

State Environmental Quality Review  
**NEGATIVE DECLARATION**  
Notice of Determination of Non-Significance

**DEC Application ID Number:** 0-9999-00075/00001  
**Mined Land Reclamation Number:** 70052

Date: June 30, 2016

This notice is issued pursuant to Part 617 of the implementing regulations pertaining to Article 8 (State Environmental Quality Review Act) of the Environmental Conservation Law.

The New York State Department of Environmental Conservation, as Lead Agency, has determined that the proposed action described below will not have a significant effect on the environment and that a Draft Environmental Impact Statement will not be required.

**Name of Action:** Proposed modification to allow construction of a surface access and ventilation shaft and surface facilities to serve Cargill, Inc.'s Cayuga Mine. The proposed modification includes 12.30 surface acres to be added to the Life-Of-Mine area.

**SEQR Status:** Type I   
Unlisted

**Conditioned Negative Declaration:**  Yes  
 No

**Description of Action:** Cargill, Inc. ("Cargill") proposes to expand the surface operation by adding 12.3 acres to the Life-of-Mine area, including a new mine shaft ("shaft 4") and infrastructure to be constructed in support of the new shaft, on land owned by the applicant. The modification application involves the construction of a surface access and ventilation shaft because of safety precautions, Mine Safety and Health Administration (MSHA) regulations and the increasing distance from the current underground operations to Cargill's main access and ventilation shaft as progresses to the north and west. This parcel is located at 1001 Ridge Road (New York State Route 34B), Town of Lansing, Tompkins County.

The proposed final reclamation plan states that shaft 4 will be decommissioned, which involves removal of any piping or operating systems from the shaft, injecting cementitious low-permeability flowable fill that will permanently seal the shaft and filling the uppermost eight to ten feet of the shaft with a high-strength concrete plug. The surface facilities will remain to provide office and/or commercial facilities for future use. The reviewed additional life-of-mine area is 12.3 acres.

**Location:** The project site is located on the west side of Ridge Road (New York State Route 34B), ½ mile south of the intersection of Ridge Road (New York State Route 34B) and Lansing Station Road and 1900 feet north of the intersection of Ridge Road (New York State Route 34B and Ross Road. The project site is located in the Town of Lansing, Tompkins County.

**Reasons Supporting This Determination:** Pursuant to State Environmental Quality Review Act (SEQRA) regulations in 6 NYCRR Part 617.7, Department staff have reviewed the Environmental Assessment Form (EAF), the mining and reclamation narrative plans and maps, and have made the determination that this project will not result in significant, adverse environmental impacts and that a permit, with appropriate conditions, can be issued.

As Lead Agency, the Department has concluded that the mining and reclamation plans have been prepared and revised to avoid adverse environmental impacts that may be potentially associated with the project. After a full review of the application, the Department is satisfied that the requirements of ECL Article 8-0109 have been met. The following was relied upon in reaching this determination:

**WATER:** Operation of the proposed shaft 4 will not have any significant adverse impacts to either the quality or quantity of surface waters or groundwater.

A Storm Water Pollution Prevention Plan (SWPPP) has been prepared in accordance with, and coverage will be obtained under, NYSDEC General Permit for Stormwater Discharges from Construction Activity, GP-0-15-002, in advance of construction. The SWPPP describes in detail best management practices, any temporary and permanent controls that will be in place (e.g. berms, silt fence, storm water ponds and drainage ditches) to prevent any potential impacts to surface water.

