Statement of Basis

LG Everist, Inc.

LG Everist, Inc., 43966 County Highway 17
Ortonville, Minnesota 56278, Big Stone County

NPDES/SDS Permit No: MN0068764
May 2018

Description of permitted facility

This granite mining facility mines, crushes, and processes granite for use in the aggregate industry. It produces an average of 20,000 tons of granite per week and a maximum of 25,000 tons of granite per week for use as product. Quarry operations include drilling and blasting granite, loading granite fragments into haul trucks by front-end loader, transporting granite fragments to the processing plant, sizing by crushing and screening, and washing crushed granite. Sized material is stockpiled for load-out into truck or rail. The plant generally operates from March through October, although maintenance activities continue throughout the year.

Discharge from the facility covered under this permit includes stormwater, wastewater from quarry dewatering, and process wastewater from washing crushed granite.

Quarry dewatering facilitates quarry mining operations. Groundwater seeping into the quarry collects in a small pond. This water is pumped out of the quarry and discharged to the Minnesota River. The dewatering water discharges at an average rate of 200,000 gallons per day and a maximum rate of 480,000 gallons per day. Dewatering usually occurs for 10 hours per day from March through October. Dewatering is rarely needed during the winter months. At no time does any plant process or non-process water come into contact with any quarry dewatering activities.

Process water is used to wash granite particulates off of newly crushed granite, and is recycled for repeated use through two settling ponds. The pond system receives water from an adjacent slough (MNDNR Water Appropriation Permit Number 1976-4024), stormwater, and spring water. The first pond (Pond 1) accepts the washwater, where most of the particulate granite settles out. Pond 1 flows to a second settling pond (Pond 2), where further settling occurs. Water from Pond 2 is pumped to the washing station, where it is used again to wash additional crushed granite.

Process generated wastewater discharges intermittently. Discharge is precipitation dependent driven by an increase in stormwater runoff and spring discharge. This additional water causes the settling ponds to discharge via the southern end of Pond 2 (SD002). The water is discharged into an intermittent stream that flows through the quarry area to a flood plain on the Minnesota River. On quarry grounds, the west side of the stream is stabilized with riprap while the east side is stabilized with vegetation.
Settling ponds are excavated weekly or as needed during the production season. Fines are dug out of the ponds with an excavator and hauled to a storage site. These ponds were modified from existing wetlands in 1971 for use as settling ponds, and their shape prevents accessing portions of the ponds with excavators. Excavation occurs around the perimeter of the ponds where accessible by heavy equipment. Placement of a silt screen in front of the outlet from Pond 2 will be required during excavating to mitigate discharge of re-suspended sediment from these activities.

Fines excavated from the ponds are temporarily stockpiled next to the ponds to allow excess water to drain back into the treatment ponds. The fines are later moved to a stockpiling area near the western border of the facility.

**Trout streams**

No trout streams are located within one mile of L.G. Everist.

**Effluent to surface water discharge**

Limit and monitoring requirements for surface water discharges are set in consideration of Minnesota state water discharge criteria also known as State Discharge Restrictions (SDR) based on Minn R. ch. 7053, Minnesota state water quality-based effluent limits (WQBEL) for the receiving water use classification, federal technology-based effluent limits (TBEL) applicable to specific discharge types, or a combination of these standards to regulate the discharge of wastewater. When limits overlap for a particular parameter or analyte, the most stringent limit is the one applied in the permit. In addition, the Minnesota Pollution Control Agency (MPCA) may derive standards that are specific to a particular discharge. These standards may be based on toxicity studies, professional judgment analysis, technology based standards, and in some instances standards developed by other U.S. states or regulatory agencies.

**SD001/SD002**

The receiving water 7Q10 low flow at outfalls SD001 and SD002 is 0.23 cubic feet per second (cfs).

The outfall SD001 and SD002 monitoring frequencies are based on MPCA guidelines. The monitoring frequencies are set to achieve sufficient data to determine the compliance with limits established for an industrial non-metallic mining discharger.

**Technology based effluent limits**

The facility is subject to Effluent Limit Guidelines or federal categorical standards: 40 CFR pt. 436, Mineral Mining and Processing Category, subp. B. The Crushed Stone discharge is subject to the federal categorical standards and must stay within the pH limits of 6.0-9.0 SU which have been applied to this permit.

