



STATE OF MINNESOTA

Minnesota Pollution Control Agency

Industrial Division

National Pollutant Discharge Elimination System (NPDES)/
State Disposal System (SDS) Permit MN0046981

PERMITTEE: Northshore Mining Company
FACILITY NAME: Northshore Mining Company – Peter Mitchell Mine
RECEIVING WATERS: Unnamed Creek, Langley Creek, Yelp Creek, Dunka River, Partridge River and Mud Lake (Class 2B, 3C, 4A, 4B, 5, 6, Waters); One Hundred Mile Swamp (Class 2D, 3D, 4C, 5, 6 Water)

CITY OR TOWNSHIP: Babbitt **COUNTY:** St. Louis
ISSUANCE DATE: August 11, 2009 **EXPIRATION DATE:** July 31, 2014
MODIFICATION DATE:

The state of Minnesota, on behalf of its citizens through the Minnesota Pollution Control Agency (MPCA), authorizes the Permittee to operate a disposal system at the facility named above and to discharge from this facility to the receiving water named above, in accordance with the requirements of this permit.

The goal of this permit is to reduce pollutant levels in point source discharges and protect water quality in accordance with Minnesota and U.S. statutes and rules, including Minn. Stat. chs. 115 and 116, Minn. R. chs. 7001, 7050, 7053, 7060, 7090, and the U.S. Clean Water Act.

This permit is effective on the issuance date identified above, as modified on June 28, 2012. This permit expires at midnight on the expiration date identified above.

Signature: _____

Jeff Udd, P.E. *for* The Minnesota Pollution Control Agency
 Supervisor, Land and Water Quality Permits Unit
 Water Section
 Industrial Division

Submit DMRs to:

Attention: Discharge Monitoring Reports
 Minnesota Pollution Control Agency
 520 Lafayette Rd N
 St Paul, MN 55155-4194

Submit Other WQ Reports to:

Attention: WQ Submittals Center
 Minnesota Pollution Control Agency
 520 Lafayette Rd N
 St Paul, MN 55155-4194

Questions on this permit?

- For DMR and other permit reporting issues, contact: Tamara Dahl, 507-476-4252.
- For specific permit requirements or permit compliance status, contact: John Thomas, 218-302-6616.
- General permit or NPDES program questions, contact: MPCA, 651-282-6143 or 1-800-657-3938.

520 Lafayette Rd. N.; St. Paul, MN 55155-4194; 651-296-6300 (voice); 651-282-5332 (TTY)

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Facility Description

The principal activity at this facility is the open-pit mining of taconite ore for processing into taconite pellets. The maximum capacity for production is 43 million tons per year. The facility consists of all excavation areas, waste rock, lean ore and overburden stockpile areas, plant areas, materials and equipment storage areas, haul roads, railroad yards, and wastewater disposal systems within the area designated on the map on page 7 of this permit.

The Northshore – Peter Mitchell Mine is divided up into five areas (Area 001 – Area 005). The following is a description of the activities taking place in each area of the mine:

Area	Outfall	Type of Discharge	Average Daily Flow (million gallons)	Maximum Daily Flow (million gallons)	Discharge Frequency	Receiving Water*
001	SD-001	Mine Pit Dewatering	2.4	21.6	Intermittent	Dunka River via Unnamed Creek
001	SD-002	Mine Pit Dewatering	2.4	21.6	Intermittent	Dunka River via Unnamed Creek
001	SD-003	Mine Pit Dewatering	2.4	21.6	Intermittent	Dunka River via Unnamed Creek
002	SD-004	Mine Pit Dewatering	4.7	** Combined flow of SD-004 And SD-005 is 15.2 MG	Intermittent	Unnamed Creek to Langley Creek to Dunka River
002	SD-005	Mine Pit Dewatering	4.7		Intermittent	Unnamed Creek to Langley Creek to Dunka River
003	SD-006	Mine Pit Dewatering	Inactive	32.8	Intermittent	Unnamed Creek to One Hundred Mile Swamp to Partridge River
003	SD-007	Mine Pit Dewatering	Inactive	32.8	Intermittent	Unnamed Creek to One Hundred Mile Swamp to Partridge River
003	SD-008	Mine Pit Dewatering	Inactive	32.8	Intermittent	Unnamed Creek to One Hundred Mile Swamp to Partridge River
003	SD-009	Mine Pit Dewatering	7.4	32.8	Intermittent	Unnamed Creek to One Hundred Mile Swamp to Yelp Creek to Partridge River
003	SD-010	Mine Pit Dewatering	0.17	32.8	Intermittent	Unnamed Creek to One Hundred Mile Swamp to Mud Lake

003	SD-011	Mine Pit Dewatering	Inactive	32.8	Intermittent	Unnamed Creek to One Hundred Mile Swamp to Yelp Creek to Partridge River
003	SD-012	Mine Pit Dewatering	Inactive	32.8	Intermittent	Unnamed Creek to One Hundred Mile Swamp to Yelp Creek to Partridge River
003	SD-013	Crusher 2 Sanitary Outfall	Inactive	0.044	Continuous when active	Unnamed Creek to One Hundred Mile Swamp to Partridge River
003	SD-016	Crusher 2 Settling Pond Discharge	0.0085	0.09	Intermittent	Unnamed Creek to One Hundred Mile Swamp to Partridge River

Area	Outfall	Type of Discharge	Average Daily Flow (million gallons)	Maximum Daily Flow (million gallons)	Discharge Frequency	Receiving Water*
004	SD-014	Crusher 1 East Sanitary Outfall (Imhoff Tank/Trickling Filter)	Inactive	0.044	Continuous when active	Unnamed Creek to Langley Creek to Dunka River
004	SD-015	Crusher 1 West Sanitary Outfall (Imhoff Tank/Trickling Filter)	0.004	0.044	Continuous	Unnamed Creek to Langley Creek to Dunka River
004	SD-017	Crusher 1 East Shop Discharge	0.02	0.09	Continuous	Unnamed Creek to Langley Creek to Dunka River
004	SD-018	Crusher 1 Potable Water System Discharge	0.01	0.07	Intermittent	Unnamed Creek to Langley Creek to Dunka River
004	SD-024	Crusher 1 Sanitary Outfall (Stabilization Ponds)	0.008	0.008	Controlled	Unnamed Creek to Langley Creek to Dunka River
005	SD-019	Crusher 1 West Shop Discharge	0.04	0.09	Continuous	Unnamed Creek to Langley Creek to Dunka River

*Receiving water use classes: Unnamed Creek, Langley Creek, Yelp Creek, Dunka River, Partridge River and Mud Lake are Class 2B, 3C, 4A, 4B, 5, 6, Waters. One Hundred Mile Swamp is a Class 2D, 3D, 4C, 5, 6 Water.

Area 001

Area 001 contains three mine pit dewatering discharge points for water pumped from the eastern portion of the mine. The discharge points are known as SD-001, SD-002, and SD-003.

Area 002

Area 002 contains two mine pit dewatering discharge points for water pumped from the central portion of the mine. The discharge points are known as SD-004 and SD-005. The Permittee may have a maximum flow of 15.2 mgd from the combined discharge of SD-004 and SD-005. The discharge may be pumped from one or both of these outfalls at a maximum rate of 15.2 mgd.

Area 003

Discharges from Area 003 include seven mine pit dewatering outfalls (SD-006 – SD-012) for water pumped from the western portion of the mine; treated shop drainage and runoff from Crusher No. 2 (SD-016); and sanitary sewage discharges from Crusher No. 2 (SD-013).

Mine pit dewatering in Area 003 is currently active at SD-009. Mine pit dewatering at SD-006, SD-007, SD-008, SD-011, and SD-012 is inactive at this time; however, mine pit dewatering could take place at one or more of these outfalls during the life of this permit. There is no active mining activity at SD-010; however there is a passive discharge due to the pit overflowing.

Area 003 contains a sanitary outfall known as SD-013 for Crusher No. 2. The sanitary wastewater treatment system consists of an Imhoff tank, tip-trough trickling filters, settling tank, chlorination, dechlorination, contact tanks and phosphorus removal. Biosolids from the sanitary wastewater treatment system are transferred to a local wastewater treatment facility for disposal. The discharge at Crusher No. 2 is continuous when active. There is no activity at Crusher No. 2 at this time.

Flow from activities taking place at or around Crusher No. 2 flow to the Crusher No. 2 settling pond (SD-016; formerly SD-023). The discharge from the settling pond can consist of water treatment plant filter backwash from the potable water supply to Crusher No. 2, internal and floor drainage from the crusher and shop building, as well as non-contact cooling water and boiler blowdown from Crusher No. 2 when the crusher is active.

At this time, Crusher No. 2 is inactive; however, vehicle maintenance activities and general dewatering are taking place at the Crusher No. 2 site. The flow from the settling pond discharge is intermittent and is estimated to have an average flow rate of 0.0085 MGD and a maximum flow rate of 0.09 MGD. Monitoring at Station SD-023 is no longer accessible as it is covered by water. Discharge point SD-016 is now monitoring the flow from former discharge point SD-023.

When the potable water treatment system is active, water from the mine pit is pumped to an on-site reservoir and treated with alum and chlorine prior to use as part of the Crusher No. 2 potable water system. The water treatment plant contains sand filters which are backwashed at a rate of 9,000 gallons per week to the settling pond. No sludges are generated by this water treatment plant. The water treatment plant is not active at this time.

Internal drainage from Crusher No. 2 is treated by an oil-water separator before being pumped to the settling basin when the crusher is active.

Once-through non-contact cooling water from the crusher and compressor cooling water from Crusher No. 2 is pumped daily at an average rate of 0.048 MGD to the settling basin when the crusher is active.

Area 004

Area 004 contains four discharge points from the area around Crusher No. 1. Discharges from Area 004 include two sanitary wastewater discharges (SD-014 and SD-015), filter backwash from the Crusher

No. 1 potable water system (SD-018), and treated drainage from Crusher No. 1 (SD-017).

Crusher No. 1 has two separate sanitary sewage discharge points known as SD-014 and SD-015. The discharge from each of the points is continuous when Crusher No. 1 is active. Each treatment system discharge consists of an Imhoff tank tip-trough trickling filter, final settling tanks, contact chlorination and dechlorination. The biosolids generated at these facilities are transferred to a local wastewater treatment facility. At this time the discharge from SD-015 is active and there is no discharge from SD-014. The discharges from SD-014 and SD-015 will be replaced with a stabilization pond system and will discharge from outfall SD-024 and is further described below in the section titled "Major Permit Modification (2013)".

The Crusher No. 1 East Shop discharge point known as SD-017 consists of internal drainage and boiler blowdown from the Crusher No. 1 Shop Complex, drainage from the aggregate stockpile and Crude Ore Storage Area; non-contact cooling water and internal drainage from Crusher No. 1; and runoff from the Crusher No. 1 Shop Complex, Drive House, water treatment plant and train loading areas. All drainage and discharges from these areas flow to the East Shop settling pond.

Internal drainage and blowdown from Crusher No. 1 is treated by an oil-water separator before being pumped to the East Shop settling pond. Floor drainage and associated wastewaters such as boiler blowdown from the Main Shop Complex are treated by a sediment tank and oil-water separator before flowing through a railroad ditch settling pond then to the East Shop settling pond.

A vehicle wash bay has been added to the Crusher No. 1 Shop Complex. Detergents and degreasers are used to clean haul trucks and other large vehicles. Wash water is collected in a settling sump. Water from the sump passes through an oil-water separator before being released to the shop drain system. The wash area drains from the Crusher No. 1 Shop Complex settling pond via SD-017.

A water pretreatment system has been added to the locomotive shop area to intercept and treat water from local drains. The pretreatment system includes settling, filtration, oil removal, and pH control. Water discharged from this system joins the remainder of the discharge from the shop floor drains prior to the original series of oil skimmers, ditches and settling ponds.

The Crusher No. 1 Potable Water System consists of ground water that is treated by a sand filter and chlorination. The water treatment system is backwashed approximately once per month and discharges via the Crusher No. 1 settling pond at a discharge point known as SD-018.

Area 005

Area 005 contains one discharge from the West Shop at Crusher No. 1. The discharge is known as SD-019 and consists of runoff from a railroad yard, salvage yard, wash shop, fueling station, paint shop, and associated settling pond, tire shop, fuel storage, and distribution area, trailer-bucket repair shop, mine maintenance shop, and a warehouse on the west side of Crusher No. 1. Runoff from the west end of the crude ore storage area and from the south side of the 78 Spur pad plant aggregate stockpile is also directed toward SD-019. All drainage and discharges associated with the West Shop are treated by ditches, an oil-water separator, and skimmer.

Additional Monitoring Points

Additional flow-weighted composite monitoring is conducted at the facility at stations known as SD-020 and SD-022. Monitoring at SD-020 is a flow weighted composite of outfalls SD-006 – SD-012 and SD-016. Monitoring at SD-022 is a flow-weighted composite of outfalls SD-001 – SD-005, and SD-017 – SD-019.

Surface Water Monitoring

Surface water is monitored at the following locations: SW-002, SW-003 and SW-004. Monitoring station SW-002 is the untreated municipal water supply for the city of Hoyt Lakes. Monitoring Station SW-003 is at the outlet of Birch Lake at the Minnesota Highway 1 bridge crossing of the South Kawishiwi River. Monitoring station SW-004 is in the Partridge River at the County Road 666 bridge east of Hoyt Lakes.

Site Geology

The Peter Mitchell Mine is excavated into the Biwabik Iron Formation. The Biwabik Iron Formation dips to the south-southeast at a 5-10 degree angle in the Peter Mitchell Mine and is overlain by the Virginia Formation and Duluth Complex. As the ore horizons get deeper, lean ores and rock from the Biwabik Iron Formation as well as Virginia Formation Rock must be excavated and stockpiled to allow access to the underlying ore.

Isolated zones of elevated sulfide mineralization have been known to occur in Virginia Formation (including bedded pyrrhotite zones) and Duluth Complex rock (copper-nickel sulfides). Northshore Mining Company, in cooperation with MPCA and Minnesota Department of Natural Resources (MDNR), has characterized Biwabik Iron Formation and Virginia Formation rock that must be removed and stockpiled to allow mining of the underlying ore. The results of this characterization have been included in a Virginia Formation Management Plan that proposes for MDNR and MPCA approval the management of Virginia Formation rock prior to stockpiling. To date, these approved stockpiles containing Virginia Formation rock have been placed in the mine pit in portions of Sections 16, 17, 19, and 20, T60N, R12W in Areas 001 and 002 in accordance with the Virginia Formation Management Plan. Some Duluth Complex material was blasted by Reserve Mining and moved to an engineered stockpile in Section 16, T60N, R12W in Area 001 by Northshore Mining Company in accordance with MPCA and MDNR permit requirements.