Operation of the proposed shaft 4 will have no impact on local or regional groundwater resources during shaft 4 construction and after the completion of construction. The shaft 4 will be isolated from the local groundwater system by a cast-in-place concrete lining. There is a potential to temporarily impact groundwater during construction by depressing levels in the immediate vicinity of the shaft. However, the exploratory Corehole #18 did not encounter significant groundwater producing zones in the shallow geology, where nearby residential water supply wells are completed. Therefore, the potential for the shaft construction project to depress groundwater levels at the nearest residential water supply well, located 1100 feet to the south, or any other residential water supply well is improbable. In addition, Cargill collected well data from nearby residential water supply wells to serve as a baseline. This Well Survey Summary Report includes three components; an inventory of groundwater users, field measurements, and laboratory analytical results. "The Inventory of Groundwater Users" outlines the location, usage and physical properties of the well. The "Field Measurements" documents basic water quality parameters measured with a multimeter water quality probe during the property visit. The laboratory analytical results were provide for water samples collected from the residential water supply wells. As a precaution, Cargill has agreed to implement a well monitoring plan during construction of shaft 4 and post-shaft construction to track potential quality and quantity of groundwater levels. In the unlikely event of an unanticipated reduction in groundwater quality or quantity, Cargill has agreed to provide a potable water source during construction and post-shaft construction.

**TRAFFIC & NOISE:** No significant adverse impacts from these aspects of the proposed project are anticipated. Additional detail is provided below:

Traffic: Based on the information provided by the applicant in the Mined Land Use Plan and the Traffic Impact Study, prepared by Spectra Engineering, Architecture and Surveying, P.C., truck traffic generated by the shaft 4 project will not have a significant impact on local roads. The increase in truck traffic will be the result of truck deliveries of mining equipment and supplies and periodic traffic due to personnel shift changes. Deliveries typically occur approximately three to five times daily during operating hours between 7:00 am and 4:00 pm. Shift changes occur three times daily at approximately 6:00 am, 2:00 pm and 10:00 pm. They involve approximately 20-40 vehicles entering and leaving the site for each shift change (40 vehicles for day shift and 20 for afternoon and night shifts). The study concludes that traffic traveling past the project's existing driveway on Ridge Road (New York State Route 34B) will increase from approximately 320 vehicles to 340-360 vehicles during morning peak hours (7:00 AM – 9:00 AM).

Noise: A noise projection study has been completed by Spectra Environmental Group, Inc. in accordance with the New York State Department of Environmental Conservation (NYSDEC) policy on "Assessing and Mitigating Noise Impacts" (October 2000, Revised February 2001).

Figure 2 and tables 1 and 3 from the noise projection prepared by Spectra Environmental Group, Inc. have been included for reference.

<u>Noise Source Sound Pressure Levels</u>				<u>Distance from Source to Receptor (feet)</u>
Reference distance = 50ft				
SPL Oct. Band	Shaft (dB)	Buzzer (dB)	Forklift (dB)	
31.5	7	14.3	33.6	
63	25.6	28.9	40.9	
125	27.8	33.2	44.4	
250	28.8	33.9	49.2	
500	36.9	46.2	52	
1K	46.1	50.6	59.7	
2K	43.4	48.9	53.2	
4K	34.2	37.8	53	
8K	25.9	30.1	38.9	
16K	16.3	18.4	31.6	
<b>dBA Equivalent</b>	<b>48.6</b>	<b>53.4</b>	<b>62.1</b>	

  

R1 = 871
R2 = 1,453
R3 = 1,534
R4 = 1,482
R5 = 1,385
R6 = 1,396
R7 = 2,559
R8 = 1,520

**Table 1**  
**Cargill Inc. - New Shaft Site**  
**Sound Level Monitoring Summary**

**Baseline Ambient Sound Level Data**

Sound Level Monitoring Location	Monitoring Time Interval 2am-6am	Average Leq dB(A)
Location 1	38.2	
Location 2	47.1	
Location 3	48.4	
Location 4	37.7	
Location 5	30.9	

Note: Each location was monitored for two (2) 15-minute intervals within the Monitoring Time Interval. Data collected on March 15, 2013.

