



# Minnesota Pollution Control Agency

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May 18, 2017

Andrea Hayden  
Northshore Mining Company  
10 Outer Drive  
Silver Bay, MN 55614

RE: Northshore Mining Industrial Solid Waste Disposal Facility, SW-409  
Permit Reissuance

Dear Ms. Hayden:

Enclosed please find the Solid Waste Facility Permit No. SW-409 for your facility located in the Southeast 1/4 and the Northeast 1/4 of Section 31, Township 56 North, Range 8 West in Lake County, Minnesota. The Minnesota Pollution Control Agency (MPCA) has prepared this permit in accordance with Minn. Stat. chs. 115, 115A, and 116, and Minn. R. chs. 7000, 7001, and 7035. No written comments were received during the 30-day public comment period.

If you have any questions about any portion of this permit, please contact Julie Henderson at 651-757-2423 or by email at [julie.henderson@state.mn.us](mailto:julie.henderson@state.mn.us).

Sincerely,

***Ainars Z. Silis***

*This document has been electronically signed.*

Ainars Z. Silis  
Supervisor  
Land Permits Unit  
Industrial Division

AZ/JH:ss

Enclosure (permit)

cc: Rita Gabrielson, Northshore Mining Company  
Curt Gadacz, Lake County  
Lee Field, MPCA  
Activity ID IND20140001 @ 1875





# Minnesota Pollution Control Agency

## Solid Waste Facility Permit

SW-409

**Permittee:** Northshore Mining Company

**Facility name:** Northshore Mining Company Industrial Solid Waste Disposal Facility  
10 Outer Drive  
Silver Bay, Minnesota 55614  
Lake County

**Issuance date:** **May 18, 2017**

**Modification date:**

**Expiration date:** **May 18, 2027**

In accordance with Minn. Stat. chs. 115, 115A, and 116, and Minn. R. chs. 7000, 7001, and 7035, the Minnesota Pollution Control Agency (MPCA) hereby issues this permit and authorizes the Permittee listed on the following page to construct and operate the facility under the conditions set forth in this permit.

The determination to issue this permit is discretionary with the MPCA and was made subsequent to MPCA staff review of the permit application. The term commissioner, as used in this permit, refers to the MPCA Commissioner or MPCA personnel who have been delegated explicit authority by the commissioner. Other terms used in this permit are defined in Minnesota Statutes, the MPCA Solid Waste Management Rules, or specifically defined in this permit.

This permit is effective on the issuance date identified above, and supersedes the previous permit that was issued for this facility. This permit expires at midnight on the expiration date identified above.

*Signature:* **Ainars Z. Silis**

*This document has been electronically signed.*

*for the Minnesota Pollution Control Agency*

Ainars Z. Silis  
Supervisor  
Land Permits Unit  
Industrial Division

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## 1. List of Permittees

The following Permittee is authorized to construct and operate the Northshore Mining Company Industrial Solid Waste Disposal Facility, SW-409, under the conditions set forth in this permit.

**Permittee activity owner:**

Northshore Mining Company  
10 Outer Drive  
Silver Bay, Minnesota 55614

**Permittee land owner:**

Northshore Mining Company  
10 Outer Drive  
Silver Bay, Minnesota 55614

**Permittee operator:**

Northshore Mining Company  
10 Outer Drive  
Silver Bay, Minnesota 55614

## 2. Permitted facility description

The Northshore Mining Company Industrial Solid Waste Disposal Facility (Facility) is located at:  
10 Outer Drive  
Silver Bay, Minnesota 55614  
Lake County

Northshore Mining Company is a taconite plant on Minnesota's Iron Range that produces taconite pellets (iron pellets) from magnetite ore, bentonite, and limestone in Silver Bay, Minnesota. Tailings disposal from the mining operations is at the Mile Post 7 Tailings Basin and is regulated by the National Discharge Elimination System/State Disposal System (NPDES/SDS) Permit MN0055301. The industrial solid waste disposal facility is located within the Mile Post 7 Tailings Basin, which is located outside of Silver Bay, Minnesota.

Historically, demolition debris and coal ash from the taconite facility's power plant was disposed of in an unlined area of the Mile Post 7 Tailings Basin above the water level in the basin. There are three permit-by-rule (PBR) demolition land disposal sites also located within the Mile Post 7 Tailings Basin. Each PBR site contains up to 15,000 cubic yards of demolition waste. Each PBR site is closed with final cover in-place.

The permit for the lined industrial solid waste landfill was issued in July 2000 to Northshore Mining Company and Silver Bay Power Company. The permit was reissued in October 2004 to Northshore Mining Company, Silver Bay Power Company, and Cleveland-Cliffs Inc and reissued in 2010 to Northshore Mining Company. This permit is reissued to Northshore Mining Company and continues authorization to dispose of coal ash and other approved wastes at the lined industrial solid waste landfill.

The design concept for this landfill is to construct the facility in four phases. Phases I, II, and III of the facility were constructed with a composite liner consisting of two-feet of engineered recompacted clay and a 60 mil high density polyethylene (HDPE) liner with leachate collection and storage. A portion of the Phase IV liner, referred to as Phase IVA, was constructed in 2008 to manage stormwater from the open areas of Phase I, II, and III. The Phase IVA liner was constructed with a composite liner utilizing a 60 mil HDPE synthetic liner and a geosynthetic clay liner.

This permit approves the concept of a four phase landfill design plan and operating capacities for Phases I, II, III and IVA.

This permit authorizes disposal of 284,000 cubic yards (cy) of in-place waste in Phases I and II, 118,000 cy of in-place waste in Phase III, and 86,320 cy of in-place waste in Phase IVA including all required cover soils (intermittent, intermediate and final) for a total permitted capacity of 488,320 cy. Based on a topographic survey conducted on October 22, 2016, approximately 81,182 cubic yards of airspace was remaining in Phase I, II and III for waste disposal. The ultimate design capacity for Phases I - IV of the landfill is 566,000 cy.