Any future blasting of and stockpiling of the Virginia Formation must be done in accordance with the updated Virginia Formation Management Plan. Duluth Complex rock or materials shall not be disturbed without written approval from the MPCA of a Duluth Complex Management Plan.

Nondegradation Review

The facility is not new or expanding and therefore is not subject to nondegradation review. In accordance with MPCA rules regarding nondegradation for all waters, the design **maximum daily** flow of the facility as of January 1, 1988, and associated mass loading are the baseline design flow and mass loading. This baseline flow and mass loading will be used to determine whether nondegradation review is required for any change in the discharge. Any change that results in an increase in design flow greater than 0.2 mgd and an increased loading of one or more pollutants, or any change in a discharge containing a toxic pollutant that results in a mass loading rate likely to increase the concentration of the toxicant in the receiving water by greater than one percent over the baseline quality, is subject to nondegradation review in accordance with Minn. R. 7050.0185.

Chemical Additives

The following chemical additives are used as necessary at the Peter Mitchell Mine:

Product Name	Average Rate of Use (Weight or Volume Per Year)	Purpose/Where Used
Nalco 918 Pulv	5 gallons/year	Shop boilers (water conditioner)
Nalco Tri-Act 1820	15 gallons/year	Shop boilers (water conditioner)
Sanuril 115	15 gallons/year	Sewage treatment system
De-Chlor	15 gallons/year	Sewage treatment system
Hydrus Quick Split-593	1,200 gallons/year	Equipment cleaner
Hydrochloric acid, 20 baume (30%)	350 gallons/year	Shop wash water pH control
Sodium hypochlorite	120 gallons/year	Potable water system
Caustic soda (sodium hydroxide)	500 gallons/year	Potable water system
Calcium chloride and/or Magnesium Chloride	250,000 gallons/year (combined)	Dust control (roads); anti-freeze (ore loadout)
Diethylene glycol	180,000 gallons/year	Anti-freeze (ore loadout)
Flex-Clean	500 gallons/year	Detergent
Sodium chloride (road salt)	1,500,000 pounds/year	Anti-icing agent

Minor Permit Modification (2012)

The permit was modified in 2012 to permit the installation of several carbon dioxide injection units at various mine pit dewatering sumps corresponding to outfalls SD-002, SD-005, and SD-009. The purpose of these units is to reduce pH of the mine pit dewatering discharge to be within permitted pH levels.

Three identical treatment units were constructed and available for operation at SD-002, SD-005, and SD-009 by July 15, 2012. Current mine pit configuration and active mining equipment surrounding the SD-004 dewatering sump will not accommodate this type of treatment system. The water from SD-004 will be discharged to the SD-005 sump where it is treated prior to discharge through SD-005. The configuration of routing SD-004 to SD-005 does not prohibit the Permittee from discharging from SD-004 directly, provided it can meet the effluent limits required in the Limits & Monitoring Section of this permit. The treatment units are semi-permanent structures and can be moved where necessary using heavy equipment. The treatment units will be staged at the associated mine dewatering sumps unless other suitable locations are identified.

The treatment systems have a design flow of 65 gallons per minute. Water is continuously pumped through the treatment unit while a pH probe analyzes the pH, signaling addition of carbon dioxide as necessary to maintain a set pH range. Treated water is then returned to the sump. When the pH of the sump reaches an upper set point, carbon dioxide is added to the stream using a gas sparger until the pH of the sump reaches the lower set point.

Major Permit Modification (2013)

The purpose of this major permit modification is to address the replacement of the existing domestic wastewater treatment system. The company is proposing to replace its existing trickling filter domestic wastewater treatment system with a lined three-cell stabilization pond system.

The proposed domestic wastewater treatment system will have a controlled discharge at SD-024 to Unnamed Creek which flows to Langley Creek (Class 2B, 3C, 4A, 4B, 5, 6 Water). It is designed to treat an average wet weather flow of 8,850 gallons per day (gpd) with a five-day carbonaceous biochemical oxygen (CBOD₅) strength of 145 mg/L (10.7 pounds/day/4.9 kg/day). The proposed system will consist of two primary cells and one secondary cell. Each of the three cells will have a surface area of approximately 0.48 acres at the four-foot depth. The stabilization pond system will provide a total detention time of 210 days at design flow.

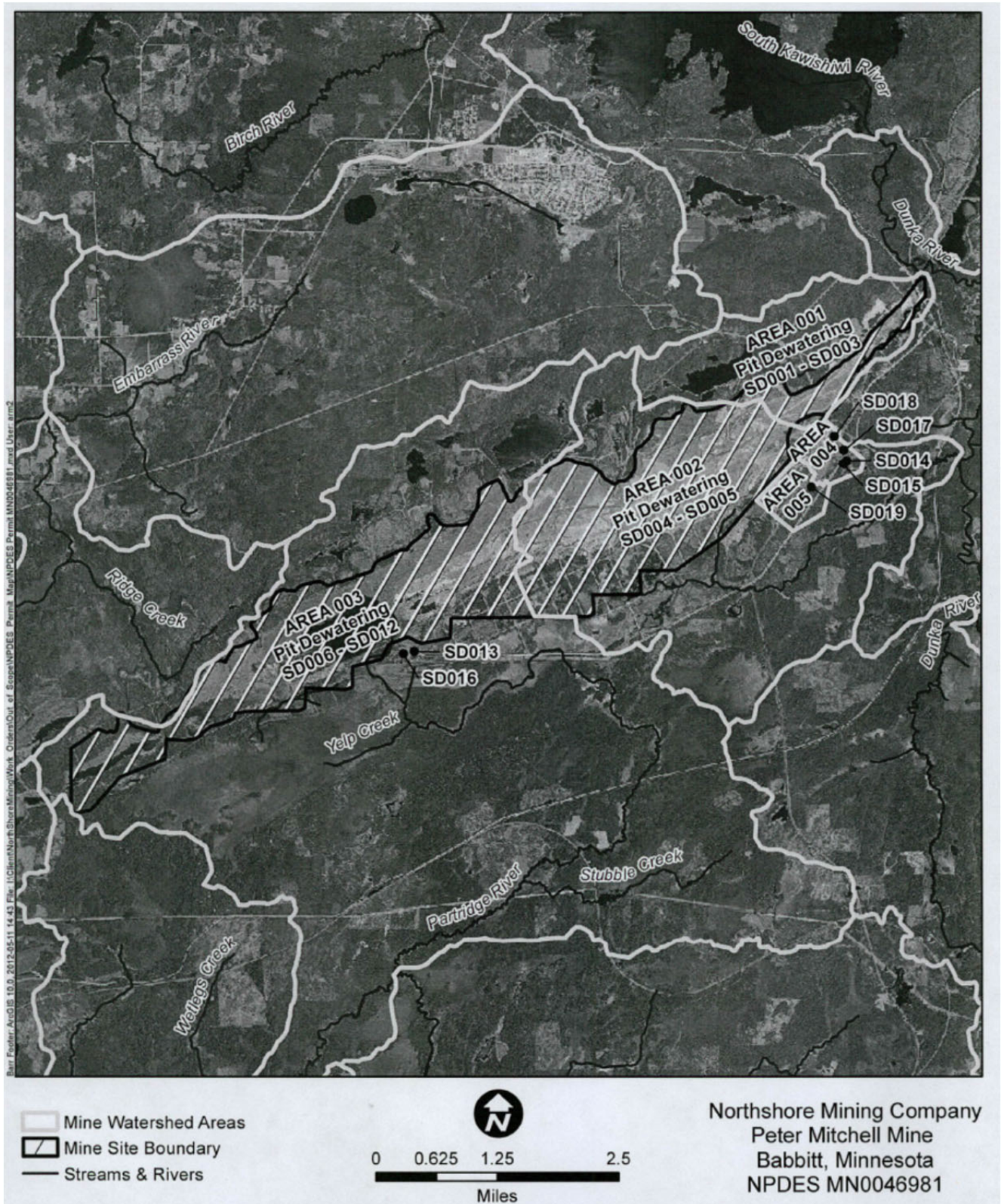
In accordance with Minnesota Pollution Control Agency rules regarding nondegradation for all waters that are not Outstanding Resource Value Waters (ORVW), nondegradation review is required for any new or expanded significant discharge (Minn. R. 7050.0185). A significant discharge is 1) a new discharge (not in existence before January 1, 1988) that is greater than 200,000 gallons per day to any water other than a Class 7 water or 2) an expanded discharge that expands by greater than 200,000 gallons per day that discharges to any water other than a Class 7 water or 3) a new or expanded discharge containing any toxic pollutant at a mass loading rate likely to increase the concentration of the toxicant in the receiving water by greater than one percent over the baseline quality. The flow rate used to determine significance is the design average wet weather flow. The January 1, 1988, design average wet weather flow for the domestic facility is 0.058 mgd.

The Permittee also proposes to install a carbon dioxide injection units at the mine pit dewatering sump corresponding to outfall SD-004. The unit is similar to those previously approved in the June 2012 permit modification. The treatment systems have a design flow of 65 gallons per minute. Water is continuously pumped through the treatment unit while a pH probe analyzes the pH, signaling addition of carbon dioxide as necessary to maintain a set pH range. Treated water is then returned to the sump. When the pH of the sump reaches an upper set point, carbon dioxide is added to the stream using a gas sparger until the pH of the sump reaches the lower set point.

This permit also complies with Minn. R. 7053.0275 regarding anti-backsliding.

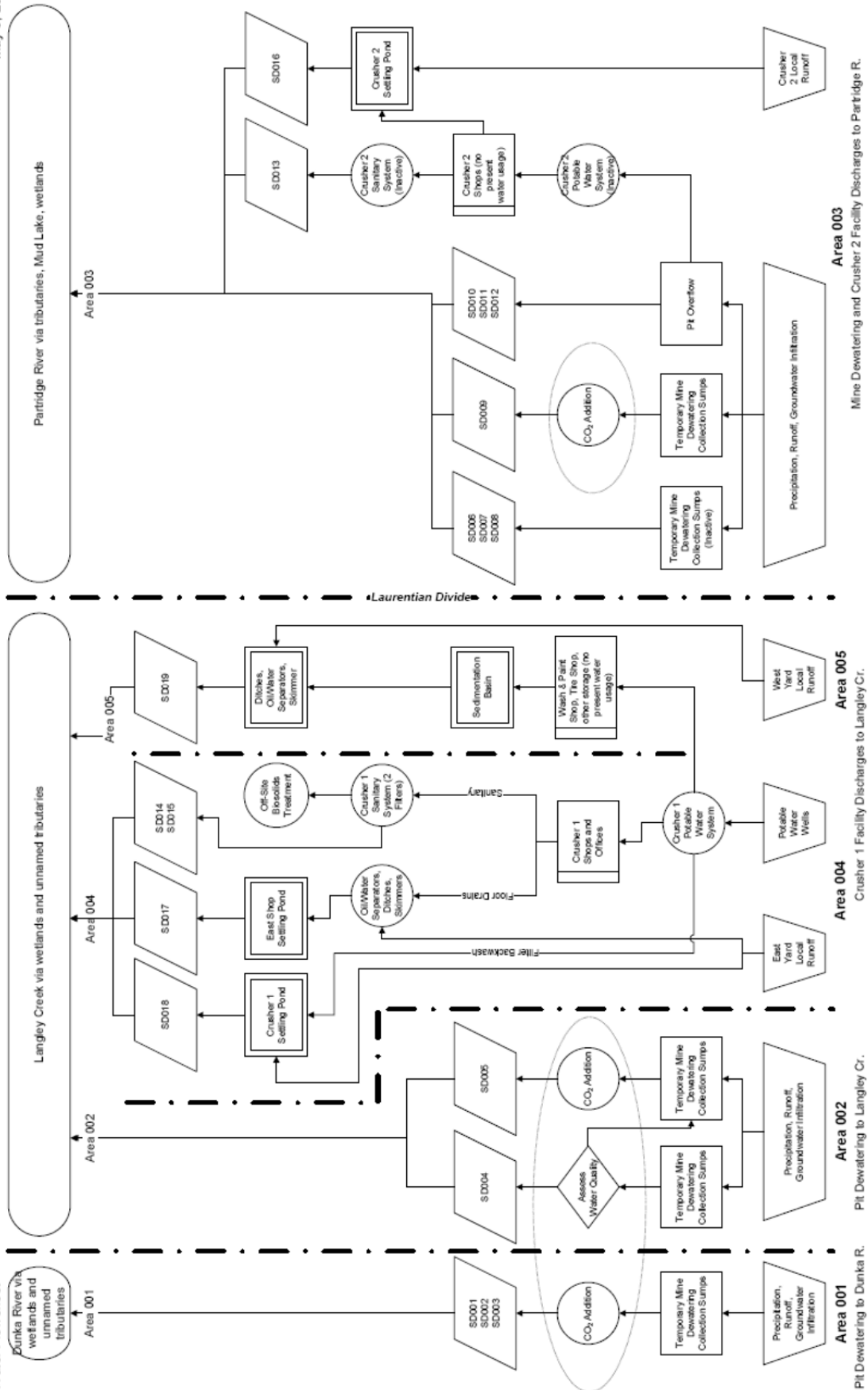
Any point source discharger of sewage, industrial, or other wastes for which a NPDS permit has been issued by the agency that contains effluent limits more stringent than those that would be established by parts 7053.0215 to 7053.0265 shall continue to meet the effluent limits established by the permit, 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.