**Octave Band Data - Sound Pressure Levels**

Source	Reference Distance (feet)	31.5	63	125	250	500	1,000	2,000	4,000	8,000	16,000	dB(A) Equivalent
Ventilation Shaft (Full Ops)	50	7.0	25.6	27.8	28.6	36.9	46.1	43.4	34.2	25.9	16.3	48.6
Elevator Buzzer	50	14.3	28.9	33.2	33.9	46.2	50.6	48.9	37.8	30.1	18.4	53.4
Fork Lift w/ Backup Alarm	50	33.6	40.9	44.4	49.2	52.0	59.7	53.2	53.0	38.9	31.6	62.1

Note: Data collected on March 14-15, 2013.

The information in Table 1 represents ambient conditions surrounding Cargill's proposed shaft 4 location during night-time hours (2:00 am to 6:00 am). Modeled noise projections to adjacent receptor locations were compared to the closest recorded ambient sound level, which represents nighttime conditions. As nighttime conditions are generally the quietest time of day, comparison to those conditions is a conservative, worst-case depiction of potential impacts to sound levels resulting from operations of the proposed shaft 4 facility.

**Table 3  
Cargill, Inc. - New Shaft Site  
Noise Study - Model Projections**

**Noise Projections - New Shaft Site (2am-6am)**

Receptor	Sound Level after Distance Atten. (dBA)	Topographic Barrier Number	Topographic Barrier Atten. (dBA)	Sound Level after Barrier Atten. (dBA)	Thickness of Vegetation (ft)	Vegetation Attenuation (dBA)*	Sound Level after Foliage Atten. (dBA)	Ambient Level (dBA)** A B	Resultant Sound Level (dBA)*** C = (A+B)	Sound Level Change @ Receptor (dBA) D = (C-B)
R1	37.8	N/A	0	37.8	175	3	34.6	37.7	35.7	2.0
R2	33.5	N/A	0	33.5	225	6	27.5	48.4	48.4	0.0
R3	33.0	N/A	0	33	580	9	24.0	47.1	47.1	0.0
R4	33.2	N/A	0	33.2	850	9	24.2	38.2	38.2	0.0
R5	33.8	N/A	0	33.8	800	9	24.8	38.2	38.2	0.0
R6	33.7	N/A	0	33.7	675	9	24.7	38.2	38.2	0.0
R7	28.4	N/A	0	28.4	900	9	19.4	30.9	30.9	0.0
R8	32.8	N/A	0	32.8	860	9	23.8	37.7	37.7	0.0

\*Foliage Attenuation taken from NYSDEC's policy on "Assessing and Mitigating Noise Impacts" (October 2000, Revised February 2001). The policy states that, "Dense vegetation that is at least 100 feet in depth will reduce the sound levels by 3 to 7 dBA." A conservative 3 dBA reduction has been applied to every 100 ft. of dense vegetation (with a maximum reduction of 9 dBA for a given receptor).  
 \*\*Ambient Levels recorded March 16, 2013.  
 \*\*\*Resultant Noise Level (column C) is the Noise Level after Foliage Attenuation (column A) logarithmically added to the Ambient Level (column B). Taken from NYSDEC's noise policy, Page 9, Table A  
 \*Approximate Addition of Sound Levels.\*

Table 3 summarizes the noise study results in particular the noise levels including distance attenuation, foliage attenuation and projected noise levels. These noise levels are then compared to the measured ambient sound levels. Distance attenuation was calculated using the inverse square rule whereby sound pressure levels decrease by 6 dB each time the distance from the source is doubled. It should be noted that no barrier attenuation was taken into account in this noise assessment even though topography and a proposed structure surrounding the shaft will likely reduce noise levels further for all receptors.

In conclusion the noise projection study predicts an increase above ambient of 2.0 dB at receptor 1 and 0 dB increase above ambient at receptors 2-8. The NYSDEC noise policy states, "Increases ranging from 0-3 dB should have no appreciable effect on receptors". In addition, noise reduction techniques to be utilized will include: 1) All equipment will be muffled to meet NYSDOT standards; 2) All equipment will be properly operated and maintained; 3) Engines of equipment will not be raced unnecessarily; 4) Any operating irregularities in equipment that may increase the level of noise generated by that equipment will be reported; 5) Vehicle speeds will be controlled to reduce engine noise during ingress and egress; 6) Broad-band back up alarms will be used where practical. Completion of shaft 4 boring and construction activities are anticipated to take approximately 18 months at a continuous 24 hours per day, 7 days per week.