### 3. Permit requirements

SW-409	Northshore Mining Company Landfill
3.1.1	<b>General.</b>
3.1.2	"ACM" means Asbestos Containing Material. [Minn. Stat. 116.326, 71]
3.1.3	"Airspace" means the volume for filling with waste, considering all solid waste, daily, intermediate, intermittent and final cover materials, and design restrictions. [Minn. R. 7001.0150, subp. 2]
3.1.4	"Commissioner" means the Commissioner of the Minnesota Pollution Control Agency (MPCA), or any individual who is authorized to review and approve submittals on behalf of the Commissioner. [Minn. R. 4410.0300, subp. 16]
3.1.5	"Design Capacity" means the maximum estimated potential airspace to be occupied by a land disposal facility, including all cover systems. "Design capacity" is used only for planning purposes and is distinct from permitted capacity. "Design capacity" is an estimate dependent on the existing landholdings of the Permittee, existing regulations that affect development and design (including required buffer areas, stormwater management requirements, and slopes), engineering designs, and site developmental plans. It includes all areas that have been completed, all active areas, and all proposed areas based on the largest design footprint shown on the plan sheets. It is the volume that, upon final closure of the facility, would be occupied by waste (along with all associated materials including cover) measured from the base of the fill to the top of the proposed final cover. [Minn. R. 7035.0300, subp. 32]
3.1.6	"Facility" has the meaning given in Minn. R. 7035.0300, subp. 37. [Minn. R. 7035.0330, subp. 37]
3.1.7	"Permitted Capacity" means the total amount or acceptance rate allowed for storage, composting, processing, transfer or disposal at the facility as found in the Waste Capacity Table of this Permit. For land disposal facilities, "permitted capacity" as stated in the Waste Capacity Table includes the volume already filled by previous disposal activities, and airspace volume authorized to be used during the ten-year term of the current permit, including cover systems. [Minn. R. 7001.0150, subp. 2]
3.1.8	"Permittee" means the landowner, facility owner(s), and facility operator(s). [Minn. R. 7001.3060]
3.1.9	"Waste Activity" means the storage, processing, transfer, utilization, treatment, or disposal of solid waste and waste by-products. [Minn. R. 7001.0150, subp. 2]
3.1.10	"Waste Activity Area" means the land, structures, monitoring devices, and other appurtenances and improvements on the land associated with a waste activity. [Minn. R. 7001.0150, subp. 2]
3.1.11	<p>The facility waste activities authorized by this permit are limited to those activities described in the Waste Capacity Table of this permit. Wastes that are acceptable for disposal and storage at this facility are described in the Industrial Solid Waste Management Plan associated with this permit.</p> <p>This permit approves the concept of a four phase landfill design plan and operating capacities for Phases I, II, and III, and IVA. The Phase IVA liner was constructed in 2008 to manage stormwater from the open areas of Phase I, II, and III and will be used for disposal capacity during the term of this permit.</p> <p>This permit authorizes disposal of 284,000 cubic yards (cy) in Phases I and II, 118,000 cy in Phase III, and 86,320 cy in Phase IVA of in-place waste including all required cover soils (intermittent, intermediate and final). Based on a topographic survey conducted on October 22, 2016, approximately 81,182 cy of airspace was remaining in Phase I, II and III for waste disposal. The ultimate design capacity for the industrial waste fill area is 566,000 cy. [Minn. R. 7001.0150, subp. 2]</p>
3.1.12	The Permittee shall keep the status of the permit current and up-to-date. [Minn. R. 7001.0150, subp. 2]
3.1.13	The Permittee shall perform the actions or conduct the activity authorized by the permit in accordance with the plans and specifications approved by the Agency, in accordance with all state and federal statutes, rules and regulations, and in compliance with the conditions of the permit. [Minn. R. 7001.0150, subp. 2]
3.1.14	<p>The facility encompasses approximately 30 acres and is located in the Southeast 1/4 and the Northeast 1/4 of Section 31, Township 56 North, Range 8 West in Lake County, Minnesota.</p> <p>The mailing address is:                      Northshore Mining Company                      10 Outer Drive                      Silver Bay, Minnesota 55614. [Minn. R. 7001.0150, subp. 2]</p>

3.1.15	The Permittee shall notify the MPCA before transferring ownership or operation of a solid waste management facility during its operating life or during postclosure care period in accordance with Minn. R. 7035.2535, subp. 2. [Minn. R. 7035.2535, subp. 2]
3.1.16	<b>Permit Documents.</b>
3.1.17	The approved plans and engineering documents are incorporated into this permit. In addition, once approved by the Commissioner, the Permittee shall comply with all submittals that are submitted in accordance with the terms of this permit. In all cases where the permit and the plans or submittals differ, the requirements of the permit shall govern over a condition in the plan or submittal. The approval by the Commissioner of the plans and specifications shall not release the Permittee from any present or subsequent requirements of statutes, rules, regulations, or ordinances. [Minn. R. 7001.0150, subp. 3(E), Minn. R. 7035.2610]
3.1.18	The permit application approved by this permit is signed and dated January 2017. [Minn. R. 7001.0010]
3.1.19	The engineering documents in the January 2017 application were prepared by Barr Engineering and are approved by this permit. These engineering documents include, but are not limited to: 1. Facility Description and Development Plans 2. Operations and Maintenance 3. Industrial Solid Waste Management Plan 4. Contingency Actions and Emergency Management 5. Construction and Engineering Design 6. Closure and Postclosure Care Plan 7. Permit Drawings 8. Financial Assurance Cost Estimate 9. Technical Specifications. [Minn. R. 7001.0150, subp. 3(H)]
3.1.20	The hydrogeologic evaluation documents approved by this permit include, but are not limited to: 1. Preliminary Site Evaluation Report of a Proposed Industrial and Demolition Landfill Site, Cyprus Northshore Mining Company, prepared by RREM, Inc., May 1991. 2. Phase II Detailed Site Investigation Report for Development of a Proposed Industrial and Demolition Landfill Site, Cyprus Northshore Mining, prepared by RREM, Inc., May 1992. 3. Supplemental Site Investigation Work Plan, Northshore Mining Company, prepared by Barr Engineering Company, March 1997. 4. Phase II Supplemental Site Investigation Report, Northshore Mining Company, prepared by Barr Engineering Company, October 1997. 5. Phase II Supplemental Site Investigation Work Plan Proposed Coal Ash Disposal Facility (Phase I and II Cells), Northshore Mining Company, May 2000. 6. Sampling and Analysis Plan, Northshore Mining Company, prepared by Barr Engineering Company, Revised April 2016. 7. Phase II Detailed Site Investigation Report, Northshore Mining Company, prepared by Barr Engineering Company, June 2000. 8. Phase III Water Monitoring System Report and Phase IV Water Quality Monitoring Work Plan, Northshore Mining Company, prepared by Barr Engineering Company, June 2000. 9. Phase IV Water Quality Monitoring Report, Northshore Mining Company, prepared by Barr Engineering Company, December 2000. [Minn. R. 7001.0150, subp. 3(H), Minn. R. 7001.3275]
3.1.21	Any revised plans shall be submitted for approval by the Commissioner. The Permittee shall obtain approval from the Commissioner on all revised engineering plans prior to construction of the affected portion of the facility. [Minn. R. 7001.0150, subp. 3(M), Minn. R. 7035.2610]
3.1.22	<b>Design And Construction Criteria.</b>
3.1.23	The Permittee may not locate, establish, or construct a solid waste management facility in areas designated in Minn. R. 7035.2555. The Permittee is planning a realignment of the western end of the southernmost dam in the tailings basin area and to raise the crest of tailings basin dams over the coming decades, resulting in a maximum tailings basin pond elevation of 1,355 feet above mean sea level. In a Technical Memorandum prepared by Barr Engineering, dated December 6, 2016, it is indicated that the SEEP/W model results show that the tailings basin pond at elevation 1,355 feet, with a drainage ditch at the dam toe with a base elevation of 1,300 feet, would not cause the groundwater elevations at the Landfill to rise. If the increased tailings basin pond elevation of 1355 feet is determined to influence the groundwater under and surrounding the landfill in such a way that the landfill can no longer be monitored effectively, the permittee shall take appropriate corrective action to maintain an effective leak detection and groundwater monitoring system for the landfill. [Minn. R. 7035.2555]