Facility Location



Northshore Mining Company: Peter Mitchell Mine

Water Flowsheet

NPDES MN0046981
May 8, 2012


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<u>Station</u>	<u>Type of Station</u>	<u>Local Name</u>	<u>PLS Location</u>
SD001	Effluent To Surface Water	3E pit dewatering outfall B100	East Half of Section 16, Township 60 North, Range 12 West
SD002	Effluent To Surface Water	0S pit dewatering outfall B101	West Half of Section 16, Township 60 North, Range 12 West
SD003	Effluent To Surface Water	3S pit dewatering outfall B102	SE Quarter of Section 17, Township 60 North, Range 12 West
SD004	Effluent To Surface Water	126S pit dewatering outfall B104	NW Quarter of Section 19, Township 60 North, Range 12 West
SD005	Effluent To Surface Water	150S pit dewatering outfall B105	NE Quarter of Section 25, Township 60 North, Range 13 West
SD006	Effluent To Surface Water	185S pit dewatering outfall B106	NW Quarter of Section 25, Township 60 North, Range 13 West
SD007	Effluent To Surface Water	223S pit dewatering outfall B107	SE Quarter of Section 26, Township 60 North, Range 13 West
SD008	Effluent To Surface Water	258S pit dewatering outfall B108	NE Quarter of Section 34, Township 60 North, Range 13 West
SD009	Effluent To Surface Water	280/292S pit dewatering outfall B109	NW Quarter of Section 34, Township 60 North, Range 13 West
SD010	Effluent To Surface Water	360S pit dewatering outfall B110	SW Quarter of Section 33, Township 60 North, Range 13 West
SD011	Effluent To Surface Water	380S pit dewatering outfall B111	NE Quarter of Section 5, Township 59 North, Range 13 West
SD012	Effluent To Surface Water	430S pit dewatering pipe outfall B112	NE Quarter of Section 6, Township 59 North, Range 13 West
SD013	Effluent To Surface Water	Crusher 2 Sanitary pipe outfall B201	NE Quarter of Section 34, Township 60 North, Range 13 West
SD014	Effluent To Surface Water	Crusher 1 E Sanitary pipe outfall B202	NW Quarter of Section 21, Township 60 North, Range 12 West
SD015	Effluent To Surface Water	Crusher 1 W Sanitary pipe outfall B203	SW Quarter of Section 21, Township 60 North, Range 12 West
SD016	Effluent To Surface Water	Crusher 2 Sed Basin weir outfall B301	NW Quarter of Section 34, Township 60 North, Range 13 West
SD017	Effluent To Surface Water	Crusher 1 E Shop weir outfall B302	SW Quarter of Section 21, Township 60 North, Range 12 West
SD018	Effluent To Surface Water	Crusher 1 Sed Basin weir outfall B303	NW Quarter of Section 21, Township 60 North, Range 12 West
SD019	Effluent To Surface Water	Crusher 1 W Shop weir outfall B304	SW Quarter of Section 20, Township 60 North, Range 12 West
SD020	Effluent To Surface Water	Flow-weighted composite of B106-B112, B301	
SD022	Effluent To Surface Water	Flow weighted composite of B100-B105, B302-B304	
SD024	Effluent To Surface Water	Domestic wastewater stabilization pond	SW Quarter of the NW Quarter of the SW Quarter of Section 21, Township 60 North, Range 12 West

Surface Water Stations

<u>Station</u>	<u>Type of Station</u>	<u>Local Name</u>	<u>PLS Location</u>
SW002	Lake/Reservoir	Untreated Hoyt Lakes Municipal Water Station B700	NE Quarter of Section 8, Township 58 North, Range 14 West
SW003	Stream/River/Ditch, Downstream	Outlet of Birch Lake at MN Hwy 1 B703	NE Quarter of Section 31, Township 62 North, Range 11 West
SW004	Stream/River/Ditch, Downstream	Partridge R at Co Rd 666 E of Hoyt Lakes B710	SW Quarter of Section 9, Township 58 North, Range 14 West

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The Permittee shall comply with the limits and monitoring requirements as specified below.

Period: Limits Applicable in the Interim Period**SD 001, SD 002, SD 003, SD 004, SD 005**

Parameter	Limit	Units	Limit Type	Effective Period	Sample Type	Frequency	Notes
Copper, Total (as Cu)	Monitor Only	ug/L	Calendar Month Maximum	Apr, Jul, Oct	Grab	1 x Month	
Flow	Monitor Only	mgd	Calendar Month Maximum	Jan-Dec	Calculation	2 x Month	
Flow	Monitor Only	MG	Calendar Month Total	Jan-Dec	Calculation	2 x Month	
Iron, Dissolved (as Fe)	1.0	mg/L	Calendar Month Average	Jan-Dec	Grab	1 x Month	
Iron, Dissolved (as Fe)	2.0	mg/L	Calendar Month Maximum	Jan-Dec	Grab	1 x Month	
Mercury, Total (as Hg)	Monitor Only	ug/L	Calendar Month Average	Mar, Sep	Grab	1 x Month	
Mercury, Total (as Hg)	Monitor Only	ug/L	Calendar Month Maximum	Mar, Sep	Grab	1 x Month	
Nickel, Total (as Ni)	Monitor Only	ug/L	Calendar Month Maximum	Apr, Jul, Oct	Grab	1 x Month	
Nitrogen, Ammonia, Total (as N)	Monitor Only	mg/L	Calendar Month Average	Mar-Oct	Grab	2 x Month	
Nitrogen, Ammonia, Total (as N)	Monitor Only	mg/L	Calendar Month Maximum	Mar-Oct	Grab	2 x Month	
Nitrogen, Ammonia, Un-ionized (as N)	0.04	mg/L	Calendar Month Average	Mar-Oct	Calculation	2 x Month	
Nitrogen, Ammonia, Un-ionized (as N)	Monitor Only	mg/L	Calendar Month Maximum	Mar-Oct	Calculation	2 x Month	
pH	8.5	SU	Instantaneous Maximum	Jan-Dec	Grab	2 x Month	
pH	6.5	SU	Instantaneous Minimum	Jan-Dec	Grab	2 x Month	
Solids, Total Suspended (TSS)	20	mg/L	Calendar Month Average	Feb, Apr, Jun, Aug, Oct, Dec	Grab	1 x Month	
Solids, Total Suspended (TSS)	30	mg/L	Calendar Month Maximum	Feb, Apr, Jun, Aug, Oct, Dec	Grab	1 x Month	
Sulfate, Total (as SO4)	Monitor Only	mg/L	Calendar Month Maximum	Jan-Dec	Grab	1 x Month	
Temperature, Water (C)	Monitor Only	Deg C	Calendar Month Average	Mar-Oct	Measurement, Instantaneous	2 x Month	
Temperature, Water (C)	Monitor Only	Deg C	Calendar Month Maximum	Mar-Oct	Measurement, Instantaneous	2 x Month	
Turbidity	Monitor Only	NTU	Calendar Month Average	Jan-Dec	Grab	2 x Month	
Turbidity	Monitor Only	NTU	Calendar Month Maximum	Jan-Dec	Grab	2 x Month	

SD 006, SD 007, SD 008, SD 009, SD 011, SD 012

Parameter	Limit	Units	Limit Type	Effective Period	Sample Type	Frequency	Notes
Flow	Monitor Only	mgd	Calendar Month Maximum	Jan-Dec	Calculation	2 x Month	
Flow	Monitor Only	MG	Calendar Month Total	Jan-Dec	Calculation	2 x Month	
Iron, Dissolved (as Fe)	1.0	mg/L	Calendar Month Average	Jan-Dec	Grab	1 x Month	
Iron, Dissolved (as Fe)	2.0	mg/L	Calendar Month Maximum	Jan-Dec	Grab	1 x Month	
Mercury, Total (as Hg)	Monitor Only	ug/L	Calendar Month Average	Mar, Jun, Sep, Dec	Grab	1 x Month	

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The Permittee shall comply with the limits and monitoring requirements as specified below.

Period: *Limits Applicable in the Interim Period*

SD 006, SD 007, SD 008, SD 009, SD 011, SD 012

Parameter	Limit	Units	Limit Type	Effective Period	Sample Type	Frequency	Notes
Mercury, Total (as Hg)	Monitor Only	ug/L	Calendar Month Maximum	Mar, Jun, Sep, Dec	Grab	1 x Month	
Nitrogen, Ammonia, Total (as N)	Monitor Only	mg/L	Calendar Month Average	Mar-Oct	Grab	2 x Month	
Nitrogen, Ammonia, Total (as N)	Monitor Only	mg/L	Calendar Month Maximum	Mar-Oct	Grab	2 x Month	
Nitrogen, Ammonia, Un-ionized (as N)	0.04	mg/L	Calendar Month Average	Mar-Oct	Calculation	2 x Month	
Nitrogen, Ammonia, Un-ionized (as N)	Monitor Only	mg/L	Calendar Month Maximum	Mar-Oct	Calculation	2 x Month	
pH	8.5	SU	Instantaneous Maximum	Jan-Dec	Grab	2 x Month	
pH	6.5	SU	Instantaneous Minimum	Jan-Dec	Grab	2 x Month	
Solids, Total Suspended (TSS)	20	mg/L	Calendar Month Average	Feb, Apr, Jun, Aug, Oct, Dec	Grab	1 x Month	
Solids, Total Suspended (TSS)	30	mg/L	Calendar Month Maximum	Feb, Apr, Jun, Aug, Oct, Dec	Grab	1 x Month	
Sulfate, Total (as SO ₄)	Monitor Only	mg/L	Calendar Month Average	Jan-Dec	Grab	1 x Month	
Temperature, Water (C)	Monitor Only	Deg C	Calendar Month Average	Mar-Oct	Measurement, Instantaneous	2 x Month	
Temperature, Water (C)	Monitor Only	Deg C	Calendar Month Maximum	Mar-Oct	Measurement, Instantaneous	2 x Month	
Turbidity	Monitor Only	NTU	Calendar Month Average	Jan-Dec	Grab	2 x Month	
Turbidity	Monitor Only	NTU	Calendar Month Maximum	Jan-Dec	Grab	2 x Month	

SD 010

Parameter	Limit	Units	Limit Type	Effective Period	Sample Type	Frequency	Notes
Flow	Monitor Only	mgd	Calendar Quarter Maximum	Jan-Dec	Calculation	1 x Quarter	8
Flow	Monitor Only	MG	Calendar Quarter Total	Jan-Dec	Calculation	1 x Quarter	8
Iron, Dissolved (as Fe)	1.0	mg/L	Calendar Quarter Average	Jan-Dec	Grab	1 x Quarter	8
Iron, Dissolved (as Fe)	2.0	mg/L	Calendar Quarter Maximum	Jan-Dec	Grab	1 x Quarter	8
Mercury, Total (as Hg)	Monitor Only	ug/L	Calendar Quarter Average	Jan-Dec	Grab	1 x Quarter	8
Mercury, Total (as Hg)	Monitor Only	ug/L	Calendar Quarter Maximum	Jan-Dec	Grab	1 x Quarter	8
pH	8.5	SU	Instantaneous Maximum	Jan-Dec	Grab	1 x Quarter	8
pH	6.5	SU	Instantaneous Minimum	Jan-Dec	Grab	1 x Quarter	8
Solids, Total Suspended (TSS)	20	mg/L	Calendar Quarter Average	Jan-Dec	Grab	1 x Quarter	8
Solids, Total Suspended (TSS)	30	mg/L	Calendar Quarter Maximum	Jan-Dec	Grab	1 x Quarter	8
Sulfate, Total (as SO ₄)	Monitor Only	mg/L	Calendar Month Average	Apr, Sep	Grab	1 x Month	8
Temperature, Water (C)	Monitor Only	Deg C	Calendar Quarter Average	Jan-Dec	Measurement, Instantaneous	1 x Quarter	8

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The Permittee shall comply with the limits and monitoring requirements as specified below.

Period: *Limits Applicable in the Interim Period***SD 010**

Parameter	Limit	Units	Limit Type	Effective Period	Sample Type	Frequency	Notes
Temperature, Water (C)	Monitor Only	Deg C	Calendar Quarter Maximum	Jan-Dec	Measurement, Instantaneous	1 x Quarter	8
Turbidity	Monitor Only	NTU	Calendar Quarter Average	Jan-Dec	Grab	1 x Quarter	8
Turbidity	Monitor Only	NTU	Calendar Quarter Maximum	Jan-Dec	Grab	1 x Quarter	8

SD 013

Parameter	Limit	Units	Limit Type	Effective Period	Sample Type	Frequency	Notes
BOD, Carbonaceous 05 Day (20 Deg C)	4.2	kg/day	Calendar Month Average	Jan-Dec	4-Hour Flow Composite	2 x Month	
BOD, Carbonaceous 05 Day (20 Deg C)	25	mg/L	Calendar Month Average	Jan-Dec	4-Hour Flow Composite	2 x Month	
BOD, Carbonaceous 05 Day (20 Deg C)	6.6	kg/day	Maximum Calendar Week Average	Jan-Dec	4-Hour Flow Composite	2 x Month	
BOD, Carbonaceous 05 Day (20 Deg C)	40	mg/L	Maximum Calendar Week Average	Jan-Dec	4-Hour Flow Composite	2 x Month	
Chlorine, Total Residual	0.038	mg/L	Daily Maximum	Apr-Oct	Grab	1 x Day	4
Fecal Coliform, MPN or Membrane Filter 44.5C	200	#100ml	Calendar Month Geometric Mean	Apr-Oct	Grab	2 x Month	
Fecal Coliform, MPN or Membrane Filter 44.5C	Monitor Only	#100ml	Maximum Calendar Week Average	Apr-Oct	Grab	2 x Month	
Flow	Monitor Only	mgd	Calendar Month Maximum	Jan-Dec	Calculation	2 x Month	
Flow	Monitor Only	MG	Calendar Month Total	Jan-Dec	Calculation	2 x Month	
pH	9.0	SU	Instantaneous Maximum	Jan-Dec	Grab	2 x Month	
pH	6.0	SU	Instantaneous Minimum	Jan-Dec	Grab	2 x Month	
Phosphorus, Total (as P)	0.17	kg/day	Calendar Month Average	Jan-Dec	4-Hour Flow Composite	2 x Month	
Phosphorus, Total (as P)	1.0	mg/L	Calendar Month Average	Jan-Dec	4-Hour Flow Composite	2 x Month	
Phosphorus, Total (as P)	0.29	kg/day	Calendar Month Maximum	Jan-Dec	4-Hour Flow Composite	2 x Month	
Phosphorus, Total (as P)	1.7	mg/L	Calendar Month Maximum	Jan-Dec	4-Hour Flow Composite	2 x Month	
Solids, Total Suspended (TSS)	7.5	kg/day	Calendar Month Average	Jan-Dec	4-Hour Flow Composite	2 x Month	
Solids, Total Suspended (TSS)	45	mg/L	Calendar Month Average	Jan-Dec	4-Hour Flow Composite	2 x Month	
Solids, Total Suspended (TSS)	10.8	kg/day	Maximum Calendar Week Average	Jan-Dec	4-Hour Flow Composite	2 x Month	
Solids, Total Suspended (TSS)	65	mg/L	Maximum Calendar Week Average	Jan-Dec	4-Hour Flow Composite	2 x Month	

SD 014, SD 015

Parameter	Limit	Units	Limit Type	Effective Period	Sample Type	Frequency	Notes
BOD, Carbonaceous 05 Day (20 Deg C)	4.2	kg/day	Calendar Month Average	Jan-Dec	4-Hour Flow Composite	2 x Month	

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The Permittee shall comply with the limits and monitoring requirements as specified below.

