, and similar undersaturated groundwater penetration likely occurred within the downcut valley thalweg beneath Cayuga Lake;
- (d) Rock textures in a core in the Evaporite section can be used to identify zones of undersaturated water penetration, but Cargill is unwilling to release the high-resolution photos of their Corehole 18 cores that would enable independent evaluation;
- (e) Excavation of mine cavities in such water-penetrated and weakened strata creates problems in mine roof stability;
- (f) Seismic definition of the depth of the thalweg downcutting into the carbonate beam and ice flexure water penetration, with associated alteration and dissolution of the Evaporite Section, explains the positions of known salt anomalies in the vicinity of the current workings of the Cayuga Salt Mine;
- (g) Seismic analysis of the public domain data from Cayuga Lake and tentative mapping of the glacial valley thalweg shows stability and mine problems associated with Carbonate Beam downcutting into the Evaporite section.

- (h) When the Akzo Nobel mine roof collapsed in Retsof, New York, a substantial portion of the Genesee Valley was dewatered, with residents within the valley either losing their water entirely, or their water being significantly polluted.
- (i) Unless an unexpected hydraulic connection is encountered during boring of Shaft No. 4, the construction of this project itself would not trigger a mine collapse. However, by enabling up to 30 more years of mining northward into an increasingly thinning bedrock zone could result in mine collapse and this should be considered a long term impact of allowing the construction of Shaft No. 4.

55. Further, based on the Ferguson and Warren Report, and other relevant data and seismic testing, the DEC should immediately halt any further exploitation of this thinning bedrock zone until the following have been completed and reviewed:

- (a) A 3-D seismic survey, or detailed 2-D survey, with acquisition parameters focused on mapping the glacial valley floor and the degree of downcutting in the Carbonate Beam and the underlying Evaporite Section (the 2016 study by Bay Geophysical should be released for review whether or not it meets all these criteria);
- (b) The same survey should be used to construct a salt anomaly map that defines the position of known and future mine workings with respect to the glacial valley thalweg;

(c) The salt core at borehole 18 should be made available to independent experts for examination of salt textures indicative of ice-flexure driven penetration of undersaturated waters.

56. Because the DEC ignored the safety hazards of continuing mining that will be enabled by the construction of Shaft No. 4 and the new tunnel, they failed to identify both the safety hazards and take a hard look at the information necessary to quantify those safety hazards.

57. Moreover, without considering the safety hazards indicated, and the importance of understanding the geologic stratigraphy and structure of the bedrock that surrounds and overlies the mine, including the bedrock at the Shaft No. 4 site, and given the subsurface imaging that can be done by a seismic survey to identify geologic stratigraphy and structure, DEC failed to identify and take a hard look prior to issuing its Negative Declaration and permit without acknowledging, consulting, and/or relying on a seismic survey of Cayuga Lake and the Shaft No. 4 area that was done on behalf of Cargill in May 2016, and also allowing public access of such study in its entirety for review and comment, and without considering and performing the necessary studies indicated by Ferguson and Warren.

(D) THE DEC'S SEQRA REVIEW IMPROPERLY SEGMENTED CONSIDERATION OF POTENTIAL SIGNIFICANT ADVERSE EFFECTS OF THE SHAFT NO. 4 FROM ITS CONNECTING TUNNEL AND CONTINUING ENLARGEMENT OF THE MINED VOIDS

58. The DEC SEQRA review only considered whether or not there would be significant adverse environmental consequences from the digging and use of Shaft No. 4, without considering the potential adverse environmental consequences of the one mile

tunnel and ongoing mining under Cayuga Lake, in spite of the fact that Cargill asserted in its August 30, 2016, Application to the Tompkins County Industrial Development Agency/Tompkins County Development Corporation that Shaft No. 4 was necessary for ventilation and miners' safety due to the continuing enlargement of the salt mining, and the one mile tunnel would only be necessary if further northward salt mining took place and Shaft No. 4 was in fact constructed. Therefore, these three actions are dependent upon each other. The one mile tunnel is not necessary unless Shaft No. 4 is constructed, and according to Cargill, both are necessary for continued salt mining "for an additional 30 years of mining at the Cayuga Mine."

59. The SEQRA regulations indicate that "[a]ctions commonly consist of a set of activities or steps" and specifies that "[t]he entire set of activities or steps must be considered the action, whether the agency decision-making relates to the action as a whole or to only a part of it." 6 NYCRR 617.3.

60. SEQRA regulations expressly provides that "[c]onsidering only a part or a segment of an action is contrary to the intent of SEQRA." SEQRA defines "segmentation" as "the division of the environmental review of an action such that various activities or stages are addressed under this part as though they were independent, unrelated activities, needing determinations of significance." 6 NYCRR § 617.2(A & G).

61. In addition, the SEQRA regulations indicate that "if a lead agency believes that circumstances warrant a segmented review, it must clearly state in its determination of significance and in any subsequent EIS the supporting reasons for the segmentation and must demonstrate that such review was clearly no less protective of the environment.

Related actions should be identified and discussed to the fullest extent possible.” 6
NYCRR § 617.3(G)(1) . The DEC did not provide these reasons.

62. The interdependence of Shaft No. 4 and its connecting tunnel is apparent, and without the Shaft No. 4 and connecting tunnel mining activities could not progress northward under the lake, since according to Cargill, the Shaft and connecting tunnel are necessary to provide ventilation and access and egress to enable another 30 years of mining under the lake.

63. Therefore, by looking at each segment and actions separately, DEC failed to take a hard look, or understand, their interrelations and the significant adverse effects that these actions may have on the Petitioners and if ongoing mining continues under the lake, the potential catastrophic consequences of a mine roof collapse.

IV. CAUSE OF ACTION: VIOLATION OF SEQRA

64. Petitioners repeat, reallege and incorporate each paragraph hereinbefore mentioned.

65. In issuing the Negative Declaration of June 30, 2016 prior to the announcement of a public comment period that began on September 3, 2016, DEC failed to consider the many relevant issues brought to their attention by Petitioners and others, and by so failing, violated the hard look standard required to identify potential environmental concerns, take a hard look at them, and give a reasoned elaboration for their determination that there will be no significant adverse consequences from allowing the construction of Shaft No. 4.

66. The DEC also improperly segmented the review of Shaft No. 4 from the new tunnel and ongoing mining under Cayuga Lake.

67. No previous proceeding concerning these issues has been brought in this or any other Court.

WHEREFORE, Petitioners respectfully pray that the Court void the actions of the DEC in issuing the modified mining permit and enjoin any activity resulting in the digging of Shaft No. 4, the new tunnel and ongoing mining in the permitted northern reserves until SEQRA has been fully complied with and until production by DEC and Cargill of all documents and studies and related information that show the reasoned elaboration of the basis for their determinations.

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December 13, 2017

Yours etc.,



RICHARD J. LIPPES, ESQ.
LIPPES & LIPPES
1109 Delaware Avenue
Buffalo, New York 14209
Telephone: (716) 884-4800
Attorneys for Petitioners