



February 12, 2024

Ms. Dereth Glance
Regional Director
NYS Department of Environmental Conservation Region 7
By e-mail to: dereth.glance@dec.ny.gov

Re: NOIA sent to Cargill re application to modify permit to allow flooding to S3 portion of Cayuga Salt Mine

Dear Ms. Glance:

As you may have noticed in my letter to you of February 5th, I say at the end that the renewal of Cargill's mining permit cannot be treated as an automatic administrative procedure due to Cargill's stated need to flood the south end of the mine. On the contrary, a "good hard look" is needed, meaning that DEC and the Office of General Services (OGS) should not allow irreversible flooding of the mine to proceed without evaluation of the consequences. In this letter I provide additional detail, including the following points:

- Proposed storage of water/brine under the lake in the 6-level mine is a material change.
- Proposed storage of water/brine under the lake in the 6-level mine does not fall automatically (ministerially) within the permission to mine rock salt that has been granted to Cargill under the terms of its lease or "consent order" from OGS.
- OGS needs to be an involved agency, along with DEC, in reviewing the proposed storage.
- Proposed storage of water/brine under the lake in the 6-level mine will be, for all intents and purposes, irreversible flooding and disposal rather than temporary storage.
- Proposed storage of water/brine under the lake in the 6-level mine will affect and may foreclose future use of State resources, including mineral resources, in ways that cannot responsibly be ignored or dismissed without appropriate review.
- There are foreseeable consequences of the proposed storage of water/brine under the lake in the 6-level mine.

Proposed storage of water/brine under the lake in the 6-level mine is a material change

The *nature, scale, and irreversibility* of the proposed storage make this a material change. We are aware of and disagree with the statement, on p. 2 of the June 2023 application submitted to DEC by Cargill consultant JMT, that:

There are no proposed changes to Cargill's existing and approved mining operations and methods.

Part of the same application document, in the section of its "S3 Water Storage Overview" quoted below, directly contradicts Cargill's claim of "no proposed changes":

The Cayuga mine's primary water storage has historically been in the abandoned workings on 4-Level. To extend the mine's water storage capacity, Cargill plans to establish a water storage area in the abandoned S3 mains and adjacent E3-E9 panels at the south end of the mine....

This plan of "establish[ing] a water storage area in the abandoned S3 mains and adjacent E3-E9 panels" is clearly a change. Its nature, scale, and irreversibility make it a material change, as we show here and are in the process of demonstrating in more detail. Furthermore, having reviewed 19 years of annual reports to DEC and many other documents, we consider the claim of "no proposed changes" to be untrue for various reasons including:

- 1) Whereas DEC did allow brine storage ponds to be created at U58 and U60 with a storage capacity of 5.5M gallons, these were temporary ponds designed to hold process and leakage waters associated with the upboring of Shaft No. 4. Recent Cargill Annual Reports to DEC do not list any inflows to the mine from Shaft #4 and thus we assume that these ponds are no longer receiving new inflows, and may have been depleted or even emptied for dust control uses on mine roadways, such that they have served a genuine purpose of temporary brine storage rather than the current proposal's purpose of irreversible brine disposal. See below for further discussion of irreversibility.
- 2) Whereas brine storage ponds have been allowed on the 4-level mine for many years, these have been largely under land and wholly within a level of the mine that is no longer contributing to active production in any way.
- 3) Brine from "U12 depressurizing boreholes" (see pp.4-5 of the 2 August 2023 Boyd Report to DEC) is the first instance we know of in the history of this mine for the use of depressurizing boreholes at U12 or anywhere else in the mine. It is also the first Cargill-acknowledged instance of a brine source from within the mine as opposed to from shaft leakage waters or saline water piped from the surface. Such use of depressurizing also constitutes a material change in mining conditions. We are in the process of reviewing this issue in more detail and will provide additional information in the near future.

Proposed storage of water/brine under the lake in the 6-level mine does not fall automatically (ministerially) within the permission to mine rock salt that has been granted to Cargill under the terms of its lease or “consent order” from OGS

The plain language of Cargill’s lease or “consent order” covers the mining of salt. We recognize that OGS as lessor might expand the terms of such lease to cover brine storage or disposal within the portion of the mine that lies under the lake, but any OGS decision to do so would be discretionary rather than ministerial. It cannot be treated as an automatic decision or lack of decision. Note that New York’s other operating rock salt mine, located in Livingston County, is said not to store water/brine underground, so mining of salt doesn’t necessarily encompass underground water/brine storage. *Nor is this exclusively a matter for OGS. DEC has authority under the Public Lands Law (PBL § 75(7)(g)(ii)) to notify OGS of any failure to comply with conditions of a lease, easement or other interest, and may potentially be involved in steps taken to correct such failure.* We bring this issue to DEC’s attention because of the authority thus granted under PBL 75(7)(g)(ii).