3.1.24	The Permittee shall construct the facility to prevent pollution of groundwater and surface water, minimize the contamination of soils from solid waste, and maintain the facility in conformance with MPCA air pollution control rules in accordance with Minn. R. 7035.2565. The Permittee shall design any proposed future expansions of the facility in accordance with this rule. [Minn. R. 7035.2565]
3.1.25	The Permittee shall construct the waste activity area where solid waste is stored in accordance with Minn. R. 7035.2855 except as provided in, subp. 1 and Minn. R. 7035.2525, subp. 2. [Minn. R. 7035.2855]
3.1.26	The Permittee shall construct the stormwater management system for the facility with Best Management Practices to manage stormwater discharge in accordance with the National Pollutant Discharge Elimination System/State Disposal System (NPDES/SDS) Permit for the discharge of stormwater associated with an industrial activity and/or a construction activity. The issuance of this permit does not release the Permittee from the obligation to obtain an NPDES/SDS permit. [Minn. R. 7001.1090]
3.1.27	The Permittee shall submit a construction plan to the Commissioner for approval prior to construction if the construction plan proposes any major revisions to the approved design. [Minn. R. 7001.0150, subp. H, Minn. R. 7035.2610]
3.1.28	The Permittee shall notify appropriate MPCA staff at least ten (10) working days in advance of the construction of the facility or any component thereof unless the Commissioner orders otherwise. [Minn. R. 7001.0150, subp. M]
3.1.29	The Permittee shall submit a construction certification for approval by the Commissioner in accordance with Minn. R. 7035.2610. A facility waste activity or any new design feature shall not be placed into operation until the construction certification has been approved by the Commissioner. [Minn. R. 7035.2610]
3.1.30	The Permittee shall not make any major alterations or additions to the facility that would materially alter the manner in which waste is managed without first obtaining the written consent of the Commissioner. [Minn. R. 7001.0150, subp. M]
3.1.31	<b>Operation And Maintenance Criteria.</b>
3.1.32	The Permittee shall ensure that the required number of operators, trained or certified under Minn. R. 7035.2545 and Minn. R. 7048.0100 to 7048.1300, are present and on duty at all times that the facility is open for the purpose of receiving waste. [Minn. R. 7035.2545, Minn. R. 7048.0100-1300]
3.1.33	The Permittee shall prevent unauthorized entry onto the facility in accordance with Minn. R. 7035.2535, subp. 3. In addition, the Permittee shall post a sign at the entrance of the facility and each waste activity area showing the facility name, MPCA permit number, hours of operation, the acceptable waste, and any other relevant information. [Minn. R. 7035.2535, subp. 3 ]
3.1.34	The Permittee shall establish and maintain a personnel training program consisting of classroom instruction and on-the-job training. The program shall address the requirements identified in Minn. R. 7035.2545, subp. 3, and shall include the specific training necessary to perform the tasks associated with each solid waste management area within the facility. The Permittee shall maintain a record of all personnel training and submit the dates of training in the annual report. [Minn. R. 7035.2545, subp. 3]
3.1.35	The Permittee shall prepare and maintain an operations and maintenance manual for the facility. The manual shall include operations and maintenance criteria that are specific to each solid waste management area within the facility. [Minn. R. 7001.3300, subp. P]
3.1.36	The Permittee shall construct and maintain all-weather approach and access roads to all waste activity areas within the facility. [Minn. R. 7001.0150, subp. 3(E)]
3.1.37	<b>Storage Of Solid Waste.</b>
3.1.38	The Permittee shall provide satisfactory storage for all solid waste accumulated at the facility in accordance with Minn. R. 7035.0700 and Minn. R. 7035.2855. [Minn. R. 7035.0700, Minn. R. 7035.2855]
3.1.39	The Permittee shall keep the facility grounds and immediately adjacent property free of litter stemming from the facility operations. The facility grounds and adjacent property shall be inspected and cleared of all litter at least once per week. [Minn. R. 7001.0150, subp. 3(O)]
3.1.40	The Permittee shall manage the facility to be in compliance with Minn. R. 7011.0150 to prevent particulate matter from becoming airborne. [Minn. R. 7011.0150]
3.1.41	The Permittee shall manage all free liquids that have come in contact with solid waste so that the liquids are not discharged as stormwater. [Minn. R. 7001.0150, subp. 2]
3.1.42	The Permittee shall provide effective measures to control flies, rodents and other insects or vermin as necessary. [Minn. R. 7001.0150, subp. 2]
3.1.43	The Permittee shall provide for the proper collection and transportation of solid waste in accordance with Minn. R. 7035.0800. [Minn. R. 7035.0800]