Period: Limits Applicable in the Interim Period**SD 014, SD 015**

Parameter	Limit	Units	Limit Type	Effective Period	Sample Type	Frequency	Notes
BOD, Carbonaceous 05 Day (20 Deg C)	25	mg/L	Calendar Month Average	Jan-Dec	4-Hour Flow Composite	2 x Month	
BOD, Carbonaceous 05 Day (20 Deg C)	6.6	kg/day	Maximum Calendar Week Average	Jan-Dec	4-Hour Flow Composite	2 x Month	
BOD, Carbonaceous 05 Day (20 Deg C)	40	mg/L	Maximum Calendar Week Average	Jan-Dec	4-Hour Flow Composite	2 x Month	
Chlorine, Total Residual	0.038	mg/L	Daily Maximum	Apr-Oct	Grab	1 x Day	4
Fecal Coliform, MPN or Membrane Filter 44.5C	200	#100ml	Calendar Month Geometric Mean	Apr-Oct	Grab	2 x Month	
Fecal Coliform, MPN or Membrane Filter 44.5C	Monitor Only	#100ml	Maximum Calendar Week Average	Apr-Oct	Grab	2 x Month	
Flow	Monitor Only	mgd	Calendar Month Maximum	Jan-Dec	Calculation	2 x Month	
Flow	Monitor Only	MG	Calendar Month Total	Jan-Dec	Calculation	2 x Month	
pH	9.0	SU	Instantaneous Maximum	Jan-Dec	Grab	2 x Month	
pH	6.0	SU	Instantaneous Minimum	Jan-Dec	Grab	2 x Month	
Phosphorus, Total (as P)	Monitor Only	kg/day	Calendar Month Average	Mar, Jun, Sep, Dec	4-Hour Flow Composite	1 x Month	
Phosphorus, Total (as P)	Monitor Only	mg/L	Calendar Month Average	Mar, Jun, Sep, Dec	4-Hour Flow Composite	1 x Month	
Phosphorus, Total (as P)	Monitor Only	kg/day	Calendar Month Maximum	Mar, Jun, Sep, Dec	4-Hour Flow Composite	1 x Month	
Phosphorus, Total (as P)	Monitor Only	mg/L	Calendar Month Maximum	Mar, Jun, Sep, Dec	4-Hour Flow Composite	1 x Month	
Solids, Total Suspended (TSS)	7.5	kg/day	Calendar Month Average	Jan-Dec	4-Hour Flow Composite	2 x Month	
Solids, Total Suspended (TSS)	45	mg/L	Calendar Month Average	Jan-Dec	4-Hour Flow Composite	2 x Month	
Solids, Total Suspended (TSS)	10.8	kg/day	Maximum Calendar Week Average	Jan-Dec	4-Hour Flow Composite	2 x Month	
Solids, Total Suspended (TSS)	65	mg/L	Maximum Calendar Week Average	Jan-Dec	4-Hour Flow Composite	2 x Month	

SD 016

Parameter	Limit	Units	Limit Type	Effective Period	Sample Type	Frequency	Notes
BOD, Carbonaceous 05 Day (20 Deg C)	25	mg/L	Calendar Month Average	Jan-Dec	Grab	1 x Month	3
BOD, Carbonaceous 05 Day (20 Deg C)	50	mg/L	Calendar Month Maximum	Jan-Dec	Grab	1 x Month	3
Cadmium, Total (as Cd)	Monitor Only	ug/L	Calendar Month Maximum	Apr, Oct	Grab	1 x Month	
Chlorine, Total Residual	0.038	mg/L	Calendar Month Maximum	Jan-Dec	Grab	1 x Month	2
Copper, Total (as Cu)	Monitor Only	ug/L	Calendar Month Maximum	Apr, Oct	Grab	1 x Month	
Flow	Monitor Only	mgd	Calendar Quarter Average	Jan-Dec	Measurement, Instantaneous	1 x Quarter	7
Flow	Monitor Only	mgd	Calendar Quarter Maximum	Jan-Dec	Measurement, Instantaneous	1 x Quarter	7
Flow	Monitor Only	MG	Calendar Quarter Total	Jan-Dec	Measurement, Instantaneous	1 x Quarter	7

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The Permittee shall comply with the limits and monitoring requirements as specified below.

Period: *Limits Applicable in the Interim Period***SD 016**

Parameter	Limit	Units	Limit Type	Effective Period	Sample Type	Frequency	Notes
Iron, Dissolved (as Fe)	1.0	mg/L	Calendar Quarter Average	Jan-Dec	Grab	1 x Quarter	7
Iron, Dissolved (as Fe)	2.0	mg/L	Calendar Quarter Maximum	Jan-Dec	Grab	1 x Quarter	7
Lead, Total (as Pb)	Monitor Only	ug/L	Calendar Month Maximum	Apr, Oct	Grab	1 x Month	
Mercury, Total (as Hg)	Monitor Only	ug/L	Calendar Quarter Maximum	Jan-Dec	Grab	1 x Quarter	7
Organics, Diesel Range as diesel, Total	Monitor Only	ug/L	Calendar Quarter Maximum	Jan-Dec	Grab	1 x Quarter	7
pH	9.0	SU	Instantaneous Maximum	Jan-Dec	Grab	1 x Quarter	7
pH	6.0	SU	Instantaneous Minimum	Jan-Dec	Grab	1 x Quarter	7
Phosphorus, Total (as P)	Monitor Only	kg/day	Calendar Quarter Average	Jan-Dec	Grab	1 x Quarter	7
Phosphorus, Total (as P)	Monitor Only	mg/L	Calendar Quarter Average	Jan-Dec	Grab	1 x Quarter	7
Phosphorus, Total (as P)	Monitor Only	kg/day	Calendar Quarter Maximum	Jan-Dec	Grab	1 x Quarter	7
Phosphorus, Total (as P)	Monitor Only	mg/L	Calendar Quarter Maximum	Jan-Dec	Grab	1 x Quarter	7
Solids, Total Suspended (TSS)	20	mg/L	Calendar Quarter Average	Jan-Dec	Grab	1 x Quarter	7
Solids, Total Suspended (TSS)	30	mg/L	Calendar Quarter Maximum	Jan-Dec	Grab	1 x Quarter	7
Specific Conductance, Field	Monitor Only	umh/cm	Calendar Quarter Maximum	Jan-Dec	Grab	1 x Quarter	7
Zinc, Total (as Zn)	Monitor Only	ug/L	Calendar Month Maximum	Apr, Oct	Grab	1 x Month	

SD 017

Parameter	Limit	Units	Limit Type	Effective Period	Sample Type	Frequency	Notes
BOD, Carbonaceous 05 Day (20 Deg C)	25	mg/L	Calendar Month Average	Jan-Dec	Grab	1 x Month	
BOD, Carbonaceous 05 Day (20 Deg C)	50	mg/L	Calendar Month Maximum	Jan-Dec	Grab	1 x Month	
Cadmium, Total (as Cd)	Monitor Only	ug/L	Calendar Month Maximum	Apr, Oct	Grab	1 x Month	
Copper, Total (as Cu)	Monitor Only	ug/L	Calendar Month Maximum	Apr, Oct	Grab	1 x Month	
Flow	Monitor Only	mgd	Calendar Month Average	Jan-Dec	Measurement, Instantaneous	1 x Month	
Flow	Monitor Only	mgd	Calendar Month Maximum	Jan-Dec	Measurement, Instantaneous	1 x Month	
Flow	Monitor Only	MG	Calendar Month Total	Jan-Dec	Measurement, Instantaneous	1 x Month	
Lead, Total (as Pb)	Monitor Only	ug/L	Calendar Month Maximum	Apr, Oct	Grab	1 x Month	
Mercury, Total (as Hg)	Monitor Only	ug/L	Calendar Month Average	Mar, Sep	Grab	1 x Month	
Mercury, Total (as Hg)	Monitor Only	ug/L	Calendar Month Maximum	Mar, Sep	Grab	1 x Month	
Organics, Diesel Range as diesel, Total	Monitor Only	ug/L	Daily Maximum	Jan-Dec	Grab	1 x Month	

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The Permittee shall comply with the limits and monitoring requirements as specified below.

Period: *Limits Applicable in the Interim Period*

SD 017

Parameter	Limit	Units	Limit Type	Effective Period	Sample Type	Frequency	Notes
pH	9.0	SU	Instantaneous Maximum	Jan-Dec	Grab	1 x Month	
pH	6.0	SU	Instantaneous Minimum	Jan-Dec	Grab	1 x Month	
Phosphorus, Total (as P)	Monitor Only	kg/day	Calendar Month Average	Mar, Jun, Sep, Dec	Grab	1 x Month	
Phosphorus, Total (as P)	Monitor Only	mg/L	Calendar Month Average	Mar, Jun, Sep, Dec	Grab	1 x Month	
Phosphorus, Total (as P)	Monitor Only	kg/day	Calendar Month Maximum	Mar, Jun, Sep, Dec	Grab	1 x Month	
Phosphorus, Total (as P)	Monitor Only	mg/L	Calendar Month Maximum	Mar, Jun, Sep, Dec	Grab	1 x Month	
Solids, Total Suspended (TSS)	30	mg/L	Calendar Month Average	Jan-Dec	Grab	1 x Month	
Solids, Total Suspended (TSS)	60	mg/L	Calendar Month Maximum	Jan-Dec	Grab	1 x Month	
Specific Conductance, Field	Monitor Only	umh/cm	Calendar Month Maximum	Jan-Dec	Grab	1 x Month	
Zinc, Total (as Zn)	Monitor Only	ug/L	Calendar Month Maximum	Apr, Oct	Grab	1 x Month	

SD 018

Parameter	Limit	Units	Limit Type	Effective Period	Sample Type	Frequency	Notes
Chlorine, Total Residual	0.038	mg/L	Calendar Month Maximum	Jan-Dec	Grab	1 x Month	
Flow	Monitor Only	mgd	Calendar Month Average	Jan-Dec	Measurement, Instantaneous	1 x Month	
Flow	Monitor Only	mgd	Calendar Month Maximum	Jan-Dec	Measurement, Instantaneous	1 x Month	
Flow	Monitor Only	MG	Calendar Month Total	Jan-Dec	Measurement, Instantaneous	1 x Month	
pH	9.0	SU	Instantaneous Maximum	Jan-Dec	Grab	1 x Month	
pH	6.0	SU	Instantaneous Minimum	Jan-Dec	Grab	1 x Month	
Solids, Total Suspended (TSS)	30	mg/L	Calendar Month Average	Jan-Dec	Grab	1 x Month	
Solids, Total Suspended (TSS)	60	mg/L	Calendar Month Maximum	Jan-Dec	Grab	1 x Month	

SD 019

Parameter	Limit	Units	Limit Type	Effective Period	Sample Type	Frequency	Notes
BOD, Carbonaceous 05 Day (20 Deg C)	25	mg/L	Calendar Month Average	Jan-Dec	Grab	1 x Month	
BOD, Carbonaceous 05 Day (20 Deg C)	50	mg/L	Calendar Month Maximum	Jan-Dec	Grab	1 x Month	
Cadmium, Total (as Cd)	Monitor Only	ug/L	Calendar Month Maximum	Apr, Oct	Grab	1 x Month	
Copper, Total (as Cu)	Monitor Only	ug/L	Calendar Month Maximum	Apr, Oct	Grab	1 x Month	
Flow	Monitor Only	mgd	Calendar Month Average	Jan-Dec	Measurement, Instantaneous	1 x Month	

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The Permittee shall comply with the limits and monitoring requirements as specified below.

Period: *Limits Applicable in the Interim Period***SD 019**

Parameter	Limit	Units	Limit Type	Effective Period	Sample Type	Frequency	Notes
Flow	Monitor Only	mgd	Calendar Month Maximum	Jan-Dec	Measurement, Instantaneous	1 x Month	
Flow	Monitor Only	MG	Calendar Month Total	Jan-Dec	Measurement, Instantaneous	1 x Month	
Lead, Total (as Pb)	Monitor Only	ug/L	Calendar Month Maximum	Apr, Oct	Grab	1 x Month	
Mercury, Total (as Hg)	Monitor Only	ug/L	Calendar Month Average	Mar, Jun, Sep, Dec	Grab	1 x Month	
Mercury, Total (as Hg)	Monitor Only	ug/L	Calendar Month Maximum	Mar, Jun, Sep, Dec	Grab	1 x Month	
Organics, Diesel Range as diesel, Total	Monitor Only	ug/L	Daily Maximum	Jan-Dec	Grab	1 x Month	
pH	9.0	SU	Instantaneous Maximum	Jan-Dec	Grab	1 x Month	
pH	6.0	SU	Instantaneous Minimum	Jan-Dec	Grab	1 x Month	
Phosphorus, Total (as P)	Monitor Only	kg/day	Calendar Month Average	Mar, Jun, Sep, Dec	Grab	1 x Month	
Phosphorus, Total (as P)	Monitor Only	mg/L	Calendar Month Average	Mar, Jun, Sep, Dec	Grab	1 x Month	
Phosphorus, Total (as P)	Monitor Only	kg/day	Calendar Month Maximum	Mar, Jun, Sep, Dec	Grab	1 x Month	
Phosphorus, Total (as P)	Monitor Only	mg/L	Calendar Month Maximum	Mar, Jun, Sep, Dec	Grab	1 x Month	
Solids, Total Suspended (TSS)	30	mg/L	Calendar Month Average	Jan-Dec	Grab	1 x Month	
Solids, Total Suspended (TSS)	60	mg/L	Calendar Month Maximum	Jan-Dec	Grab	1 x Month	
Specific Conductance, Field	Monitor Only	umh/cm	Calendar Month Maximum	Jan-Dec	Grab	1 x Month	
Zinc, Total (as Zn)	Monitor Only	ug/L	Calendar Month Maximum	Apr, Oct	Grab	1 x Month	

SD 020, SD 022

Parameter	Limit	Units	Limit Type	Effective Period	Sample Type	Frequency	Notes
Fibers, Ambiguous	Monitor Only	MF/L	Single Value	Apr, Nov	Composite	1 x Month	
Fibers, Amphibole	Monitor Only	MF/L	Single Value	Apr, Nov	Composite	1 x Month	
Fibers, Chrysotile	Monitor Only	MF/L	Single Value	Apr, Nov	Composite	1 x Month	
Fibers, Non-Amphibole Non Chrysotile	Monitor Only	MF/L	Single Value	Apr, Nov	Composite	1 x Month	
Fibers, Total	Monitor Only	MF/L	Single Value	Apr, Nov	Composite	1 x Month	
Flow	Monitor Only	mgd	Single Value	Apr, Nov	Calculation	1 x Month	5
Precipitation	Monitor Only	in	Single Value	Apr, Nov	Measurement, Continuous	1 x Month	9

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The Permittee shall comply with the limits and monitoring requirements as specified below.

