



5 November 2024

Mr. Sean Mahar
Interim Commissioner
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Ms. Jeanette M. Moy
Commissioner
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Dear Interim Commissioner Mahar and Commissioner Moy:

This letter relates to 1) the proposed modification of Cargill’s salt mining permit, which if approved would allow disposal¹ of water and/or brine in level 6 of Cargill’s Cayuga Salt Mine, and 2) the roles of your respective agencies – the Department of Environmental Conservation (DEC) and Office of General Services (OGS) – in reviewing said permit modification prior to any approval of the modification.

We note that DEC has a mandatory duty to protect the state’s environment, and that OGS has a mandatory duty of responsible stewardship of state lands. We also note that the June 2, 2009 Consent Order between OGS and Cargill, quoting their earlier Consent Order dated January 12, 1995, says that “the State granted Cargill the permission to mine rock salt from certain lands under the waters of Cayuga Lake...”

We have seen no subsequent wording that enlarges such permission beyond “permission to mine rock salt.” We therefore conclude that disposal of water and/or brine in lands under the waters of Cayuga Lake does not fall within the permission already given “to mine rock salt.” We would reject any notion that disposal of water and/or brine within mined-out cavities could automatically be allowed as a necessary ancillary activity that falls within the definition of salt mining.

In reaching this conclusion, we rely on the fact that New York’s other operating room and pillar salt mine, the Hampton Corners Salt Mine operated by American Rock Salt, does not store or dispose of water and/or brine within its mine cavities. The predecessor salt mine in Livingston County, the Retsof Salt Mine, also pumped their shaft leakage waters to the surface. Similarly, the Detroit Salt Mine pumps their shaft leakage waters to the surface.

¹ We use the term “disposal” whereas Cargill prefers the term “storage” even though DEC’s third party mining consultant, John T. Boyd, has reported in one or more annual reviews of Cargill reports that portions of the 4-level mine used for “brine storage” have become unstable rendering further access by staff too risky.

And, while there may be some other salt mines on the planet where shaft leakage waters are stored in the mine, this is not a necessary component of salt mining. Cayuga Salt Mine is underlying about 22% of Cayuga Lake, New York's second largest Finger Lake, primarily in the Town of Lansing and the Town of Ulysses. The only case of a freshwater lake draining into a salt mine resulted in 1980 in that lake—Lake Peigneur in Louisiana--becoming permanently saline.

Given the long-term risks to Cayuga Lake, we are proposing that Cargill be required to post a \$10B environmental bond with New York State until such time as the mine voids have completely closed. This is a process that can take as little as 15 years, but according to one Cargill consultant, Leo L. Van Sambeek of RESPEC, the process at Cayuga Salt Mine could take more than 500 years.²

In our understanding, storage or disposal of water and/or brine in lands under the waters of Cayuga Lake would be a violation of the current Consent Order (sometimes called “lease”) under which OGS allows Cargill to mine rock salt from certain lands under the waters of Cayuga Lake.

Such a violation – especially given the likelihood of future adverse environmental impacts resulting from storage or disposal of water and/or brine in lands under the waters of Cayuga Lake – falls squarely in the province of DEC. The Public Lands Law (PBL § 75(7)(g)(ii)) recognizes this possibility:

If the commissioner of environmental conservation notifies the commissioner [of OGS] of any failure to comply with conditions of a lease, easement or other interest, the commissioner shall investigate such suspected violation. The commissioner [of OGS], on his or her own initiative or at the request of the commissioner of environmental conservation, shall thereafter take enforcement action as described herein or request the attorney general to institute an action to enjoin such violation and to recover any damages therefor.

There are of course administrative procedures for modifying permits and/or leases which could potentially authorize storage or disposal of water and/or brine within mined-out cavities under the lake. To the extent that such procedures involve discretionary approvals by state agencies, the State Environmental Quality Review Act (SEQRA) governs the type of review needed. Given the circumstances summarized here, the proposed modification of Cargill's permit would apparently require the participation of OGS as an “involved agency.” As defined in the SEQRA implementing regulations at 6 NYCRR 617.2(t):

Involved agency means an agency that has jurisdiction by law to fund, approve or directly undertake an action. If an agency will ultimately make a discretionary decision to fund, approve or undertake an action, then it is an “involved agency” notwithstanding

² Leo Van Sambeek, RESPEC Consulting & Services. July 2013. Expected subsidence over the Cayuga Salt Mine amended area. Topical Report RSE-2361 prepared for Cargill Deicing Technology, Lansing NY. P. 9; “Significantly more than 500 years might be required for the mine to completely close by salt creep and the maximum subsidence to be achieved.”

that it has not received an application for funding or approval at the time the SEQR process is commenced....

