



*Cargill Salt – Road Safety  
P.O. Box B  
Lansing, NY 14882*

February 23, 2023

Mr. Matthew Podniesinski  
Chief, Resource Development Section  
Bureau of Resource Management & Development  
Division of Mineral Resources  
New York State Department of Environmental Conservation  
625 Broadway, Third Floor  
Albany, New York 12233-6500

RE: Annual Report for Mine File #709-3-29-0052; Cayuga Salt Mine  
Permit ID#0-9999-00075-00001  
Towns of Lansing and Ulysses, County of Tompkins  
Town of Covert, County of Seneca

Dear Mr. Podniesinski:

Enclosed is an annual report contemplated in the Special Conditions Section (Items 17.a through 17.g) of DEC Permit # 0-9999-00075/00001. The report addresses each reporting requirement separately (17.a.(1), 17.a.(2), etc.); pertinent drawings are attached as required. All technical data associated with monitoring of mine stability will be made available to Dr. Vincent Scovazzo of the John T. Boyd Company. A copy of this report is in the mail to Christopher Lucidi, the Region 7 Mined Land Reclamation Specialist, Thomas Rigley the Region 7 Mining Program Supervisor, and to Steven Army, the Region 8 Mining Program Supervisor.

If any questions arise, please bring them to my attention at your earliest convenience.

With Best Regards,

A handwritten signature in black ink that reads "Shawn Wilczynski". The signature is written in a cursive, flowing style.

Shawn G. Wilczynski  
Mine Manager – Cargill Salt

## Annual Reporting, Monitoring, and Notifications

### 17.a.(1) - Cargill Cayuga Mine Manager Certification:

I, Shawn G. Wilczynski, Mine Manager – Cargill Salt, certify that all mining activities, to the best of my knowledge, conducted during the reporting period from January 1<sup>st</sup> of 2022 through December 31<sup>st</sup> of 2022 were in conformance with the DEC Permit # 0-9999-00075/00001 and the approved plans. No variances occurred and none were reported.



Signed:

Date: 2/23/2023

### 17.a.(2) - Summary of all non-routine mining incidents:

The Cayuga Mine is not aware of any non-routine incidents associated with the mining, processing, or other mine related activities that would have adversely affected any of the following:

- Mine stability
- Ground and surface water
- Natural resources
- Health, safety, welfare or property of the general public

### 17.a.(3) - 3 Year Mining Plan

A map is attached depicting the current and proposed mining for the next three years.

The Cayuga Mine is currently operating in the northern region of the mine. Active mining is located in panels U-78, U-84, U-86, and U-88.

### 17.a.(4) - Summary of In-situ Measurements of Rock Mechanics:

The Cayuga Mine continues to collect mine convergence data in accordance with the guidelines previously established in the Mined Land Use Plan. Convergence stations are typically installed at the “face” of active tunnels in mining panels with a profile of three stations located in the center and edges of the yield pillar panels. The convergence stations are usually read daily during the first week and then shifted to a weekly schedule until the next profile is installed. The initial profile will then be monitored on a quarterly or semi-annually schedule for the duration of mining of the panel. After abandonment of the panel, specific convergence stations are monitored quarterly. Currently, there are over 300 convergence stations being monitored. Once the data from the convergence stations has been collected it is evaluated both internally and externally for trends to ensure that each panel and the mine are behaving properly.

Evaluations of the convergence data indicate that overall no unusual trends have been identified and the mine is behaving as expected. There continues to be a few slight localized anomalies, which while showing elevated closure rates above the mine’s median levels, are still significantly below levels observed industry-wide and do not present a concern to global stability of the respective areas. These areas are being monitored closely and have been outfitted with additional electronic instrumentation to help gather more data.

Roof sag and wall expansion, measured with extensometers, is also monitored as conditions warrant, and is reviewed internally and externally as well. This data indicates the mine is behaving as expected. The Cayuga Mine operates a micro-seismic monitoring network which now has over 120 geophones and covers over 6 square miles of mine workings. The data from this system is reviewed daily in-house, by Engineering Seismology Group (ESG), and is reviewed weekly by RESPEC. This data indicates the mine is behaving as expected and global stability continues to be maintained.

17.a.(5) - Summary of Subsidence Monitoring:

Surface subsidence measurements continue to be performed in accordance with the Mined Land Use Plan. A traditional survey was completed in 2020 for the west shoreline, east shoreline, Town of Lansing, and #4 Shaft area and a baseline LiDAR survey of was completed in November 2021. All results were well within expected ranges. The next surface subsidence LiDAR is planned for fall 2024.

17.a.(6) - Source and Volume of Water Inflow Into the Mine and Disposition of Such Water:

The following is a list of sources and associated flow rates of water into the Cayuga Mine. All inflows are sodium chloride dominant salt brine.

- Production Shaft (#1 shaft) – 29 gallons per minute (gpm)
- Ventilation Shaft (#2 shaft) – Less than 1 gpm
- Service Shaft (#3 shaft) – 1 gpm
- ED Plant Concentrate discharge – Less than 1 gpm
- Other inflows – 4 gpm
- Total Water Inflow = 35 gpm

Most the water is directed to a settling pond located on the 4-level of the mine. The water is then pumped from the settling pond to abandoned areas at the far west end of 4-level as well as to various areas of the active mine for dust control. Water labeled as Other Inflows is fully saturated brine and is stored in various abandoned areas on the 6 Level of the mine.

17.b. - MSHA Correspondence Involving Non-routine Mining Incidents:

The Cayuga Mine has not received any citations or correspondence from MSHA regarding non-routine mining incidents as identified in section 19.

17.c. - Changes in Mining Method:

The mining methods used at the Cayuga Mine have not been changed in the last year.

17.d. - Written Citizen Complaints:

Cargill maintains a written record of citizen complaints that is available to the Department upon request.

18. - Monitoring

All monitoring of subsidence and in situ measurements of rock mechanics have continued as outlined in 17.a.(4) and 17.a.(5).