Period: *Limits Applicable in the Interim Period*

SW 002, SW 004

Parameter	Limit	Units	Limit Type	Effective Period	Sample Type	Frequency	Notes
Fibers, Ambiguous	Monitor Only	MF/L	Single Value	Apr, Nov	Grab	1 x Month	10
Fibers, Amphibole	Monitor Only	MF/L	Single Value	Apr, Nov	Grab	1 x Month	10
Fibers, Chrysotile	Monitor Only	MF/L	Single Value	Apr, Nov	Grab	1 x Month	10
Fibers, Non-Amphibole Non Chrysotile	Monitor Only	MF/L	Single Value	Apr, Nov	Grab	1 x Month	10
Fibers, Total	Monitor Only	MF/L	Single Value	Apr, Nov	Grab	1 x Month	10
Flow, Stream, Instantaneous	Monitor Only	cfs	Single Value	Apr, Nov	Measurement, Instantaneous	1 x Month	10
Solids, Total Suspended (TSS)	Monitor Only	mg/L	Single Value	Apr, Nov	Grab	1 x Month	10
Turbidity	Monitor Only	NTU	Single Value	Apr, Nov	Grab	1 x Month	10

SW 003

Parameter	Limit	Units	Limit Type	Effective Period	Sample Type	Frequency	Notes
Fibers, Ambiguous	Monitor Only	MF/L	Single Value	Apr, Nov	Grab	1 x Month	
Fibers, Amphibole	Monitor Only	MF/L	Single Value	Apr, Nov	Grab	1 x Month	
Fibers, Chrysotile	Monitor Only	MF/L	Single Value	Apr, Nov	Grab	1 x Month	
Fibers, Non-Amphibole Non Chrysotile	Monitor Only	MF/L	Single Value	Apr, Nov	Grab	1 x Month	
Fibers, Total	Monitor Only	MF/L	Single Value	Apr, Nov	Grab	1 x Month	
Flow, Stream, Instantaneous	Monitor Only	cfs	Single Value	Apr, Nov	Measurement, Instantaneous	1 x Month	
Solids, Total Suspended (TSS)	Monitor Only	mg/L	Single Value	Apr, Nov	Grab	1 x Month	
Turbidity	Monitor Only	NTU	Single Value	Apr, Nov	Grab	1 x Month	

Period: *Limits Applicable in the Final Period*

SD 001, SD 002, SD 003, SD 004, SD 005

Parameter	Limit	Units	Limit Type	Effective Period	Sample Type	Frequency	Notes
Copper, Total (as Cu)	Monitor Only	ug/L	Calendar Month Maximum	Apr, Jul, Oct	Grab	1 x Month	
Flow	Monitor Only	mgd	Calendar Month Maximum	Jan-Dec	Calculation	2 x Month	
Flow	Monitor Only	MG	Calendar Month Total	Jan-Dec	Calculation	2 x Month	
Iron, Dissolved (as Fe)	1.0	mg/L	Calendar Month Average	Jan-Dec	Grab	1 x Month	
Iron, Dissolved (as Fe)	2.0	mg/L	Calendar Month Maximum	Jan-Dec	Grab	1 x Month	
Mercury, Total (as Hg)	Monitor Only	ug/L	Calendar Month Average	Mar, Sep	Grab	1 x Month	

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The Permittee shall comply with the limits and monitoring requirements as specified below.

Period: *Limits Applicable in the Final Period*

SD 001, SD 002, SD 003, SD 004, SD 005

Parameter	Limit	Units	Limit Type	Effective Period	Sample Type	Frequency	Notes
Mercury, Total (as Hg)	Monitor Only	ug/L	Calendar Month Maximum	Mar, Sep	Grab	1 x Month	
Nickel, Total (as Ni)	Monitor Only	ug/L	Calendar Month Maximum	Apr, Jul, Oct	Grab	1 x Month	
Nitrogen, Ammonia, Total (as N)	Monitor Only	mg/L	Calendar Month Average	Mar-Oct	Grab	2 x Month	
Nitrogen, Ammonia, Total (as N)	Monitor Only	mg/L	Calendar Month Maximum	Mar-Oct	Grab	2 x Month	
Nitrogen, Ammonia, Un-ionized (as N)	0.04	mg/L	Calendar Month Average	Mar-Oct	Calculation	2 x Month	
Nitrogen, Ammonia, Un-ionized (as N)	Monitor Only	mg/L	Calendar Month Maximum	Mar-Oct	Calculation	2 x Month	
pH	8.5	SU	Instantaneous Maximum	Jan-Dec	Grab	2 x Month	
pH	6.5	SU	Instantaneous Minimum	Jan-Dec	Grab	2 x Month	
Solids, Total Suspended (TSS)	20	mg/L	Calendar Month Average	Feb, Apr, Jun, Aug, Oct, Dec	Grab	1 x Month	
Solids, Total Suspended (TSS)	30	mg/L	Calendar Month Maximum	Feb, Apr, Jun, Aug, Oct, Dec	Grab	1 x Month	
Sulfate, Total (as SO4)	Monitor Only	mg/L	Calendar Month Maximum	Jan-Dec	Grab	1 x Month	
Temperature, Water (C)	Monitor Only	Deg C	Calendar Month Average	Mar-Oct	Measurement, Instantaneous	2 x Month	
Temperature, Water (C)	Monitor Only	Deg C	Calendar Month Maximum	Mar-Oct	Measurement, Instantaneous	2 x Month	
Turbidity	Monitor Only	NTU	Calendar Month Average	Jan-Dec	Grab	2 x Month	
Turbidity	Monitor Only	NTU	Calendar Month Maximum	Jan-Dec	Grab	2 x Month	

SD 006, SD 007, SD 008, SD 009, SD 011, SD 012

Parameter	Limit	Units	Limit Type	Effective Period	Sample Type	Frequency	Notes
Flow	Monitor Only	mgd	Calendar Month Maximum	Jan-Dec	Calculation	2 x Month	
Flow	Monitor Only	MG	Calendar Month Total	Jan-Dec	Calculation	2 x Month	
Iron, Dissolved (as Fe)	1.0	mg/L	Calendar Month Average	Jan-Dec	Grab	1 x Month	
Iron, Dissolved (as Fe)	2.0	mg/L	Calendar Month Maximum	Jan-Dec	Grab	1 x Month	
Mercury, Total (as Hg)	Monitor Only	ug/L	Calendar Month Average	Mar, Jun, Sep, Dec	Grab	1 x Month	
Mercury, Total (as Hg)	Monitor Only	ug/L	Calendar Month Maximum	Mar, Jun, Sep, Dec	Grab	1 x Month	
Nitrogen, Ammonia, Total (as N)	Monitor Only	mg/L	Calendar Month Average	Mar-Oct	Grab	2 x Month	
Nitrogen, Ammonia, Total (as N)	Monitor Only	mg/L	Calendar Month Maximum	Mar-Oct	Grab	2 x Month	
Nitrogen, Ammonia, Un-ionized (as N)	0.04	mg/L	Calendar Month Average	Mar-Oct	Calculation	2 x Month	
Nitrogen, Ammonia, Un-ionized (as N)	Monitor Only	mg/L	Calendar Month Maximum	Mar-Oct	Calculation	2 x Month	
pH	8.5	SU	Instantaneous Maximum	Jan-Dec	Grab	2 x Month	

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The Permittee shall comply with the limits and monitoring requirements as specified below.

Period: *Limits Applicable in the Final Period*

SD 006, SD 007, SD 008, SD 009, SD 011, SD 012

Parameter	Limit	Units	Limit Type	Effective Period	Sample Type	Frequency	Notes
pH	6.5	SU	Instantaneous Minimum	Jan-Dec	Grab	2 x Month	
Solids, Total Suspended (TSS)	20	mg/L	Calendar Month Average	Feb, Apr, Jun, Aug, Oct, Dec	Grab	1 x Month	
Solids, Total Suspended (TSS)	30	mg/L	Calendar Month Maximum	Feb, Apr, Jun, Aug, Oct, Dec	Grab	1 x Month	
Sulfate, Total (as SO ₄)	Monitor Only	mg/L	Calendar Month Average	Jan-Dec	Grab	1 x Month	
Temperature, Water (C)	Monitor Only	Deg C	Calendar Month Average	Mar-Oct	Measurement, Instantaneous	2 x Month	
Temperature, Water (C)	Monitor Only	Deg C	Calendar Month Maximum	Mar-Oct	Measurement, Instantaneous	2 x Month	
Turbidity	Monitor Only	NTU	Calendar Month Average	Jan-Dec	Grab	2 x Month	
Turbidity	Monitor Only	NTU	Calendar Month Maximum	Jan-Dec	Grab	2 x Month	

SD 010

Parameter	Limit	Units	Limit Type	Effective Period	Sample Type	Frequency	Notes
Flow	Monitor Only	mgd	Calendar Quarter Maximum	Jan-Dec	Calculation	1 x Quarter	8
Flow	Monitor Only	MG	Calendar Quarter Total	Jan-Dec	Calculation	1 x Quarter	8
Iron, Dissolved (as Fe)	1.0	mg/L	Calendar Quarter Average	Jan-Dec	Grab	1 x Quarter	8
Iron, Dissolved (as Fe)	2.0	mg/L	Calendar Quarter Maximum	Jan-Dec	Grab	1 x Quarter	8
Mercury, Total (as Hg)	Monitor Only	ug/L	Calendar Quarter Average	Jan-Dec	Grab	1 x Quarter	8
Mercury, Total (as Hg)	Monitor Only	ug/L	Calendar Quarter Maximum	Jan-Dec	Grab	1 x Quarter	8
pH	8.5	SU	Instantaneous Maximum	Jan-Dec	Grab	1 x Quarter	8
pH	6.5	SU	Instantaneous Minimum	Jan-Dec	Grab	1 x Quarter	8
Solids, Total Suspended (TSS)	20	mg/L	Calendar Quarter Average	Jan-Dec	Grab	1 x Quarter	8
Solids, Total Suspended (TSS)	30	mg/L	Calendar Quarter Maximum	Jan-Dec	Grab	1 x Quarter	8
Sulfate, Total (as SO ₄)	Monitor Only	mg/L	Calendar Month Average	Apr, Sep	Grab	1 x Month	8
Temperature, Water (C)	Monitor Only	Deg C	Calendar Quarter Average	Jan-Dec	Measurement, Instantaneous	1 x Quarter	8
Temperature, Water (C)	Monitor Only	Deg C	Calendar Quarter Maximum	Jan-Dec	Measurement, Instantaneous	1 x Quarter	8
Turbidity	Monitor Only	NTU	Calendar Quarter Average	Jan-Dec	Grab	1 x Quarter	8
Turbidity	Monitor Only	NTU	Calendar Quarter Maximum	Jan-Dec	Grab	1 x Quarter	8

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The Permittee shall comply with the limits and monitoring requirements as specified below.

Period: *Limits Applicable in the Final Period***SD 013**

Parameter	Limit	Units	Limit Type	Effective Period	Sample Type	Frequency	Notes
BOD, Carbonaceous 05 Day (20 Deg C)	4.2	kg/day	Calendar Month Average	Jan-Dec	4-Hour Flow Composite	2 x Month	
BOD, Carbonaceous 05 Day (20 Deg C)	25	mg/L	Calendar Month Average	Jan-Dec	4-Hour Flow Composite	2 x Month	
BOD, Carbonaceous 05 Day (20 Deg C)	6.6	kg/day	Maximum Calendar Week Average	Jan-Dec	4-Hour Flow Composite	2 x Month	
BOD, Carbonaceous 05 Day (20 Deg C)	40	mg/L	Maximum Calendar Week Average	Jan-Dec	4-Hour Flow Composite	2 x Month	
Chlorine, Total Residual	0.038	mg/L	Daily Maximum	Apr-Oct	Grab	1 x Day	4
Fecal Coliform, MPN or Membrane Filter 44.5C	200	#100ml	Calendar Month Geometric Mean	Apr-Oct	Grab	2 x Month	
Fecal Coliform, MPN or Membrane Filter 44.5C	Monitor Only	#100ml	Maximum Calendar Week Average	Apr-Oct	Grab	2 x Month	
Flow	Monitor Only	mgd	Calendar Month Maximum	Jan-Dec	Calculation	2 x Month	
Flow	Monitor Only	MG	Calendar Month Total	Jan-Dec	Calculation	2 x Month	
pH	9.0	SU	Instantaneous Maximum	Jan-Dec	Grab	2 x Month	
pH	6.0	SU	Instantaneous Minimum	Jan-Dec	Grab	2 x Month	
Phosphorus, Total (as P)	0.17	kg/day	Calendar Month Average	Jan-Dec	4-Hour Flow Composite	2 x Month	
Phosphorus, Total (as P)	1.0	mg/L	Calendar Month Average	Jan-Dec	4-Hour Flow Composite	2 x Month	
Phosphorus, Total (as P)	0.29	kg/day	Calendar Month Maximum	Jan-Dec	4-Hour Flow Composite	2 x Month	
Phosphorus, Total (as P)	1.7	mg/L	Calendar Month Maximum	Jan-Dec	4-Hour Flow Composite	2 x Month	
Solids, Total Suspended (TSS)	7.5	kg/day	Calendar Month Average	Jan-Dec	4-Hour Flow Composite	2 x Month	
Solids, Total Suspended (TSS)	45	mg/L	Calendar Month Average	Jan-Dec	4-Hour Flow Composite	2 x Month	
Solids, Total Suspended (TSS)	10.8	kg/day	Maximum Calendar Week Average	Jan-Dec	4-Hour Flow Composite	2 x Month	
Solids, Total Suspended (TSS)	65	mg/L	Maximum Calendar Week Average	Jan-Dec	4-Hour Flow Composite	2 x Month	

SD 016

Parameter	Limit	Units	Limit Type	Effective Period	Sample Type	Frequency	Notes
BOD, Carbonaceous 05 Day (20 Deg C)	25	mg/L	Calendar Month Average	Jan-Dec	Grab	1 x Month	3
BOD, Carbonaceous 05 Day (20 Deg C)	50	mg/L	Calendar Month Maximum	Jan-Dec	Grab	1 x Month	3
Cadmium, Total (as Cd)	Monitor Only	ug/L	Calendar Month Maximum	Apr, Oct	Grab	1 x Month	
Chlorine, Total Residual	0.038	mg/L	Calendar Month Maximum	Jan-Dec	Grab	1 x Month	2
Copper, Total (as Cu)	Monitor Only	ug/L	Calendar Month Maximum	Apr, Oct	Grab	1 x Month	
Flow	Monitor Only	mgd	Calendar Quarter Average	Jan-Dec	Measurement, Instantaneous	1 x Quarter	7
Flow	Monitor Only	mgd	Calendar Quarter Maximum	Jan-Dec	Measurement, Instantaneous	1 x Quarter	7

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The Permittee shall comply with the limits and monitoring requirements as specified below.