3.1.44	The Permittee shall not accept the wastes identified in Minn. R. 7035.2535, subp. 1 for treatment, storage, processing, or disposal. [Minn. R. 7035.2535, subp. 1]
3.1.45	The Permittee shall manage industrial solid waste for each waste activity as specified in the approved plan in accordance with Minn. R. 7035.2535, subp. 5. The Permittee shall include the information required by Minn. R. 7035.2575, subp. 2, items B and C in the annual report for each industrial waste accepted at the facility. [Minn. R. 7035.2535, subp. 5]
3.1.46	The Permittee shall operate and maintain the stormwater management system for the facility with Best Management Practices to manage stormwater discharges in accordance with the National Pollutant Discharge Elimination System/State Disposal System (NPDES/SDS) Permit for the discharge of stormwater associated with an industrial activity and/or a construction activity. [Minn. R. 7001.1090]
3.1.47	The Permittee shall operate and maintain the facility to prevent pollution of groundwater and surface water, minimize the contamination of soils from solid waste, and maintain the facility in conformance with MPCA air pollution control rules in accordance with Minn. R. 7035.2565. [Minn. R. 7035.2565]
3.1.48	The Permittee shall provide and maintain adequate emergency equipment at the facility to control accidental fires, and make arrangements with the local fire protection agency to immediately acquire their services when needed. The Permittee shall also provide adequate communications equipment for emergency purposes. [Minn. R. 7035.2595, subp. 2&4]
3.1.49	The Permittee shall keep a written operating record at the facility in accordance with Minn. R. 7035.2575. [Minn. R. 7035.2575, subp. 2]
3.1.50	The Permittee shall inspect the facility in accordance with the schedule and items approved by the Commissioner as defined by Minn. R. 7035.2535, subp. 4. The Permittee shall record inspections in an inspection log or summary and shall keep these records for at least five years. [Minn. R. 7035.2535, subp. 4]
3.1.51	The Permittee shall maintain a copy of the approved emergency procedures manual at the facility for facility personnel to use in time of emergency. [Minn. R. 7035.2595, subp. 5]
3.1.52	The Permittee shall maintain a copy of the approved contingency action plan at the facility. [Minn. R. 7035.2615]
3.1.53	The Permittee shall maintain a copy of the approved facility closure plan, and all revisions to the plan, at the facility until closure is completed and certified in accordance with Minn. R. 7035.2635, subp. 3. [Minn. R. 7035.2625, subp. 3]
3.1.54	The Permittee shall maintain a copy of the approved postclosure care plan, and all subsequent amendments, until the postclosure care period begins. During the postclosure care period, the plan shall be kept by the contact person identified in Minn. R. 7035.2645, subp. 2, item C. [Minn. R. 7035.2645, subp. 2]
3.1.55	<b>Monitoring Criteria.</b>
3.1.56	The Permittee shall design, construct, operate, and maintain the disposal area to achieve compliance with the analytical limits set forth in the Sampling and Monitoring Requirements of this permit. These limits are based upon the Minnesota Department of Health, Health Risk Limits (HRL), Health-Based Values (HBV), Risk Assessment Advice (RAA), and Maximum Contaminate Level (MCL) and replace the standards listed in Minn. R. 7035.2815, subp. 4, item F, as provided for in Minn. R. 7035.2815, subp. 4, item H. [Minn. R. 7001.0150, subp. 2, Minn. R. 7035.2815, subp. 4(F & H)]
3.1.57	The Permittee shall establish compliance boundaries as specified in the approved plans and specifications, and in accordance with Minn. R. 7035.2815, subp. 4, items A through E. [Minn. R. 7001.0150, subp. 2, Minn. R. 7035.2815, subp. 4(A-E)]
3.1.58	The Permittee shall determine the initial water quality in new monitoring points and monitoring systems, and perform background monitoring in accordance with Minn. R. 7035.2815, subp. 14, item E. [Minn. R. 7001.0150, subp. 2, Minn. R. 7035.2815, subp. 14(E)]
3.1.59	The Permittee shall develop and keep current a written monitoring protocol for the disposal area according to Minn. R. 7035.2815, subp. 14, item G and shall ensure the protocol is followed during sampling and sample analysis. [Minn. R. 7001.0150, subp. 2, Minn. R. 7035.2815, subp. 14(G)]
3.1.60	The Permittee shall conduct groundwater quality sampling and analysis as specified in the approved plans and specifications, and in accordance with Minn. R. 7035.2815 subp. 14, and shall include the monitoring stations identified in this Permit. The Permittee shall conduct the sampling according to the schedule shown in the Sampling and Monitoring Requirements of this Permit. [Minn. R. 7001.0150, subp. 2, Minn. R. 7035.2815, subp. 10]
3.1.61	The sampling window for the Spring Quarter, denoted as "Apr" on the Sampling and Monitoring Requirement Table, is between March 14 and May 14 of each calendar year. [Minn. R. 7001.0150, subp. 2, Minn. R. 7035.2815, subp. 10]

3.1.62	The sampling window for the Summer Quarter, denoted as "Jul" on the Sampling and Monitoring Requirement Table, is between June 21 and August 7 of each calendar year. [Minn. R. 7001.0150, subp. 2, Minn. R. 7035.2815, subp. 10]
3.1.63	The sampling window for the Fall Quarter, denoted as "Oct" on the Sampling and Monitoring Requirement Table, is between October 1 and November 21 of each calendar year. [Minn. R. 7001.0150, subp. 2, Minn. R. 7035.2815, subp. 10]
3.1.64	The sampling window for the Winter Quarter, denoted as "Dec" on the Sampling and Monitoring Requirement Table, is between December 1 and January 21 of each calendar year. [Minn. R. 7001.0150, subp. 2, Minn. R. 7035.2815, subp. 10]
3.1.65	The Permittee shall take the actions listed in Minn. R. 7035.2815, subp. 4, item G. if an intervention limit established in this permit is exceeded. [Minn. R. 7001.0150, subp. 2, Minn. R. 7035.2815, subp. 4(G)]
3.1.66	The Permittee shall conduct leachate quality sampling and analysis as specified in the approved plans and specifications, and in accordance with Minn. R. 7035.2815 subp. 14 and shall include the monitoring stations identified in this permit. The Permittee shall conduct the sampling according to the schedule shown in the Sampling and Monitoring Requirements of this Permit. [Minn. R. 7001.0150, subp. 2, Minn. R. 7035.2815, subp. 10]
3.1.67	The Permittee shall conduct surface water quality sampling and analysis as specified in the approved plans and specifications, and in accordance with Minn. R. 7035.2815 subp. 14 and shall include the monitoring stations identified in this Permit. The Permittee shall conduct the sampling according to the schedule shown in the Sampling and Monitoring Requirements of this Permit. [Minn. R. 7035.2815, subp. 10]
3.1.68	<b>Reporting Criteria.</b>
3.1.69	The Permittee shall submit an annual facility report for the preceding calendar year in accordance with Minn. R. 7035.2585 in a format prescribed by the MPCA. The annual facility report shall include waste types, volumes, management methods, and final destinations. When required of a waste activity, the report shall include summary evaluation reports and specific annual reporting requirements and monitoring results. The Permittee shall submit the report to the Commissioner according to the schedule in the Submittal/Action requirements section of this Permit. [Minn. R. 7035.2585]
3.1.70	The Permittee shall submit an electronic copy of all monitoring data including groundwater, leachate, and field data for each monitoring event. Electronic data shall be submitted in the format specified by the MPCA. The schedule for submitting electronic monitoring data shall follow the schedule outlined in the Submittal/Action Requirements section of this permit. [Minn. R. 7001.0150]
3.1.71	The Permittee shall submit a complete copy of the all monitoring results via emailed in PDF format to solidwastereports.pca@state.mn.us. The facility name and permit number must be in the subject line of the email. The monitoring results must be accompanied by information sufficient to establish the reliability, precision, and accuracy of the reported values, including but is not limited to the analytical report, chain of custody forms, filed notes, data analysis, and recommendation for monitoring adjustments. [Minn. R. 7001.0150]
3.1.72	The Permittee shall collect location and elevation data for all monitoring points. Location data shall be submitted in an approved coordinates system. Elevation data for monitoring wells shall include the elevation of the riser pipe and ground surface. The depth of wells from the riser pipe shall also be identified. If existing data is being reported the surveying method and datum used to collect this information shall be identified. [Minn. R. 7001.0150]
3.1.73	The Permittee shall submit an annual water and leachate monitoring summary and evaluation report in accordance with Minn. R. 7035.2585 and 7035.2815, subp. 14, item Q. The Permittee shall submit the report to the Commissioner, as part of the annual facility report, according to the schedule in this Permit. [Minn. R. 7001.0150, subp. 2, Minn. R. 7035.2815, subp. 14(Q)]
3.1.74	<b>Contingency Action Criteria.</b>
3.1.75	The Permittee shall address all facility waste activities as specified in the approved plans and specifications, and in accordance with Minn. R. 7035.2615. [Minn. R. 7035.2615]
3.1.76	If a fire occurs in the waste deposit area, the Permittee shall immediately implement its contingency action plan to extinguish the fire. [Minn. R. 7001.0150, subp. 3(E)]