We refer above to the likelihood of future adverse environmental impacts resulting from storage or disposal of water and/or brine in lands under the waters of Cayuga Lake. We believe both DEC and OGS are well aware of our concerns about future environmental impacts and the underlying evidence that we have presented in various fora during the past several years.

In a letter to CLEAN dated October 16th, 2024, DEC's Matthew Podniesinski wrote: "The water storage modification has been determined to be a Type 1 action and a coordinated review was completed."

We believe that OGS and Town of Ulysses Planning Board, as "involved agencies," or as a "local agency" under 6 NYCRR 617.2(w), should have been a part of that "coordinated review". That review should have taken into account any relevant local zoning or other related laws in the Town of Ulysses. The town appears to have a right under its zoning code to enforce its Lake Shore zone provisions. Its Lake Shore Zone extends to the center line of Cayuga Lake. It appears that Cargill may be violating these and other provisions in Ulysses Town Code, Chapters 212-(A) and (B), and 212-42—212-46. We are writing to state, given these or other relevant provisions of law and/or rules, that the "coordinated review" done to date was not adequate.

We also believe that as involved agencies, OGS and the Town of Ulysses Planning Board, should be a part of the yet-to-be-completed SEQR review of the modification application.

Our technical consultants are fully prepared to provide more information to DEC, OGS, and Town of Ulysses regarding the risks posed by brine disposal in a salt mine located in bedded salt that due to various breaches and falls of salt from panel ceilings is not fully encapsulated by salt.

Our substantive concerns include long-term salinity impacts on Cayuga Lake once the mine is flooded and the >15B gallons of saturated brine becomes pressurized by subsidence. A major procedural concern is that neither Cargill nor DEC nor OGS has the right to proceed with an apparently irreversible flooding of mine cavities under the lake without careful review, including public input, of the alternatives and foreseeable impacts.³

³ In his letter to CLEAN dated 16 October 2024, DEC's Matthew Podniesinski wrote that "The [S3] storage area equates to about 150 acres of the 13,579 acre life of mine". While "life of mine" can refer to the projected number of years that a mine is planned to be in operation, we believe Mr. Podniesinski in his letter is using the term to refer to the total mineral right acreage that Cargill or a successor would be entitled to mine during the lifespan of the mine. Perhaps Mr. Podniesinski was seeking to convey the idea that this 1.1% of Life of Mine for the S3 area was an insignificant portion of Cayuga Salt Mine and thus not sizeable enough to merit concern? We respectfully suggest this would be the wrong inference to make. Here is our reasoning:

First, the two collapse zones at the 7,360-acre Retsof Salt Mine, 2 yard south and 11 yard west, had a combined area of about 18 acres or about 0.2% of the already mined out area of that mine. Retsof and Cayuga Mines share similar geology.

Second, the 6-level of Cayuga Salt Mine has a mined out area under the lake of about 3,040 acres and the mined out area of the S3 zone is about 147 acres. Thus, the S3 area equals about 4.8% of the 6-level mined as of 2023.

Third, 6-level Life of Mine of Cayuga Salt Mine under Cayuga Lake is about 9,435 acres (i.e., total permitted mineral rights under the lake). This 147-acre S3 zone is the northern mined out portion of the approximately 2,651 acre area of Cargill mineral rights under Cayuga Lake that Cargill summarily abandoned in 2014 after a series of

In summary, we ask that an immediate moratorium be placed on further brine disposal in the S3 area and that DEC and OGS respond with descriptions of their plans for addressing the above issues and remedying any deficiencies in the “coordinated review” that has occurred to date.