Period: *Limits Applicable in the Final Period***SD 016**

Parameter	Limit	Units	Limit Type	Effective Period	Sample Type	Frequency	Notes
Flow	Monitor Only	MG	Calendar Quarter Total	Jan-Dec	Measurement, Instantaneous	1 x Quarter	7
Iron, Dissolved (as Fe)	1.0	mg/L	Calendar Quarter Average	Jan-Dec	Grab	1 x Quarter	7
Iron, Dissolved (as Fe)	2.0	mg/L	Calendar Quarter Maximum	Jan-Dec	Grab	1 x Quarter	7
Lead, Total (as Pb)	Monitor Only	ug/L	Calendar Month Maximum	Apr, Oct	Grab	1 x Month	
Mercury, Total (as Hg)	Monitor Only	ug/L	Calendar Quarter Maximum	Jan-Dec	Grab	1 x Quarter	7
Organics, Diesel Range as diesel, Total	Monitor Only	ug/L	Calendar Quarter Maximum	Jan-Dec	Grab	1 x Quarter	7
pH	9.0	SU	Instantaneous Maximum	Jan-Dec	Grab	1 x Quarter	7
pH	6.0	SU	Instantaneous Minimum	Jan-Dec	Grab	1 x Quarter	7
Phosphorus, Total (as P)	Monitor Only	kg/day	Calendar Quarter Average	Jan-Dec	Grab	1 x Quarter	7
Phosphorus, Total (as P)	Monitor Only	mg/L	Calendar Quarter Average	Jan-Dec	Grab	1 x Quarter	7
Phosphorus, Total (as P)	Monitor Only	kg/day	Calendar Quarter Maximum	Jan-Dec	Grab	1 x Quarter	7
Phosphorus, Total (as P)	Monitor Only	mg/L	Calendar Quarter Maximum	Jan-Dec	Grab	1 x Quarter	7
Solids, Total Suspended (TSS)	20	mg/L	Calendar Quarter Average	Jan-Dec	Grab	1 x Quarter	7
Solids, Total Suspended (TSS)	30	mg/L	Calendar Quarter Maximum	Jan-Dec	Grab	1 x Quarter	7
Specific Conductance, Field	Monitor Only	umh/cm	Calendar Quarter Maximum	Jan-Dec	Grab	1 x Quarter	7
Zinc, Total (as Zn)	Monitor Only	ug/L	Calendar Month Maximum	Apr, Oct	Grab	1 x Month	

SD 017

Parameter	Limit	Units	Limit Type	Effective Period	Sample Type	Frequency	Notes
BOD, Carbonaceous 05 Day (20 Deg C)	25	mg/L	Calendar Month Average	Jan-Dec	Grab	1 x Month	
BOD, Carbonaceous 05 Day (20 Deg C)	50	mg/L	Calendar Month Maximum	Jan-Dec	Grab	1 x Month	
Cadmium, Total (as Cd)	Monitor Only	ug/L	Calendar Month Maximum	Apr, Oct	Grab	1 x Month	
Copper, Total (as Cu)	Monitor Only	ug/L	Calendar Month Maximum	Apr, Oct	Grab	1 x Month	
Flow	Monitor Only	mgd	Calendar Month Average	Jan-Dec	Measurement, Instantaneous	1 x Month	
Flow	Monitor Only	mgd	Calendar Month Maximum	Jan-Dec	Measurement, Instantaneous	1 x Month	
Flow	Monitor Only	MG	Calendar Month Total	Jan-Dec	Measurement, Instantaneous	1 x Month	
Lead, Total (as Pb)	Monitor Only	ug/L	Calendar Month Maximum	Apr, Oct	Grab	1 x Month	
Mercury, Total (as Hg)	Monitor Only	ug/L	Calendar Month Average	Mar, Sep	Grab	1 x Month	
Mercury, Total (as Hg)	Monitor Only	ug/L	Calendar Month Maximum	Mar, Sep	Grab	1 x Month	

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The Permittee shall comply with the limits and monitoring requirements as specified below.

Period: *Limits Applicable in the Final Period*

SD 017

Parameter	Limit	Units	Limit Type	Effective Period	Sample Type	Frequency	Notes
Organics, Diesel Range as diesel, Total	Monitor Only	ug/L	Daily Maximum	Jan-Dec	Grab	1 x Month	
pH	9.0	SU	Instantaneous Maximum	Jan-Dec	Grab	1 x Month	
pH	6.0	SU	Instantaneous Minimum	Jan-Dec	Grab	1 x Month	
Phosphorus, Total (as P)	Monitor Only	kg/day	Calendar Month Average	Mar, Jun, Sep, Dec	Grab	1 x Month	
Phosphorus, Total (as P)	Monitor Only	mg/L	Calendar Month Average	Mar, Jun, Sep, Dec	Grab	1 x Month	
Phosphorus, Total (as P)	Monitor Only	kg/day	Calendar Month Maximum	Mar, Jun, Sep, Dec	Grab	1 x Month	
Phosphorus, Total (as P)	Monitor Only	mg/L	Calendar Month Maximum	Mar, Jun, Sep, Dec	Grab	1 x Month	
Solids, Total Suspended (TSS)	30	mg/L	Calendar Month Average	Jan-Dec	Grab	1 x Month	
Solids, Total Suspended (TSS)	60	mg/L	Calendar Month Maximum	Jan-Dec	Grab	1 x Month	
Specific Conductance, Field	Monitor Only	umh/cm	Calendar Month Maximum	Jan-Dec	Grab	1 x Month	
Zinc, Total (as Zn)	Monitor Only	ug/L	Calendar Month Maximum	Apr, Oct	Grab	1 x Month	

SD 018

Parameter	Limit	Units	Limit Type	Effective Period	Sample Type	Frequency	Notes
Chlorine, Total Residual	0.038	mg/L	Calendar Month Maximum	Jan-Dec	Grab	1 x Month	
Flow	Monitor Only	mgd	Calendar Month Average	Jan-Dec	Measurement, Instantaneous	1 x Month	
Flow	Monitor Only	mgd	Calendar Month Maximum	Jan-Dec	Measurement, Instantaneous	1 x Month	
Flow	Monitor Only	MG	Calendar Month Total	Jan-Dec	Measurement, Instantaneous	1 x Month	
pH	9.0	SU	Instantaneous Maximum	Jan-Dec	Grab	1 x Month	
pH	6.0	SU	Instantaneous Minimum	Jan-Dec	Grab	1 x Month	
Solids, Total Suspended (TSS)	30	mg/L	Calendar Month Average	Jan-Dec	Grab	1 x Month	
Solids, Total Suspended (TSS)	60	mg/L	Calendar Month Maximum	Jan-Dec	Grab	1 x Month	

SD 019

Parameter	Limit	Units	Limit Type	Effective Period	Sample Type	Frequency	Notes
BOD, Carbonaceous 05 Day (20 Deg C)	25	mg/L	Calendar Month Average	Jan-Dec	Grab	1 x Month	
BOD, Carbonaceous 05 Day (20 Deg C)	50	mg/L	Calendar Month Maximum	Jan-Dec	Grab	1 x Month	
Cadmium, Total (as Cd)	Monitor Only	ug/L	Calendar Month Maximum	Apr, Oct	Grab	1 x Month	
Copper, Total (as Cu)	Monitor Only	ug/L	Calendar Month Maximum	Apr, Oct	Grab	1 x Month	

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The Permittee shall comply with the limits and monitoring requirements as specified below.

Period: *Limits Applicable in the Final Period***SD 019**

Parameter	Limit	Units	Limit Type	Effective Period	Sample Type	Frequency	Notes
Flow	Monitor Only	mgd	Calendar Month Average	Jan-Dec	Measurement, Instantaneous	1 x Month	
Flow	Monitor Only	mgd	Calendar Month Maximum	Jan-Dec	Measurement, Instantaneous	1 x Month	
Flow	Monitor Only	MG	Calendar Month Total	Jan-Dec	Measurement, Instantaneous	1 x Month	
Lead, Total (as Pb)	Monitor Only	ug/L	Calendar Month Maximum	Apr, Oct	Grab	1 x Month	
Mercury, Total (as Hg)	Monitor Only	ug/L	Calendar Month Average	Mar, Jun, Sep, Dec	Grab	1 x Month	
Mercury, Total (as Hg)	Monitor Only	ug/L	Calendar Month Maximum	Mar, Jun, Sep, Dec	Grab	1 x Month	
Organics, Diesel Range as diesel, Total	Monitor Only	ug/L	Daily Maximum	Jan-Dec	Grab	1 x Month	
pH	9.0	SU	Instantaneous Maximum	Jan-Dec	Grab	1 x Month	
pH	6.0	SU	Instantaneous Minimum	Jan-Dec	Grab	1 x Month	
Phosphorus, Total (as P)	Monitor Only	kg/day	Calendar Month Average	Mar, Jun, Sep, Dec	Grab	1 x Month	
Phosphorus, Total (as P)	Monitor Only	mg/L	Calendar Month Average	Mar, Jun, Sep, Dec	Grab	1 x Month	
Phosphorus, Total (as P)	Monitor Only	kg/day	Calendar Month Maximum	Mar, Jun, Sep, Dec	Grab	1 x Month	
Phosphorus, Total (as P)	Monitor Only	mg/L	Calendar Month Maximum	Mar, Jun, Sep, Dec	Grab	1 x Month	
Solids, Total Suspended (TSS)	30	mg/L	Calendar Month Average	Jan-Dec	Grab	1 x Month	
Solids, Total Suspended (TSS)	60	mg/L	Calendar Month Maximum	Jan-Dec	Grab	1 x Month	
Specific Conductance, Field	Monitor Only	umh/cm	Calendar Month Maximum	Jan-Dec	Grab	1 x Month	
Zinc, Total (as Zn)	Monitor Only	ug/L	Calendar Month Maximum	Apr, Oct	Grab	1 x Month	

SD 020, SD 022

Parameter	Limit	Units	Limit Type	Effective Period	Sample Type	Frequency	Notes
Fibers, Ambiguous	Monitor Only	MF/L	Single Value	Apr, Nov	Composite	1 x Month	
Fibers, Amphibole	Monitor Only	MF/L	Single Value	Apr, Nov	Composite	1 x Month	
Fibers, Chrysotile	Monitor Only	MF/L	Single Value	Apr, Nov	Composite	1 x Month	
Fibers, Non-Amphibole Non Chrysotile	Monitor Only	MF/L	Single Value	Apr, Nov	Composite	1 x Month	
Fibers, Total	Monitor Only	MF/L	Single Value	Apr, Nov	Composite	1 x Month	
Flow	Monitor Only	mgd	Single Value	Apr, Nov	Calculation	1 x Month	5
Precipitation	Monitor Only	in	Single Value	Apr, Nov	Measurement, Continuous	1 x Month	9

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The Permittee shall comply with the limits and monitoring requirements as specified below.

Period: *Limits Applicable in the Final Period*

SD 024

Parameter	Limit	Units	Limit Type	Effective Period	Sample Type	Frequency	Notes
BOD, Carbonaceous 05 Day (20 Deg C)	7.4	kg/day	Calendar Month Average	Jan-Dec	Grab	2 x Week	6
BOD, Carbonaceous 05 Day (20 Deg C)	25	mg/L	Calendar Month Average	Jan-Dec	Grab	2 x Week	11
BOD, Carbonaceous 05 Day (20 Deg C)	11.8	kg/day	Maximum Calendar Week Average	Jan-Dec	Grab	2 x Week	6
BOD, Carbonaceous 05 Day (20 Deg C)	40	mg/L	Maximum Calendar Week Average	Jan-Dec	Grab	2 x Week	11
Fecal Coliform, MPN or Membrane Filter 44.5C	200	#100ml	Calendar Month Geometric Mean	Apr-Oct	Grab	2 x Week	11
Flow	0	MG	Calendar Month Total Intervention	Jan-Feb, Jul, Aug	Measurement	1 x Day	13
Flow	Monitor Only	mgd	Calendar Month Average	Mar-Jun, Sep-Dec	Measurement	1 x Day	12
Flow	Monitor Only	MG	Calendar Month Total	Mar-Jun, Sep-Dec	Measurement	1 x Day	
Oxygen, Dissolved	Monitor Only	mg/L	Calendar Month Minimum	Jan-Dec	Grab	2 x Week	1
pH	9.0	SU	Calendar Month Maximum	Jan-Dec	Grab	2 x Week	1
pH	6.0	SU	Calendar Month Minimum	Jan-Dec	Grab	2 x Week	1
Phosphorus, Total (as P)	Monitor Only	kg/day	Calendar Month Average	Jan-Dec	Grab	2 x Week	11
Phosphorus, Total (as P)	Monitor Only	mg/L	Calendar Month Average	Jan-Dec	Grab	2 x Week	11
Solids, Total Suspended (TSS)	13.3	kg/day	Calendar Month Average	Jan-Dec	Grab	2 x Week	6
Solids, Total Suspended (TSS)	45	mg/L	Calendar Month Average	Jan-Dec	Grab	2 x Week	11
Solids, Total Suspended (TSS)	19.2	kg/day	Maximum Calendar Week Average	Jan-Dec	Grab	2 x Week	6
Solids, Total Suspended (TSS)	65	mg/L	Maximum Calendar Week Average	Jan-Dec	Grab	2 x Week	11

SW 002, SW 004

Parameter	Limit	Units	Limit Type	Effective Period	Sample Type	Frequency	Notes
Fibers, Ambiguous	Monitor Only	MF/L	Single Value	Apr, Nov	Grab	1 x Month	10
Fibers, Amphibole	Monitor Only	MF/L	Single Value	Apr, Nov	Grab	1 x Month	10
Fibers, Chrysotile	Monitor Only	MF/L	Single Value	Apr, Nov	Grab	1 x Month	10
Fibers, Non-Amphibole Non Chrysotile	Monitor Only	MF/L	Single Value	Apr, Nov	Grab	1 x Month	10
Fibers, Total	Monitor Only	MF/L	Single Value	Apr, Nov	Grab	1 x Month	10
Flow, Stream, Instantaneous	Monitor Only	cfs	Single Value	Apr, Nov	Measurement, Instantaneous	1 x Month	10
Solids, Total Suspended (TSS)	Monitor Only	mg/L	Single Value	Apr, Nov	Grab	1 x Month	10
Turbidity	Monitor Only	NTU	Single Value	Apr, Nov	Grab	1 x Month	10

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The Permittee shall comply with the limits and monitoring requirements as specified below.