**State discharge restrictions**

State Discharge Restrictions (SDRs) are not considered water-quality based effluent limits. However, these restrictions were designed to protect water quality and maintain in-stream water quality standards. Therefore, the restrictions are strict enough to protect water quality standards. The 30 mg/L limit for TSS is based on Minn. R. 7053.0215 subp. 1.

**Table 1: Technology based effluent limit**

<table>
<thead>
<tr>
<th>Pollutant</th>
<th>Calendar month average</th>
<th>Daily maximum</th>
</tr>
</thead>
<tbody>
<tr>
<td>pH</td>
<td>6.0-9.0 SU</td>
<td></td>
</tr>
</tbody>
</table>
Table 2: State discharge restrictions

<table>
<thead>
<tr>
<th>Pollutant</th>
<th>Calendar month average</th>
<th>Calendar month maximum</th>
</tr>
</thead>
<tbody>
<tr>
<td>TSS</td>
<td>30 mg/L</td>
<td></td>
</tr>
</tbody>
</table>

Table 3: SD001/SD002

<table>
<thead>
<tr>
<th>Pollutant</th>
<th>Calendar month average, mg/L</th>
<th>Calendar month maximum</th>
<th>Daily Average</th>
<th>Calendar Month Total, mg/L</th>
<th>Frequency</th>
<th>Which Months</th>
</tr>
</thead>
<tbody>
<tr>
<td>TSS</td>
<td>30</td>
<td></td>
<td></td>
<td></td>
<td>Once per Month</td>
<td>Jan-Dec</td>
</tr>
<tr>
<td>pH, SU</td>
<td></td>
<td>9.0</td>
<td>6.0</td>
<td></td>
<td>Once per Month</td>
<td>Jan-Dec</td>
</tr>
<tr>
<td>Flow</td>
<td>Monitor Only</td>
<td>Monitor Only</td>
<td>Monitor Only</td>
<td></td>
<td>Once per Day</td>
<td>Jan-Dec</td>
</tr>
<tr>
<td>Phosphorus, Total (as P)</td>
<td>Monitor Only</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Nitrite Plus Nitrate (as N), Total</td>
<td>Monitor Only</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Kjeldahl Nitrogen, Total</td>
<td>Monitor Only</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Nitrogen, Total (as N)</td>
<td>Monitor Only</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

Stormwater

Stormwater management and control have been included with this permit. Stormwater discharges from the Facility are precipitation dependent. Current monitoring and limits included with this permit at surface discharge stations SD001/SD002 encompass analytes and parameters of concern associated with stormwater runoff and are more restrictive than the benchmark intervention limit of 100 mg/L for subsector J2-Dimension, Crushed Stone, and Nonmetallic Minerals. Therefore, additional monitoring of stormwater is not necessary.

Pollutants of concern

Nitrogen

Nitrogen is a pollutant that can negatively impact the quality of Minnesota’s water resources, including water used for drinking. Studies have shown that nitrogen in lakes and streams has a toxic effect on aquatic life such as fish. Like phosphorus, nitrogen is a nutrient that promotes algae and aquatic plant growth often resulting in decreased water clarity and oxygen levels. In September 2014, the MPCA completed the final draft of the Statewide Nutrient Reduction Strategy (https://www.pca.state.mn.us/water/nutrient-reduction-strategy) which identifies goals and milestones for nitrogen reductions for both point and non-point nitrogen sources within Minnesota. To gain a better understanding of the current nitrogen concentrations and loadings received by and discharged from the Facility, additional effluent nitrogen monitoring has been added to the Permit. This monitoring has been added in accordance with Minn. Stat. ch. 115.03.
The Permit includes effluent monitoring for Nitrite plus Nitrate-Nitrogen, Total Kjeldahl Nitrogen and Total Nitrogen at a frequency of one time per month for the five-year term of the Permit. There is no nitrogen limit in the Permit.