Sincerely,



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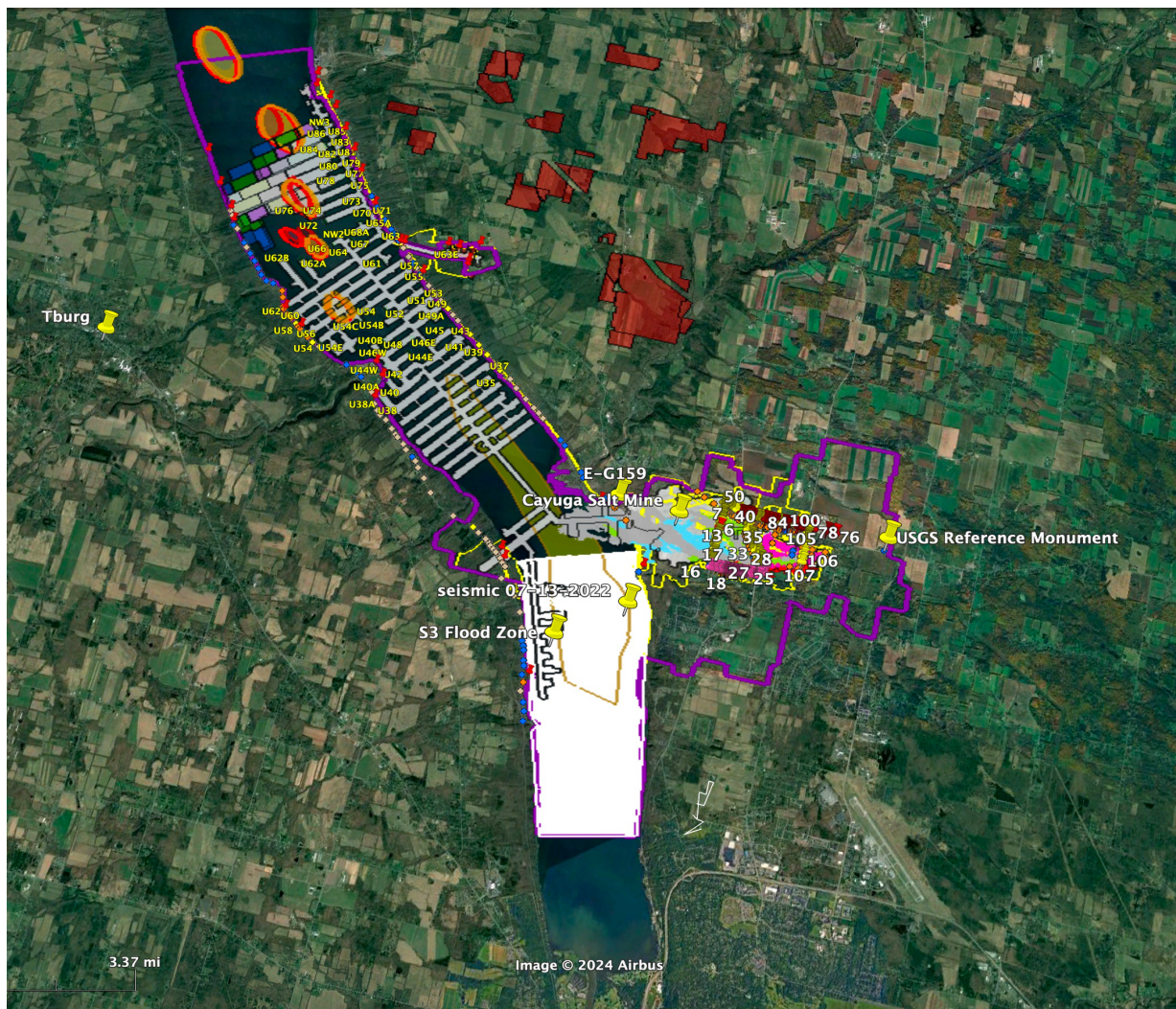
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seismic “pops” convinced their technical teams that it was no longer safe to mine south of mining panel U-12. These sonic “pops” were caused either by breakage of rock in rock strata above the mine or the slippage of rock along faults. [See Figure 1 below]. $2651/9435 \approx 28\%$. It appears that in 2014, Cargill decided this 28% of 6-level Life of Mine under Cayuga Lake was too unstable to ever mine again. Therefore, it makes no sense for Cargill to begin 9 years later a destabilizing flooding event in this abandoned and seismically-unstable 28% of 6-level life of mine under Cayuga Lake prior to the necessary SEQR review and a yet-to-be-granted mine permit modification.

Figure 1. the 2,651-acre Life of Mine area under Cayuga Lake that Cargill abandoned in 2014.



Purple outline = Cargill’s mineral rights within existing Life of Mine

White shared area = S3 area within the larger area of mineral right abandoned by Cargill in 2014 due to seismic instability issues.

Yellow-green line within white area = boundaries of artesian aquifer between the mine and the lake identified by a Cargill 1995 seismic study.

Red areas on land show areas of mineral rights recently purchased by Cargill north and east of Shaft 4.

Red and orange ovals under the lake show the locations of geologic glacially-scoured anomalies A through E as well as Cargill’s portrayal of the Frontenac Point anomaly as an oval rather than a linear fault.

Mining panel number beginning with “U” are shown in yellow.

Source of map: various Cargill maps released under FOIL by DEC and adapted by cartographer Karen Edelstein. John V. Dennis added the white overlay.