Period: *Limits Applicable in the Final Period*

SW 003

Parameter	Limit	Units	Limit Type	Effective Period	Sample Type	Frequency	Notes
Fibers, Ambiguous	Monitor Only	MF/L	Single Value	Apr, Nov	Grab	1 x Month	
Fibers, Amphibole	Monitor Only	MF/L	Single Value	Apr, Nov	Grab	1 x Month	
Fibers, Chrysotile	Monitor Only	MF/L	Single Value	Apr, Nov	Grab	1 x Month	
Fibers, Non-Amphibole Non Chrysotile	Monitor Only	MF/L	Single Value	Apr, Nov	Grab	1 x Month	
Fibers, Total	Monitor Only	MF/L	Single Value	Apr, Nov	Grab	1 x Month	
Flow, Stream, Instantaneous	Monitor Only	cfs	Single Value	Apr, Nov	Measurement, Instantaneous	1 x Month	
Solids, Total Suspended (TSS)	Monitor Only	mg/L	Single Value	Apr, Nov	Grab	1 x Month	
Turbidity	Monitor Only	NTU	Single Value	Apr, Nov	Grab	1 x Month	

Notes:

- 1 -- Analyze immediately. Samples shall be collected from the final cell outlet control structure.
- 2 -- Applicable only during and within one month after periods of chlorine addition to the drainage to this outfall.
- 3 -- Applicable starting when diethylene glycol is first applied in the Crusher 2 area.
- 4 -- Applicable whenever chlorine is added. Excluding weekends and holidays.
- 5 -- As sum of the outfalls composited.
- 6 -- Based on a maximum 6-inch per day drawdown rate from the 0.48 acre secondary cell.
- 7 -- If crushing activity or any other activity that could introduce pollutants is resumed in the portion of the area reporting to SD-016, monitoring requirements at SD-016 will increase to the parameters and frequencies specified for discharge point SD-019.
- 8 -- If mining activity or any other activity that could introduce pollutants is resumed in the portion of the mining area reporting to SD-010, monitoring requirements at SD-010 will increase to the parameters and frequencies specified for discharge point SD-009.
- 9 -- Record precipitation for the five-day period before sampling.
- 10 -- Sample four to six days after the SD020 sampling.
- 11 -- Samples shall be collected from the final cell outlet control structure.
- 12 -- The acceptable discharge periods are March 1 through June 30 and September 1 through December 31.
- 13 -- The problem discharge periods are January through February; July, and August.

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Chapter 1. Special Requirements

1. Special Requirements

Mine Pit Water / Potable Water Supply Monitoring

- 1.1 The Permittee shall sample the mine pit water (via a discharge sump or, if no pump is active, directly from a pit sump) in April, July and October for a period of three years from Area 001 (SD-001 - SD-003), Area 002, (SD-004 - SD-005) and Area 003 (SD-006 - SD-012). The Permittee shall also sample the potable water supply pumped from local wells prior to treatment in April, July and October for a period of three years.
- 1.2 Samples shall be taken in April, July and October of each year for a period of three years at each of the above locations for the following parameters: Arsenic, Boron, Chloride, Cobalt, Fluoride, Iron, Manganese, Molybdenum, Sulfate and Total Dissolved Solids (TDS).
- 1.3 The Permittee shall submit the results from the first year of sampling from Area 001, Area 002, Area 003, and the potable water supply by December 31, 2009.
- 1.4 The Permittee shall submit the results from the second year of sampling from Area 001, Area 002, Area 003, and the potable water supply by December 31, 2010.
- 1.5 The Permittee shall submit the results from the third year of sampling from Area 001, Area 002, Area 003, and the potable water supply by December 31, 2011.
- 1.6 The Permittee shall prepare and submit a final report comparing the sample results to Minnesota ground water standards. The Permittee shall provide a brief discussion how the sample results compare to Minnesota ground water standards. The report shall be submitted by June 30, 2012.
- 1.7 The MPCA recognizes the samples taken from the mine pit sumps are ground water combined with surface water runoff and thus, Minnesota ground water standards are not directly applicable to these waters. Sample results from the mine pit that exceed Minnesota ground water standards shall not be considered a violation of this permit. The purpose of this monitoring is to provide a preliminary indication of current mine pit/ground water quality with respect to Minnesota ground water standards and to help determine the extent of future ground water monitoring, particularly at mine closure.

Plant Aggregate

- 1.8 The Permittee shall submit an Annual Aggregate Use Report by January 22 of each year following permit issuance.
- 1.9 Plant aggregate used or deposited at the facility shall comply with the following requirements:
 - a. The material is limited to plant aggregate generated by, and transported directly from, the E.W. Davis Works in Silver Bay;
 - b. The material is stored and placed within the facility so that all drainage from the material is discharged through outfalls SD001 - SD012 and SD016 - SD019;
 - c. The material is used for construction backfill, haul road ballast or blast stemming material;
 - d. The material shall not be used or deposited at the facility if it is needed to comply with the dam construction and/or the capping of fine tailings at the Mile Post 7 Tailings Basin as required by NPDES/SDS Permit No. MN0055301, and as approved in writing by the MPCA under the provisions of NPDES/SDS Permit No. MN0055301; and
 - e. The Permittee shall record estimated masses and the purpose of use for the material used or deposited at the facility, and maintain those records according to the requirements of this permit. The Permittee shall include in the Annual Aggregate Use Report the estimated material amounts placed in storage, removed from storage, and remaining in storage at the facility.

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Chapter 1. Special Requirements

1. Special Requirements

- 1.10 Based on fibers data from the facility and other relevant information, the MPCA may require the mitigation of fiber levels in discharges from the facility. If appropriate, the MPCA may require that the mitigation of fiber impacts be included in a Closure Plan for the facility.

Virginia Formation and Duluth Complex Rock

- 1.11 The Permittee shall not fragment, excavate or remove: a) the bedded pyrrhotite unit of the Virginia Formation; or b) other portions of the Virginia Formation and associated dikes and sills containing sulfide mineralization, unless an updated Virginia Formation Management Plan addressing the management, disposal and reclamation of such material has been approved by the Minnesota Department of Natural Resources (MDNR) and the MPCA.
- 1.12 The primary objective of the Virginia Formation Management Plan is to prevent adverse effects on water quality. Prior to fragmenting, excavating or removing Virginia Formation material, including dikes and sills within the Virginia Formation, the Permittee shall characterize and document the behavior of the material with respect to its sulfide mineralization and the resulting potential to adversely effect water quality or violate water quality standards. The characterization shall be done in consultation with the MPCA and the Minnesota Department of Natural Resources. Information from the characterization shall be incorporated into the updated Virginia Formation Management Plan required by Chapter 1 1.11. Actions to prevent adverse effects to water quality shall also be addressed in the updated Plan. Such action may include, but is not limited to, leaving the material unmined, capping in place, constructing a separate lined and capped stockpile and/or incorporating appropriate engineering design and management considerations into existing stockpiling activities. As necessary, wastewater/leachate collection and treatment shall be included in the updated Plan.

Updates to the Virginia Formation Management Plan, once approved by the MDNR and the MPCA, shall become an integral and enforceable part of this permit.

- 1.13 If the bedded pyrrhotite unit or other rock containing elevated sulfide mineralization that has not been specifically characterized and addressed in the approved Virginia Formation Management Plan is encountered during drilling, blasting or excavation of Virginia Formation material, the Permittee shall immediately cease mining activity related to this material and notify the MPCA. Before mining activities related to this material may proceed, the Permittee shall submit and receive MPCA approval of a Supplement to the Virginia Formation Management Plan that details how the management of this material will be addressed.

If the rock containing elevated sulfide mineralization has already been specifically characterized and addressed in the approved Virginia Formation Management Plan, mining activity related to this material will not need to stop provided that the Permittee adhere to the approved Management Plan.

- 1.14 The Permittee is responsible for the quality of water release to ground or surface waters from any fragmented or stockpiled Virginia Formation material generated by the Permittee. The Permittee shall take the necessary actions to control this material so as to prevent degradation of water quality and violation of water quality standards.
- 1.15 Notwithstanding the preceding requirements related to management of Virginia Formation material, if the MPCA determines that the exposure, excavation, removal or stockpiling of Virginia Formation material may adversely affect the quality of waters of the state or violate water quality standards, the MPCA may require modification of this permit to address these issues. Such permit modification may include additional monitoring and limits, wastewater collection and treatment, stockpiling requirements such as lining or capping, or other items deemed necessary to address water quality issues in both the short and long terms.
- 1.16 The Permittee shall not fragment, excavate, remove, relocate or otherwise disturb Duluth Complex rock or materials without written approval from the MPCA of a Duluth Complex Management Plan that addresses water quality issues associated with stockpile containment. A Duluth Complex Management Plan shall be submitted to the MPCA for review and approval 180 days prior to planned disturbance of Duluth Complex rock or materials.

Sampling Requirements at SD-010

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Chapter 1. Special Requirements

1. Special Requirements

- 1.17 Sampling at SD-010 shall be conducted quarterly for the following parameters: Flow, dissolved iron, mercury, pH, total suspended solids, temperature, and turbidity. Sampling for total sulfate is required twice per year. However, if mining activity or any other activity that could introduce pollutants is resumed in the portion of the mining area reporting to SD-010, monitoring requirements at SD-010 will increase to the parameters and frequencies specified for discharge point SD-009.

Un-ionized Ammonia Calculations

- 1.18 Monitoring for ammonia nitrogen at Stations SD-001 through SD-005 shall be taken at a point representative of the mine pit dewatering discharge. The downstream temperature and pH monitoring for these Stations shall be located in the DNR "permit to mine" area at a point in the channel of the discharging pump-out pipe prior to mixing with other discharge or receiving waters. The downstream monitoring points for temperature and pH must be designated prior to sampling and approved by the MPCA.

Nitrogen Management

- 1.19 The Permittee is required to evaluate sources of ammonia to mine pit water and to identify and implement measures to reduce sources of ammonia to those waters.
- 1.20 The Permittee shall submit a nitrogen mitigation plan within one year after permit issuance. The plan shall address violations of permit un-ionized ammonia effluent limits. The plan shall include a description of what the company has done to evaluate sources of nitrogen to the discharge, what it has found to be the sources of nitrogen and how the company proposes to mitigate those sources. The plan shall also include the findings of the evaluation, the proposed best management practices (BMPs) and a schedule for implementation to the MPCA for review and approval.

Class 3 and 4 Water Quality Standards

- 1.21 The Permittee shall sample the effluent from mine pit dewatering outfalls SD-001, SD-002, SD-003, SD-004, SD-005 and SD-009 for bicarbonates, total chloride, hardness (calcium and magnesium, calculated as CaCO_3), total dissolved solids, and specific conductance once per month for a period of two years following the permit issuance date. The results of this monitoring shall be reported in the appropriate fields on the Discharge Monitoring Reports.

If the outfall is inactive for the entire calendar month, sampling of the inactive outfall is not required and "No Discharge" shall be reported on the corresponding Discharge Monitoring Report.

- 1.22 In addition, the Permittee shall sample the dewatering discharge outfalls which are inactive at the time of permit issuance (SD-006, SD-007, SD-008, SD-010, SD-011 and SD-012), upon initiation of dewatering for a period of two years starting from the time dewatering is active. Sampling shall be conducted for bicarbonates, total chloride, hardness (calcium and magnesium, calculated as CaCO_3), total dissolved solids, specific conductance and total sulfate once per month for a period of two years. The results of this monitoring shall be reported as an attachment to the required Discharge Monitoring Reports.

If an outfall is inactive for the entire calendar month, sampling of the inactive outfall for that month is not required and "No Discharge" shall be reported on the corresponding Discharge Monitoring Report.

- 1.23 The Permittee shall submit a "Class 3 and 4 Water Quality Standard Report" for MPCA review and approval 120 days following completion of the two year monitoring for outfalls SD-001- SD-005 and SD-009. The Report shall include the complete monitoring results collected as well as a detailed discussion as to the significance of the results in relation to water quality standards for the listed parameters.

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Chapter 1. Special Requirements

1. Special Requirements

- 1.24 The Permittee shall, within 120 days following completion of the two year monitoring required by Chapter 1.1.18 above, submit for MPCA review and approval a Class 3 and 4 Water Quality Standards Report for Area 3 (Area 3 Class 3 & 4 Water Quality Standards Report). The Area 3 Class 3 and 4 Report shall include the complete monitoring results collected for outfalls SD-006, SD-007, SD-008, SD-010, SD-011, and SD-012 pursuant to Chapter 1.1.18 above as well as a detailed discussion as to the significance of the results in relation to water quality standards for the listed parameters.

Chapter 2. Compliance Schedule

1. Compliance Schedule

pH Treatment System

- 1.1 As required by the June 24, 2011 Stipulation Agreement, Northshore Mining Company will install and operate three carbon dioxide injection units at various mine pit dewatering sumps corresponding to outfalls SD-002, SD-005 and SD-009. The company is required to complete construction of the carbon dioxide injection units by July 1, 2012.
- 1.2 Mine pit configuration cannot support the installation of a carbon dioxide injection unit at the SD-004 dewatering sump. Water normally discharged from SD-004 will be re-routed the SD-005 dewatering sump where it will be treated prior to discharge through SD-005. The configuration of routing SD-004 to SD-005 does not prohibit the Permittee from discharging from SD-004 directly, provided it can meet the effluent limits required in the Limits & Monitoring Section of this permit.
- 1.3 The carbon dioxide injection units at SD-002, SD-005 and SD-009 shall be available for operation by July 15, 2012.