**AIR:** There will not be any significant impacts to the air and sources contributing to air emissions will be well below regulatory thresholds for an air registration or permit.

**Gas:** The data from the #18 Corehole reveals that gas was encountered at 1,505 feet. During the drilling of the pilot hole for the shaft, drilling will be done wet and gas will be contained by the head of water in the hole. Once the hole connects with the mine, fans installed below ground will create a negative pressure in the shaft bottom section of the mine, preventing gas emissions from entering the atmosphere. Any gas from the hole will be diluted to allowable levels by the

mine ventilation and dispersed throughout the mine. If necessary, a gas bleeder system will be installed similar to the existing system in the #3 intake shaft.

**Dust:** Dust control measures will be implemented to reduce fugitive dust including the addition of water on all unpaved road ways or geotextile or stone shall be placed on the driving surfaces and roadways will be swept as needed.

**BLASTING:** There will not be any blasting impacts during the construction of shaft 4. A majority of the blast events, which will be smaller in nature than the typical permitted production blasts, will occur underground. Minor surface blasting may occur while setting the collar and air plenum. All blast events will be professionally designed to minimize noise, vibration, fly rock and air blasts. In addition, there are permit conditions that the operator must adhere to in reference to air blast limits and ground vibration limits. Blasting will be consistent with DEC guidance and include DEC oversight.

**CULTURAL/VISUAL RESOURCES:** The project is not within an area shown on the Statewide Archaeological Inventory Map as having the potential for significant cultural or archaeological resources. There will be no impacts to cultural or archaeological resources from the development of this mine. No further review in accordance with SHPA is required.

Environmental Design & Research (EDR) conducted a visual impact analysis which demonstrates there will be minimal visual impacts from the construction of shaft 4. The study includes four points adjacent to the project site and two points across Cayuga Lake including Taughannock Falls State Park and Frontenac Point. The photo simulations of the three new buildings from these vantage points showed that views were either obstructed from view by vegetation or topography or were barely discernable. This takes into account the proposed 93 foot structure housing shaft 4.

**FISH AND WILDLIFE:** There will be no significant adverse impact to wildlife species within the proposed 12.3 acres associated with the construction and operation of shaft 4 and the support facilities. There will be some minor disruption and dislocation of wildlife species and loss of existing habitat during the operational life of the mine. This impact is unavoidable because of the human intrusion, equipment operation, stripping of vegetation and topsoil that are inherent to this type of project.

There will be no impact to any aquatic resources from the development and operation of shaft 4. There are no aquatic or fisheries resources, or threatened or endangered plant or animal species known within the project area.

**LAND USE PLANNING & ZONING:** Local land use planning and land use decisions are at the discretion of local government. DEC jurisdiction over mining does not preclude the Town's rights to plan and regulate land use development. As it relates to other land use impacts, the Department finds that significant, long term adverse impacts are unlikely should shaft 4 be developed as proposed and activities proceed under a valid mining permit. Land affected by mining in compliance with the policies and regulations of the MLRL, does not inevitably result in the elimination of future beneficial uses for that land. The enforcement of the MLRL permit which includes the approved final reclamation further ensures that the long term impact of mining at this site will not result in adverse impacts.

**OTHER:** This application review and significance determination is only for the current 12.3 acre Life of Mine area included in this application. Any future modification which, in the judgment of

the Department, results in a material change, or in the environmental conditions at the site, or in the scope of the permitted activity or would require one or more changes to any MLRL permit conditions will be considered a new application and will be reviewed pursuant to all applicable regulations.

**For Further Information:**

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