OGS needs to be an involved agency, along with DEC, in reviewing the proposed storage

The role of an involved agency is spelled out in the SEQR implementing regulations at 6 NYCRR 617.2(t), which certainly applies to the present circumstances where the proposed water/brine storage needs both a DEC permit modification and an OGS lease modification. We see that the Environmental Assessment Form (EAF) dated June 15, 2023, does not acknowledge either the role of OGS or certain other discretionary decisions mentioned in this letter. Given these omissions, and given the issuance of the NOIA on January 17, 2024, what’s the procedure for changing or replacing the existing EAF in light of such omissions and the issues set forth in the NOIA?

More generally, how have DEC and OGS coordinated their respective SEQR obligations when, as here, there may be impacts associated with how state lands are used? For example, when OGS renews a lease, how does OGS determine whether or not there may be impacts? Does OGS ask DEC for an opinion? Is there a formal interagency policy on such coordination, relating either to DEC and OGS generally or relating specifically to coordinating the Cargill mine permit with the Cargill mine lease? Is such an interagency policy written, for example as a Memorandum of Understanding? If so, may we have a copy from you or by FOIL?

Proposed storage of water/brine under the lake in the 6-level mine will be, for all intents and purposes, irreversible flooding and disposal rather than temporary storage

Irreversibility of the proposed storage, making it permanent disposal rather than temporary storage, is apparently recognized. See, for example, the January 17 NOIA in which DEC asks

about “the approximate dates that convergence monitoring stations will be inundated, preventing safe access and necessitating the abandonment of the stations.” This indicates that the proposed storage is expected to be irreversible. See below for further discussion of this topic.

Proposed storage of water/brine under the lake in the 6-level mine will affect and may foreclose future use of State resources, including mineral resources, in ways that cannot responsibly be ignored or dismissed without appropriate review

While we would generally not promote further mining under the lake, we recognize the right of future generations to have reasonable access to resources they may deem valuable. Policies that preserve future access to such resources are important, not only in our view but also as a matter of state policy. See, for example, the following excerpt from DEC’s *SEQR Handbook*, 4th edition, page 121, which outlines how review processes should address irreversible and irretrievable commitments of resources:

The extent to which a proposed action may cause permanent loss of one or more environmental resources should be identified as specifically as possible based upon available information. Resources which should be considered include natural and manmade resources that would be consumed, converted or made unavailable for further uses due to construction, operation, or use of the proposed project, whether those losses would occur in the immediate future, or over the long term.

Simply put, deliberate flooding such as the proposed water/brine storage would make the mine “unavailable for further uses” in the sense discussed in the *SEQR Handbook*. A decision to flood or not to flood may be justified when current and future priorities are reviewed and compared, but, in any case, such a decision is discretionary and needs to be supported by environmental review.

There are foreseeable consequences of the proposed storage of water/brine under the lake in the 6-level mine

- There are known problems with depressurizing rock units above a mine, as we outlined in our recent poster presentation at the Finger Lakes Institute research conference. We are now in the process of combining that information with recently released information from Boyd and other sources on depressurization above the Cayuga Mine, and also with historic information on some of the drastic consequences that prompted Cargill to abandon mining in the S3 area in the first place. While we are still in the process of reviewing this issue in more detail and expect to provide additional information in the near future, it’s clear that attention will need to be paid to the foreseeable consequences.

- Studies done to date on global stability of the mine, whether by RESPEC or Agapito Associates or others, need to be available to independent third-party reviewers before they can be regarded as valid safeguards against foreseeable consequences. Geophysical models are generally simplifications of the real world; are the simplifications justified? What stress fields are included? Is regional compressive tectonic stress included? Is stress redistribution due to depressurization included? How is the continual stress redistribution due to ongoing subsidence modeled? These and various other questions need to be reviewable in a reasonably open process.
- When considering foreseeable consequences, it's useful to recognize how these are handled in a SEQR context. The procedure spelled out in 6 NYCRR 617.9 (b)(6) covers steps needed in an environmental review "if information about reasonably foreseeable catastrophic impacts to the environment is unavailable because the cost to obtain it is exorbitant, or the means to obtain it are unknown, or there is uncertainty about its validity, and such information is essential to an agency's SEQR findings..."

As noted, we expect to provide additional information in the near future. In the meantime, we look forward to hearing from you on the important matters set forth above.

Best regards,



John V. Dennis
President, CLEAN

Copies:

- Kevin Balduzzi, Regional Permit Administrator, DEC Region 7
- Margaret Sheen, Regional Attorney, DEC Region 7
- Jonathan Stercho, Deputy Regional Permit Administrator, DEC Region 7
- Stephanie Redmond, Program Manager, CLEAN
- Raymond Vaughan, PhD, PG, geologist consultant advising CLEAN