3.1.77	Within 24 hours of discovery of the fire, the Permittee shall provide notice to the MPCA that a fire has occurred and that the contingency action plan has been implemented. If the Permittee has not extinguished the fire within two weeks of notice, the Permittee shall again notify the MPCA and shall provide the name of the professional engineer that their Permittee has hire to develop a revised plan for further firefighting efforts. The Permittee shall submit the revised plan to the MPCA for review and approval within 15 days of the notice to the MPCA that a revised plan is being prepared. To be approved, their revised plan shall identify the action that will be taken to extinguish that fire, including sources for materials and equipment and a timeline for implementation, and shall be signed by a registered professional engineer. The Permittee shall implement the revised plan upon approval by the MPCA. [Minn. R. 7001.0150, subp. 3(E)]
3.1.78	The Permittee shall implement the actions necessary to comply with the contingency action requirements in accordance with Minn. R. 7035.2615. [Minn. R. 7035.2615, subp. 2]
3.1.79	The Permittee shall maintain and operate the facility to minimize the possibility of a fire, explosion, or any release to air, land, or water of pollutants that threaten human health or the environment in accordance with Minn. R. 7035.2595. [Minn. R. 7035.2595, subp. 1]
3.1.80	The Permittee shall take all reasonable containment measures during an emergency and submit a written report to the Commissioner in accordance with Minn. R. 7035.2605. [Minn. R. 7035.2605, subp. 1]
3.1.81	<b>Closure Criteria.</b>
3.1.82	The Permittee shall close each waste activity, or the entire facility as appropriate, as specified in the approved plans and specifications, and in accordance with Minn. R. 7035.2625. [Minn. R. 7035.2625]
3.1.83	The Permittee shall perform closure for each waste activity as specified in the approved plans and specifications, and in accordance with Minn. R. 7035.2635. [Minn. R. 7035.2635]
3.1.84	The Permittee shall complete closure activities for the waste activity area in accordance with the closure plan within 180 days following the beginning of closure as specified in the closure procedures above. [Minn. R. 7001.0150, subp. 3(E)]
3.1.85	<b>Postclosure Criteria.</b>
3.1.86	The post-closure care period shall be a minimum of twenty years starting on the date the Commissioner approves the facility's final closure certification report. [Minn. Stat. 116.07, subd. 4h]
3.1.87	The Permittee shall comply with postclosure requirements as specified in the approved plans and specifications, and in accordance with Minn. R. 7035.2645. [Minn. R. 7035.2645]
3.1.88	The Permittee shall perform postclosure care for each waste activity as specified in the approved plans and specifications, and in accordance with Minn. R. 7035.2655, subp. 1. [Minn. R. 7035.2655, subp. 1]
3.1.89	The Permittee shall comply with postclosure use of property requirements in accordance with Minn. R. 7035.2655, subp. 2. [Minn. R. 7035.2655, subp. 2]
3.1.90	Prior to the end of the postclosure care period the Permittee must submit to the MPCA for review and approval a Post Closure Care Summary Report signed by a professional engineer licensed with the State of Minnesota. [Minn. R. 7035.2645]
3.1.91	<b>Financial Criteria.</b>
3.1.92	The Permittee shall keep the current cost estimates for contingency action, closure and postclosure care for each waste activity at the facility during the operating life in accordance with Minn. R. 7035.2685, subp. 2. [Minn. R. 7035.2685]
3.1.93	The Permittee shall establish and maintain financial assurance in accordance with Minn. R. 7035.2665 to 7035.2805. [Minn. R. 7035.2665-2805]
3.1.94	<b>General Conditions.</b>
3.1.95	The MPCA's issuance of a permit does not release the Permittee from any liability, penalty, or duty imposed by Minnesota or federal statutes, or regulations, or local ordinances including, but not limited to, those promulgated pursuant to Minn. Stat. chs. 115, 115A, 116, 400 and 473. This permit shall be permissive only and shall not be construed as estopping or limiting any claims against the Permittee, its agents, contractors, or assigns, nor as estopping or limiting any legal claims of the state against the Permittee, its agents, contractors, or assigns for damages to state property, or for any violation of the terms of this permit. [Minn. R. 7001.0150, subp. 3(A)]
3.1.96	The MPCA's issuance of a permit does not prevent the future adoption by the MPCA of pollution control rules, standar or enforcement orders more stringent than those now in existence and does not prevent the enforcement of these rules, standards, or enforcement orders against the Permittee. [Minn. R. 7001.0150, subp. 3(B)]

3.1.97	The permit does not convey a property right or an exclusive privilege. [Minn. R. 7001.0150, subp. 3(C)]
3.1.98	The MPCA's issuance of a permit does not obligate the MPCA to enforce local laws, rules or plans beyond that authorized by Minnesota Statutes. [Minn. R. 7001.0150, subp. 3(D)]
3.1.99	The Permittee shall perform the actions or conduct the activity authorized by the permit in accordance with the submittals and specifications approved by the MPCA and in compliance with the conditions of the permit. [Minn. R. 7001.0150, subp. 3(E)]
3.1.100	The Permittee shall at all times properly operate and maintain the facilities and systems of treatment and control and the appurtenances related to them which are installed or used by the Permittee to achieve compliance with the conditions of the permit. Proper operation and maintenance includes effective performance, adequate funding, adequate operator staffing and training, and adequate laboratory and process controls, including appropriate quality assurance procedures. The Permittee shall install and maintain appropriate backup or auxiliary facilities if they are necessary to achieve compliance with the conditions of the permit and, for all permits other than hazardous waste facility permits, if these backup or auxiliary facilities are technically and economically feasible. [Minn. R. 7001.0150, subp. 3(F)]
3.1.101	The Permittee may not knowingly make a false or misleading statement, representation, or certification in a record, report, plan, or other document required to be submitted to the MPCA or the Commissioner by the permit. The Permittee shall immediately upon discovery report to the Commissioner an error or omission in these records, reports, submittals or other documents. [Minn. R. 7001.0150, subp. 3(G)]
3.1.102	The Permittee shall, when requested by the Commissioner, submit within a reasonable time the information and reports that are relevant to the control of pollution regarding the construction, modification, or operation of the facility covered by the permit or regarding the conduct of the activity covered by the permit. [Minn. R. 7001.0150, subp. 3(H)]
3.1.103	When authorized by Minn. Stat. 115.04, 115B.17, subd. 4 and 116.091, and upon presentation of proper credentials, the MPCA, or an authorized employee or agent of the MPCA, shall be allowed by the Permittee to enter at reasonable times upon the property of the Permittee to examine and copy books, papers, records, or memoranda pertaining to the construction, modification, or operation of the facility covered by the permit or pertaining to the activity covered by the permit; and to conduct surveys and investigations, including sampling or monitoring, pertaining to the construction, modification, or operation of the facility covered by the permit or pertaining to the activity covered by the permit. [Minn. R. 7001.0150, subp. 3(I)]
3.1.104	If the Permittee discovers, through any means, including notification by the MPCA, that noncompliance with a condition of the permit has occurred, the Permittee shall take all reasonable steps to minimize the adverse impacts on human health, public drinking water supplies, or the environment resulting from the noncompliance. [Minn. R. 7001.0150, subp. 3(J)]
3.1.105	If the Permittee discovers that noncompliance with a condition of the permit has occurred which could endanger human health, public drinking water supplies, or the environment, the Permittee shall, within 24 hours of the discovery of the noncompliance, orally notify the Commissioner. Within five (5) days of the discovery of the noncompliance, the Permittee shall submit to the Commissioner a written description of the noncompliance; the cause of the noncompliance; the exact dates of the period of the noncompliance; if the noncompliance has not been corrected, the anticipated time it is expected to continue; and steps taken or planned to reduce, eliminate, and prevent recurrence of the noncompliance. [Minn. R. 7001.0150, subp. 3(K)]
3.1.106	The Permittee shall report noncompliance with the permit not reported in the Notification of Noncompliance subheading above by submitting the information listed in Notification of Noncompliance within 30 days of the discovery of the noncompliance. [Minn. R. 7001.0150, subp. 3(L)]
3.1.107	The Permittee shall give advance notice to the Commissioner as soon as possible of planned physical alterations or additions to the permitted facility or activity that may result in noncompliance with a Minnesota or federal pollution control statute or rule or condition of the permit. [Minn. R. 7001.0150, subp. 3(M)]
3.1.108	The permit is not transferable to any person without the express written approval of the MPCA after compliance with the requirements of Minn. R. 7001.0190. A person to whom the permit has been transferred shall comply with the conditions of the permit. [Minn. R. 7001.0150, subp. 3(N)]
3.1.109	The permit authorizes the Permittee to perform the activities described in the permit under the conditions of the permit. In issuing the permit, the state and MPCA assume no responsibility for damage to persons, property, or the environment caused by the activities of the Permittee in the conduct of its actions, including those activities authorized, directed, or undertaken under the permit. To the extent the state and MPCA may be liable for the activities of its employees, that liability is explicitly limited to that provided in the Tort Claims Act, Minn. Stat. 3.736. [Minn. R. 7001.0150, subp. 3(O)]