This additional monitoring will provide the data necessary to develop a better understanding of the total nitrogen concentrations and loadings that is currently being received and discharged from municipal and industrial wastewater treatment plants. Once a more extensive total nitrogen data set is established nitrogen reduction work can begin to achieve the necessary reductions to meet the goal of a 20% reduction in total nitrogen loads from point source dischargers by 2025. The changes and/or increases in total nitrogen monitoring in wastewater Permits as a result of the Statewide Nutrient Reduction Strategy is outlined in the Minnesota NPDES Wastewater Permit Nitrogen Monitoring Implementation Plan document located on the MPCA wastewater Permits webpage at: https://www.pca.state.mn.us/water/wastewater-permits.

**Phosphorus**

The effluent concentrations of phosphorus are not expected to be greater than one mg/L. Dewatering discharges that consist of uncontaminated groundwater and stormwater generally contain, if any, low concentrations of phosphorus and are therefore, considered to be di minimis.

All phosphorus samples must be analyzed by a certified laboratory and the data submitted to the MPCA. If your laboratory would like more information about becoming certified, please call the Environmental Laboratory Certification Unit at 612-676-5200. Samples must be collected in a clean bottle (preferably cleaned by a certified laboratory) that was not washed with phosphate detergent. Also, a sulfuric acid preservative must be added immediately after the sample is collected, and it must be stored at four degrees Celsius until analysis. If a contract laboratory is used, the bottle and preservative would typically be provided by the laboratory analyzing the sample.

**Total Maximum Daily Load (TMDL) Study**

To address water quality impairments, a TMDL study of the Minnesota River - Headwaters watershed may be conducted. The study will determine the capacity to assimilate pollutant loads as the basis for recommendations of wastewater treatment allocation for point sources and load allocation for nonpoint sources within the watershed. An appropriate balance of point and nonpoint source controls that attain water quality objectives will be selected with full stakeholder involvement. Based on the results of the TMDL study, the permit may be reopened and effluent limitations for this facility may be re-examined. This permit will be modified or reissued as needed to incorporate effluent loading recommendations from the TMDL study.

**Total facility requirements**

**Certified laboratory**

Effective January 1, 2013, all Minnesota municipal, county or industrial laboratories that analyze wastewater per Clean Water Act requirements must be certified by the MPCA or the Minnesota Department of Health. Information regarding MPCA laboratory certification is located on the MPCA website at https://www.pca.state.mn.us/water/mpca-laboratory-certification. If you have questions concerning MPCA laboratory certification, please contact the MPCA at 1-800-657-3864 or by email at qa.questions.mpca@state.mn.us. Commercial laboratories doing these analyses must maintain Minnesota Department of Health certification.
Electronic Discharge Monitoring Reports (eDMRs)

The electronic Discharge Monitoring Reports (eDMRs), Sample Values/Operational Spreadsheets, and related attachments shall be electronically submitted via the MPCA Online Services Portal (https://netweb.pca.state.mn.us/private/). Paper copies of Discharge Monitoring Reports will no longer be accepted. The eDMR and Sample Value/Operational Spreadsheets are generated directly from the limits and monitoring requirements in the reissued permit for your facility. They are generated by the Pollution Control Data Specialist (PCDS) assigned to manage the data for your facility and will be available online within 30 days of the permit action, please make sure to download the most recent version of the eDMR and Sample Value/Operational Spreadsheet prior to submitting your next monthly eDMRs.

Antidegradation and Anti-backsliding

Changes to the facility may result in an increase in pollutant loading to surface waters or other causes of degradation to surface waters. If a change to the facility will result in a net increase in pollutant loading or other causes of degradation that exceed the maximum loading authorized through conditions specified in the existing permit, the changes to the facility are subject to antidegradation requirements found in Minn. R. 7050.0250 to 7050.0335.

The Permit complies with Minn. R. 7053.0275 regarding anti-backsliding.

Any point source discharger of sewage, industrial, or other wastes for which a NPDES permit has been issued by the MPCA that contains effluent limits more stringent than those that would be established by parts 7053.0215 to 7053.0265 shall continue to meet the effluent limits established by the permit, unless the permittee establishes that less stringent effluent limits are allowable pursuant to federal law, under section 402(o) of the Clean Water Act, United States Code, title 33, section 1342.

Term of Permit

The Agency has made a preliminary determination to reissue this NPDES permit for a term of approximately five years, per Minn. R. 7001.0150.