3.1.110	The Commissioner may commence proceedings to modify or revoke this permit during its terms if cause exists under Minn. R. 7001.0170 to 7001.0180. [Minn. R. 7001.0170-0180]
3.1.111	The provisions of this permit are severable. If any provision of this permit is held invalid, the remainder of this permit shall not be affected. [Minn. R. 7035.3200]
3.1.112	The Permittee may request an extension of the dates set forth in this permit including the submittal and monitoring dates. The request shall include justification for requesting the extension of the date. Based on the justification, the Commissioner may grant an extension. [Minn. R. 7001.0190, subp. 3(B)]
3.1.113	This permit is valid until the expiration date unless revoked or modified by the MPCA pursuant to Minn. R. 7001.0170 to 7001.0180. To allow for adequate MPCA review time and to avoid possible termination of the permit at the time the permit expires, an application for reissuance of the permit shall be submitted no later than 180 calendar days before the expiration date of the permit. [Minn. R. 7001.0150, subp. 1, Minn. R. 7001.3500, subp. 1]
3.1.114	The Permittee shall maintain records of all groundwater monitoring data and groundwater surface elevations for the active life of the facility and each waste activity and, for disposal activities, for the postclosure care period. The Permittee shall also maintain an operating record in accordance with Minn. R. 7035.2575 until closure of each waste activity at the facility. [Minn. R. 7001.3500, subp. 3(A)]
3.1.115	The Permittee may not start treatment, storage, or disposal of solid waste in a new solid waste management facility or in a modified portion of an existing solid waste management facility until the Commissioner has received a letter and as-built plans signed by the owner or operator and by an engineer registered in Minnesota certifying that the facility or modified portion of the facility has been constructed in compliance with the conditions of the permit. [Minn. R. 7001.3500, subp. 3(B)]
3.1.116	The Permittee may not start treatment, storage, or disposal of solid waste in a new solid waste management facility or in a modified portion of an existing solid waste management facility until the Commissioner has inspected the new facility or modified portion of the facility and has provided the owner or operator with a letter stating that the certification submitted is complete and approved. [Minn. R. 7001.3500, subp. 3(B (2))]
3.1.117	The Permittee may not start treatment, storage, or disposal of solid waste in a new solid waste management facility or in a modified portion of an existing solid waste management facility until the Commissioner has approved the financial assurance amount and instrument to be used for the facility in accordance with Minn. R. 7035.2665 to 7035.2805. [Minn. R. 7001.3500, subp. 3 (B (3))]
<b>IL 001</b>	<b>Industrial Waste Land Disposal</b>
3.2.1	<b>Design And Construction Criteria.</b>
3.2.2	The Permittee shall construct or install the phases, cells, liners, leachate management system, and water monitoring system of the industrial landfill in accordance with the approved plans and specifications. [Minn. R. 7035.1590]
3.2.3	The Permittee shall design any proposed future expansions or modifications of the disposal area in accordance with the design requirements as specified in the approved plans. [Minn. R. 7035.1590]
3.2.4	The disposal of industrial solid waste is prohibited within the areas outlined in Minn. R. 7035.1600. [Minn. R. 7035.1600]
3.2.5	Plans, including a permit application, report, and drawings shall be prepared by a registered engineer of Minnesota. The submitted plans shall include those outlined in Minn. R. 7035.1800. [Minn. R. 7035.1800]
3.2.6	The disposal area shall be located in accordance with Minn. R. 7035.2555 and Minn. R. 7035.2815, subp. 2. [Minn. R. 7001.0150, subp. 2, Minn. R. 7035.2555, Minn. R. 7035.2815, subp. 2]
3.2.7	The Permittee shall design the cover system of any proposed future expansions or modifications of the disposal area in accordance with Minn. R. 7035.1700, subp. D and Y and the approved plans. [Minn. R. 7035.1700, subp. D&Y]
3.2.8	The liner must comply with the requirements of Minn. R. 7035.2815, subp. 7 and the approved plans. [Minn. R. 7035.2815, subp. 7]
3.2.9	The Permittee shall evaluate any soils intended for use as cover or liner material in accordance with Minn. R. 7035.2815, subp. 8. [Minn. R. 7001.0150, subp. 2, Minn. R. 7035.2815, subp. 8]
3.2.10	The Permittee shall design any proposed future expansions or modifications of the water monitoring system in accordance with Minn. R. 7035.2815, subp. 10. [Minn. R. 7001.0150, subp. 2, Minn. R. 7035.2815, subp. 10]
3.2.11	The Permittee shall design any future expansions or modifications of the waste disposal area to include a leachate detection, collection, and on-site or off-site treatment system in accordance with Minn. R. 7035.2815, subp. 9. [Minn. R. 7035.1700, subp. T]
3.2.12	<b>Operating And Maintenance Criteria.</b>

3.2.13	The Permittee shall divert surface water drainage around and away from the site operating area. Slopes greater than 200 feet shall include drainage ways and design features to prevent erosion. [Minn. R. 7035.1700, subp. E, Minn. R. 7035.2815, subp. 5(E)]
3.2.14	The Permittee shall maintain a run-on control system to prevent flow onto the waste activity area, and a run-off control system to collect and control at least the water volume resulting from a 24 hour, 25 year storm. [Minn. R. 7001.0150, subp. 3]
3.2.15	The Permittee shall screen the disposal area either by existing or provided means. [Minn. R. 7035.1700, subp. O]
3.2.16	The Permittee shall not accept the following wastes for disposal except as approved by the Commissioner: 1) liquids; 2) infectious waste; 3) raw animal manure; 4) septic tank pumpings; 5) any of the following: digested sewage sludges, lime sludges, grit chamber cleanings, bar screenings, and other sludges; and 6) other substances that may be deemed unacceptable by the MPCA. [Minn. R. 7035.1700, subp. V]
3.2.17	The Permittee shall place at least six feet of solid waste, or an MPCA approved alternative insulating material, on any newly constructed liner by December 1st of each year if compacted clay was used in the barrier layer of the liner. If an alternative insulating material is utilized, the Permittee shall install thermo couples in the newly lined area, and shall maintain the approved thickness of insulating material until six feet of solid waste has been placed on the liner. No disposal may take place on uncovered areas after December 1st without testing the liner integrity and obtaining written approval from the Commissioner. If ash is used for frost protection, intermediate cover shall be placed over the ash if the area will be inactive for greater than 120 days. [Minn. R. 7001.0150, subp. 2, Minn. R. 7035.2815, subp. 13(U)]
3.2.18	The Permittee shall develop the site in phases according to the phase development plans. Each phase shall contain individual cells that will provide for filling in a manner to achieve final waste elevations as rapidly as possible. [Minn. R. 7001.0150, subp. 2, Minn. R. 7035.2815, subp. 5(B)]
3.2.19	The Permittee shall identify each fill phase with grade stakes or other marking method before the deposition of any waste. [Minn. R. 7001.0150, subp. 2, Minn. R. 7035.2815, subp. 13(F)]
3.2.20	The Permittee shall limit the disposal of industrial solid waste to as small an area as practical and with appropriate facilities to confine wind-blown material within the area. [Minn. R. 7035.1700, subp. C]
3.2.21	The Permittee shall compact the industrial solid waste as densely as practicable in layers two feet or less in depth and using a maximum three-to-one slope to achieve maximum compaction. [Minn. R. 7035.1700, subp. D, Minn. R. 7035.2815, subp. 13(A)]
3.2.22	The Permittee shall maintain an adequate supply of cover material which, if necessary, shall be stockpiled and protected to allow for compliance with the requirements contained in Minn. R. 7035.1700, item D. The cover material shall be available for use during inclement weather or winter operations. [Minn. R. 7035.1700, subp. D]
3.2.23	The Permittee shall cover the industrial solid waste with a minimum six inches of suitable compacted cover material at the end of each day of operation, or as approved by the Commissioner. The Permittee shall maintain all previously filled areas with at least six inches of suitable cover material. [Minn. R. 7035.1700, subp. D]
3.2.24	The Permittee shall provide and maintain an intermediate cover, totaling at least 12 inches of suitable compacted cover material or other approved cover material, for those disposal areas that will be exposed to the elements for a period of 120 days or longer. [Minn. R. 7035.1700, subp. D]
3.2.25	The Permittee shall begin closure of each fill phase within 30 days after reaching final permitted elevations. Each fill phase, upon reaching final permitted elevations, shall be covered in accordance with the approved plans and specifications. [Minn. R. 7001.0150, subp. 2, Minn. R. 7035.2815, subp. 16(A)]
3.2.26	The Permittee shall maintain the final cover system on all closed portions of the active waste disposal area in accordance with the approved plans and specifications. [Minn. R. 7001.0150, subp. 2, Minn. R. 7035.2815, subp. 16(B)]
3.2.27	The Permittee shall operate and maintain the stormwater management system for the disposal area with Best Management Practices to manage stormwater discharges in accordance with the National Pollutant Discharge Elimination System (NPDES) Permit for the discharge of stormwater associated with an industrial and/or construction activity. The permittee shall maintain certification for industrial stormwater coverage under the No Exposure Exclusion for the closed areas of the landfill that are not located within the drainage area of the Mile Post 7 tailings basin. [Minn. R. 7001.1090, Minn. R. 7035.1700, subp. D]

3.2.28	The Permittee shall maintain the integrity and functionality of the water monitoring network. The Permittee shall operate and maintain a water monitoring system in accordance with the approved plans and specifications. [Minn. R. 7001.0150, subp. 2, Minn. R. 7035.2815, subp. 10]
3.2.29	The Permittee shall maintain the integrity and functionality of the leachate detection, collection and treatment system. The Permittee shall also operate and maintain the leachate detection, collection and on-site or off-site treatment system in accordance with the approved plans and specifications. [Minn. R. 7035.1700, subp. T]

#### 4. Waste capacity table

Waste activity	ID	Status	Permitted area	Permitted area units	Permitted capacity	Permitted capacity (Units)	Design capacity	Design capacity (Units)
Industrial Waste Land Disposal	IL 001	Active / Existing	12.20	acre	488320	yd3	566000	yd3

#### 5. Submittal/Action requirements

SW-409	Northshore Mining Company Landfill
5.1.1	The Permittee shall submit an annual facility report: Due annually, by the 1st of February. [Minn. R. 7035.2585]
5.1.2	The Permittee shall submit a spring water monitoring report : Due annually, by the 30th of June. [Minn. R. 7035.2815, subp. 14(P)]
5.1.3	The Permittee shall submit a summer water monitoring report : Due annually, by the 30th of September. [Minn. R. 7035.2815, subp. 14(P)]
5.1.4	The Permittee shall submit an autumn water monitoring report : Due annually, by the 1st of February. [Minn. R. 7035.2815, subp. 14(P)]
5.1.5	The Permittee shall submit annual water monitoring evaluation report : Due annually, by the 1st of February. [Minn. R. 7035.2815, subp. 14(Q)]
5.1.6	The Permittee shall submit spring quarter leachate report : Due annually, by the 30th of June. [Minn. R. 7035.2815, subp. 14(P)]
5.1.7	The Permittee shall submit summer quarter leachate report : Due annually, by the 30th of September. [Minn. R. 7035.2815, subp. 14(P)]
5.1.8	The Permittee shall submit autumn quarter leachate report : Due annually, by the 1st of February. [Minn. R. 7035.2815, subp. 14(P)]
5.1.9	At a minimum of 180 days before the expiration date of this Permit, the Permittee shall submit an application for permit reissuance : Due 3472 calendar days after Permit Issuance Date. [Minn. R. 7001.0040, subp. 3]

#### 6. Monitoring stations

Monitoring type	Station name	Status
Groundwater	ALF-1	Active / Existing
Groundwater	ALF-4	Active / Existing
Groundwater	ALF-5	Active / Existing
Groundwater	ALF-7	Active / Existing
Groundwater	ALF-2R	Active / Existing
Groundwater	ALF-3R	Active / Existing
Groundwater	ALF-6R	Active / Existing
Groundwater	ALF-9R	Active / Existing
Liner Leak Detection	LDS-1	Active / Existing
Liner Leak Detection	LDS-2	Active / Existing
Waste Stream	Leachate Storage Tank	Active / Existing



## 7. Monitoring groups

Type	Name	Group description	Assigned stations
Ground Water Monitoring Group	Groundwater Sampling Group		ALF-1, ALF-4, ALF-5, ALF-7, ALF-2R, ALF-3R, ALF-6R, ALF-9R
Leachate Monitoring Group	Leachate Sampling Group	Leachate Tank and Phase I and III Lysimeters. The Phase I and III lysimeters must be sampled if there is liquid present.	LDS-1, LDS-2, Leachate Storage Tank

## 8. Sampling and monitoring requirements

Type	Group code	Parameter	CAS	Limit	Unit	Sampling freq.
Groundwater Sampling Group						
8.1.1	INOR	Alkalinity, Total as CaCO3	T-005		ug/L	Apr, Jul, Oct
8.1.2	INOR	Chloride	16887-00-6		ug/L	Apr, Jul, Oct
8.1.3	INOR	Fluoride	16984-48-8		ug/L	Apr, Jul, Oct
8.1.4	INOR	Nitrite (as Nitrogen)	14797-65-0	250	ug/L	Apr, Jul, Oct
8.1.5	INOR	Sulfate	14808-79-8		ug/L	Apr, Jul, Oct
8.1.6	INOR	Nitrate (as Nitrogen)	14797-55-8	2500	ug/L	Apr, Jul, Oct
8.1.7	METL	Arsenic	7440-38-2	2.5	ug/L	Jul
8.1.8	METL	Barium	7440-39-3	500	ug/L	Jul
8.1.9	METL	Aluminum	7429-90-5		ug/L	Jul
8.1.10	METL	Antimony	7440-36-0	1.5	ug/L	Jul
8.1.11	METL	Beryllium	7440-41-7	.02	ug/L	Jul
8.1.12	METL	Boron	7440-42-8	250	ug/L	Apr, Jul, Oct
8.1.13	METL	Cadmium	7440-43-9	.125	ug/L	Jul
8.1.14	METL	Calcium	7440-70-2		ug/L	Jul
8.1.15	METL	Chromium	7440-47-3	25	ug/L	Jul
8.1.16	METL	Copper	7440-50-8	250	ug/L	Jul
8.1.17	METL	Iron	7439-89-6		ug/L	Jul
8.1.18	METL	Lead	7439-92-1	3.75	ug/L	Jul
8.1.19	METL	Magnesium	7439-95-4		ug/L	Jul
8.1.20	METL	Mercury	7439-97-6	.5	ug/L	Jul
8.1.21	METL	Molybdenum	7439-98-7	7.5	ug/L	Jul
8.1.22	METL	Nickel	7440-02-0	25	ug/L	Apr, Jul, Oct
8.1.23	METL	Potassium	7440-09-7		ug/L	Jul
8.1.24	METL	Selenium	7782-49-2	7.5	ug/L	Apr, Jul, Oct
8.1.25	METL	Sodium	7440-23-5		ug/L	Jul
8.1.26	METL	Zinc	7440-66-6	500	ug/L	Jul
8.1.27	None	Vanadium	7440-62-2	12.5	ug/L	Jul
8.1.28	PHYS	Solids, Total Dissolved (TDS)	C010		ug/L	Apr, Jul, Oct
8.1.29	PHYS	Solids, Total Suspended (TSS)	C009		NTU	Apr, Jul, Oct
8.1.30	PHYS	Eh (Oxidation potential)	4		mV	Apr, Jul, Oct
8.1.31	PHYS	Oxygen, Dissolved	7782-44-7		ug/L	Apr, Jul, Oct
8.1.32	PHYS	pH	C006		SU	Apr, Jul, Oct
8.1.33	PHYS	Specific Conductance	C-011		umhos/cm	Apr, Jul, Oct
8.1.34	PHYS	Static Water Level (Elevation, MSL)	PCA-001		ft msl	Apr, Jul, Oct
8.1.35	PHYS	Temperature	T-121		degrees C	Apr, Jul, Oct
8.1.36	PHYS	Color	M002		SU	Apr, Jul, Oct
8.1.37	PHYS	pH, Field	C006		SU	Apr, Jul, Oct

Type	Group code	Parameter	CAS	Limit	Unit	Sampling freq.
Leachate Sampling Group						
8.2.1	CCRP	Chloride	16887-00-6		ug/L	Jul
8.2.2	CCRP	Fluoride	16984-48-8		ug/L	Jul
8.2.3	CCRP	Sulfate	14808-79-8		ug/L	Jul
8.2.4	CCRP	Arsenic	7440-38-2		ug/L	Jul
8.2.5	CCRP	Barium	7440-39-3		ug/L	Jul
8.2.6	CCRP	Antimony	7440-36-0		ug/L	Jul
8.2.7	CCRP	Beryllium	7440-41-7		ug/L	Jul
8.2.8	CCRP	Boron	7440-42-8		ug/L	Jul
8.2.9	CCRP	Cadmium	7440-43-9		ug/L	Jul
8.2.10	CCRP	Calcium	7440-70-2		ug/L	Jul
8.2.11	CCRP	Chromium, Total (as Cr)	7440-47-3		ug/L	Jul
8.2.12	CCRP	Cobalt	7440-48-4		ug/L	Jul
8.2.13	CCRP	Lead	7439-92-1		ug/L	Jul
8.2.14	CCRP	Lithium	7439-93-2		ug/L	Jul
8.2.15	CCRP	Mercury	7439-97-6		ug/L	Jul
8.2.16	CCRP	Molybdenum	7439-98-7		ug/L	Jul
8.2.17	CCRP	Selenium	7782-49-2		ug/L	Jul
8.2.18	CCRP	Thallium	7440-28-0		ug/L	Jul
8.2.19	CCRP	pH	C006		SU	Jul
8.2.20	None	Alkalinity, Total as CaCO3	T-005		mg/L	Jul
8.2.21	None	Nitrite Plus Nitrate, Total (as N)	C005		ug/L	Jul
8.2.22	None	Nitrogen, Ammonia, Total (as N)	7664-41-7		mg/L	Jul
8.2.23	None	Aluminum	7429-90-5		ug/L	Jul
8.2.24	None	Copper	7440-50-8		ug/L	Jul
8.2.25	None	Iron	7439-89-6		ug/L	Jul
8.2.26	None	Magnesium	7439-95-4		ug/L	Jul
8.2.27	None	Manganese	7439-96-5		ug/L	Jul
8.2.28	None	Nickel	7440-02-0		ug/L	Jul
8.2.29	None	Potassium	7440-09-7		ug/L	Jul
8.2.30	None	Sodium	7440-23-5		ug/L	Jul
8.2.31	None	Vanadium	7440-62-2		ug/L	Jul
8.2.32	None	Zinc	7440-66-6		ug/L	Jul
8.2.33	None	Specific Conductance	C-011		umho	Jul
8.2.34	None	Static Water Level (Elevation, MSL)	PCA-001		ft	Jul
8.2.35	None	Temperature	T-121		degrees C	Jul
8.2.36	None	Turbidity	G-019		NTU	Jul