Chapter 3. Surface Discharge Stations

1. Requirements for Specific Stations

- 1.1 SD 001, SD 002, SD 003, SD 004, SD 005, SD 006, SD 007, SD 008, SD 009, SD 010, SD 011, SD 012, SD 013, SD 014, SD 015, SD 016, SD 017, SD 018, SD 019: Submit a monthly DMR monthly by 21 days after the end of each calendar month following issuance of major permit modification.
- 1.2 SD 020, SD 022: Submit a monthly DMR monthly by 425 days after the end of each calendar month following permit issuance.
- 1.3 SD 024: Submit a monthly DMR monthly by 21 days after the end of each calendar month following initiation of operation.

2. Special Requirements

- 2.1 The mine pit dewatering outfalls shall be located and managed with respect to Virginia Formation and Duluth Complex rock materials such that the flows directed by the Permittee to, at and/or below the outfall points do not:
- promote the weathering, leaching or erosion of Virginia Formation or Duluth Complex bedrock materials or stockpiles; nor
 - infiltrate Virginia Formation or Duluth Complex stockpiles or known bedrock fracture zones such as the 'Grano Fault'.

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Chapter 3. Surface Discharge Stations

3. Sampling Location

- 3.1 Samples for each individual outfall shall be taken at the immediate pipe, culvert, weir or ditch outlet of the respective outfall. Monitoring for pH and temperature at SD-001 - SD-005 shall be taken in accordance with Chapter 1.18 of this permit.
- 3.2 Samples and measurements required by this permit shall be representative of the monitored activity.

4. Surface Discharges

- 4.1 Floating solids or visible foam shall not be discharged in other than trace amounts.
- 4.2 Oil or other substances shall not be discharged in amounts that create a visible color film.
- 4.3 The Permittee shall install and maintain outlet protection measures at the discharge stations to prevent erosion.

5. Winter Sampling Conditions

- 5.1 The Permittee shall sample flows at the designated monitoring stations including when this requires removing ice to sample the water. If the station is completely frozen throughout a designated sampling month, the Permittee shall check the "No Discharge" box on the Discharge Monitoring Report (DMR) and note the ice conditions in Comments on the DMR.

6. Discharge Monitoring Reports

- 6.1 The Permittee shall submit monitoring results for discharges in accordance with the limits and monitoring requirements for this station. If no discharge occurred during the reporting period, the Permittee shall check the "No Discharge" box on the Discharge Monitoring Report (DMR).
- 6.2 The Permittee shall include the following information in the DMR for outfalls SD020 and SD022:
 - a. the active pumping stations during the sampling period and for the three days before it; and
 - b. a brief discussion of which outfalls might be the most impacted at the time of sampling by activities at the facility.

Chapter 4. Surface Water Stations

1. Requirements for Specific Stations

- 1.1 SW 002, SW 003, SW 004: Submit a monthly DMR monthly by 425 days after the end of each calendar month following permit issuance.

2. Discharge Monitoring Reports

- 2.1 Individual values for each sample and measurement for stations SW002, SW003 and SW004 shall be reported on the Supplemental Report Form provided by the MPCA and submitted with the DMR.

3. Sampling Location

- 3.1 Samples for Station SW002 shall be taken at the untreated City of Hoyt Lakes municipal water supply.

Samples for Station SW003 shall be taken at the outlet of Birch Lake to the South Kawishiwi River at the Minnesota Highway 1 crossing.

Samples for Station SW004 shall be taken at the Partridge River at the County Road 666 crossing east of Hoyt Lakes.

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Chapter 4. Surface Water Stations

3. Sampling Location

- 3.2 Samples shall be taken at mid-stream, mid-depth when possible. Record location, date, time and results for each surface water sample on the supplemental Discharge Monitoring Report form.
- 3.3 The purpose of flow monitoring at stations SW003 and SW004 is to help estimate the loading of pollutants to downstream waters. The MPCA recognizes that the reported flow will be an estimate that may not be accurate to the degree that is required, and typical, for surface discharge stations.

4. Winter Sampling Conditions

- 4.1 The Permittee shall sample flows at the designated monitoring stations including when this requires removing ice to sample the water. If the station is completely frozen throughout a designated sampling month, the Permittee shall check the "No Flow" box on the Discharge Monitoring Report (DMR) and note the ice conditions in Comments on the DMR. If there is extensive, but not complete, ice cover at the time of sampling and the flow rate cannot be estimated, the Permittee shall collect a sample but may choose to not report a flow value and instead include an explanatory note in the comments section of the DMR.
- 4.2 If a designated monitoring station is unsafe to monitor due to ice conditions, the Permittee shall document in detail these conditions, and the Permittee shall return to collect the required sample as soon thereafter when the conditions are no longer unsafe. Unsafe ice conditions may justify postponing, but not cancelling, monitoring required by this permit.

Chapter 5. Domestic Wastewater (non-POTW)

1. Special Requirements

Abandonment

- 1.1 The existing domestic wastewater treatment system shall be abandoned in accordance with the following:
- 1) All solids and liquids must be removed and disposed of to prevent future human contact.
 - 2) All electrical devices and devices containing mercury or asbestos must be removed and disposed of according to all applicable regulations.
 - 3) Abandoned tanks or any other underground cavities such as those from the trickling filter must be removed or remain in place and crushed with the remaining cavity filled with soil or rock material.
- 1.2 Access for future discharges to the existing domestic wastewater treatment system must be permanently denied.
- 1.3 System abandonment of the existing domestic wastewater treatment system shall be completed within 180 days of initiation of operation of the stabilization pond system. Abandon discharge location by 180 days after initiation of operation.

Construction

- 1.4 Submit Notice for Pre-liner Inspection. The Permittee must notify the MPCA in writing at least 14 days before the scheduled placement of the liner. The MPCA may then complete a pre-liner inspection to observe the placement of the sub-base soil prior to placement of the liner. "Pre-liner" means that the Permittee has accepted the work necessary to begin placing the liner material.
- 1.5 Submit Notice for Pre-fill Inspection. The Permittee must notify the MPCA in writing at least 14 days before the scheduled pre-fill of the lined treatment unit. The MPCA may then complete a pre-fill inspection. "Pre-fill" means that the Permittee has accepted the work necessary to begin the water balance test in accordance with MPCA Prefill and Water Balance Criteria.

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Chapter 5. Domestic Wastewater (non-POTW)

1. Special Requirements

- 1.6 Submit Notice of Intent to Initiate Operation. The Permittee must notify the MPCA in writing at least 14 days before the planned initiation of operation date. Following MPCA staff concurrence that the facility is adequately prepared, MPCA staff will notify the Permittee that it may initiate operation of the new or upgraded facility.
- 1.7 Submit Initiation of Operation Date. The Permittee must notify the MPCA in writing within 14 days after the actual initiation of operation date. The Permittee must comply with all permit requirements and attain final limits within 90 days of the Initiation of Operation date.
- 1.8 Submit Final Technical Documents. The Permittee must submit the following to the MPCA within one year after the initiation of operation date:
 - a. An MPCA-approved certification form that is signed by a professional engineer registered in the state of Minnesota stating that the project meets the performance standards.
 - b. A revised operation and maintenance manual or a maintenance plan; or a certificate of completion of an operation and maintenance manual on a form prescribed by the MPCA. At a minimum, this plan must include a detailed discussion of operation and controls, maintenance, sampling and analysis, problem mitigation, VOC management, personnel records and reporting, and safety. This plan must be maintained and updated regularly and made available to the MPCA staff upon request.
 - c. One copy of "as-built" plans and specifications, also known as record drawings, must be submitted in a format approved by the MPCA. The factsheet titled: "Wastewater Treatment Facility Construction Record Documents, As-built Submittal Requirements" contains specific information regarding the required format of the submittal. The document is located on the MPCA web page at:
<http://www.pca.state.mn.us/index.php/view-document.html?gid=15492>.

Initiation of Operation of Stabilization Pond System

- 1.9 The Permittee shall not initiate operation of the stabilization pond system or introduce wastewater from the existing domestic wastewater treatment system to the stabilization pond system until it has secured applicable land leases for the discharge location of the stabilization pond system and construction of the stabilization pond system is complete, including the outfall location.

Pond Outfall

- 1.10 The Permittee shall take precautions to minimize erosion from the discharge channel to the receiving waters.

2. Stabilization Pond Requirements

- 2.1 Acceptable discharge periods are March 1 through June 30 and September 1 through December 31 for facilities located in the Detroit Lakes, Brainerd and Duluth regions.
- 2.2 For discharges occurring outside the acceptable discharge periods, refer to the "Stabilization Pond Guidance for Controlled Discharges." If any of the discharge occurs outside of the acceptable discharge periods, the Permittee shall notify the MPCA of the potential noncompliance prior to discharge. The Permittee shall call the appropriate regional office and indicate that the call is for notification of a pond discharge.
- 2.3 For any discharge outside of acceptable discharge periods or to an ice covered receiving water, the Permittee shall submit a "Discharge Evaluation Report" on a form provided in the "Stabilization Pond Discharge Guidance" located at www.pca.state.mn.us/water/wastewater.html#operation.
- 2.4 The Facility has at least 180 days of storage if located south of the 46 degrees 25 north latitude (approximately the latitude of Brainerd) and 210 days of storage for facilities north of this line unless previously approved by the MPCA for something less. If design capacity is less than 180 days and 210 days respectively, the Permittee may show that actual flows allow for 180 days and 210 days respectively.

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Chapter 5. Domestic Wastewater (non-POTW)

2. Stabilization Pond Requirements

- 2.5 The collection system and stabilization pond facility do not receive excessive flows that result in regular bypassing from the collection system or facility, or result in regular discharges outside the designated discharge window for that facility. Facilities that are experiencing excessive flows may be allowed coverage under this permit for one permit cycle, provided that the permit contains a compliance schedule to investigate and address the excessive flows (see Chapter 6).
- 2.6 Stabilization ponds that are part of the facility do not exceed the allowable seepage rate of 500 gallons per acre per day if the pond was built after May 16, 1975 and 3,500 gallons per acre per day if the pond was built before May 16, 1975. Facilities that are suspected to be leaking may be allowed coverage under this permit for one permit cycle provided that the Permittee agrees to complete a compliance schedule to investigate the leakage rate (see Chapter 7).

Acceptable Discharge Periods

- 2.7 Effluent limitations for this permit have been assigned based upon the assumption that the receiving waters exhibit favorable flow and re-aeration characteristics during the acceptable discharge periods.

Discharges Outside of Acceptable Discharge Periods

- 2.8 For any discharge outside of acceptable discharge periods or to an ice covered receiving water, an adequate dilution ratio is required. If an adequate dilution ratio is not available, receiving water monitoring is required. "Adequate Dilution Ratio" applies to controlled discharges from stabilization pond facilities and means the ratio of receiving water flow rate to effluent volume meets the following criteria based on effluent five-day carbonaceous biological oxygen demand (CBOD5) concentration:

Effluent CBOD5 Concentration	Minimum Dilution Ratio (receiving water effluent)
< 5 mg/L	No minimum dilution ratio
5 - 10 mg/L	3:1
10 - 15 mg/L	5:1
15 - 20 mg/L	7:1
20 - 25 mg/L	10:1

Pre-discharge Sampling

- 2.9 If predischage sample results indicate that one or more of the effluent limitations may be exceeded, the Permittee shall notify the MPCA of potential noncompliance prior to discharge. The Permittee shall call the appropriate MPCA regional office and indicate that the call is for notification of a pond discharge.
- 2.10 Samples shall be taken from four sides of the pond and composited prior to discharge and analyzed for permitted parameters. This sampling must be taken no more than two weeks prior to the beginning of the discharge; dissolved oxygen and pH (both are field tests) must be taken no more than 24 hours prior to the beginning of the discharge. If more than two weeks pass prior to the beginning of discharge, additional predischage samples shall be obtained and analyzed prior to discharge.

Pond Discharge Rate

- 2.11 The discharge rate shall be limited so as not to create a shock load on the receiving waters, disturb the pond bottom sediment in the area of the intake or flood downstream properties. If the drawdown rate should exceed six (6) inches per day, the Permittee shall call the appropriate MPCA regional office and indicate that the call is for notification of a pond discharge.

Pond Observations

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Chapter 5. Domestic Wastewater (non-POTW)

2. Stabilization Pond Requirements

- 2.12 The Permittee shall inspect the pond system weekly, and shall take measurements of pond water depth, estimate the coverage of aquatic plants, floating mats and ice cover on the surface of the ponds, and note odors, the condition of the dikes and the presence of rodents. The Permittee shall maintain records of these weekly inspections for the last three (3) years, and submit the results on the Discharge Monitoring Report (DMR) supplemental form.
- 2.13 The Permittee shall maintain daily precipitation records.

Unauthorized Releases

- 2.14 For all unauthorized releases that may cause pollution of the waters of the state, the Permittee shall take at least one grab sample for permitted effluent parameters two times per week. If the Permittee believes that measuring these parameters is inappropriate due to known information about the discharge, the monitoring may be modified in consultation with the MPCA. Where there is reason to believe a pollutant other than those limited in the permit is present, the Permittee shall sample for that pollutant in addition to the permitted effluent parameters.

3. Bypass Structures

- 3.1 All structures capable of bypassing the treatment system shall be manually controlled and kept locked at all times.

4. Operator Certification

- 4.1 For the operation of the existing domestic wastewater treatment system, the Permittee shall provide a Class C state certified operator who is in direct responsible charge of the operation, maintenance and testing functions required to ensure compliance with the terms and conditions of this permit.

The Permittee shall provide a Class D state certified operator for the operation of the stabilization pond system. A Class C state certified operator will no longer be required once the existing domestic wastewater treatment system is properly abandoned and the requirements in Chapter 5.1.3 of this permit have been met.

- 4.2 The Permittee shall provide the appropriate number of operators with a Type IV certification to be responsible for the land application of biosolids or semisolids from commercial or industrial operations.
- 4.3 If the Permittee chooses to meet operator certification requirements through a contractual agreement, the Permittee shall provide a copy of the contract to the MPCA, WQ Submittals Center. The contract shall include the certified operator's name, certificate number, company name if appropriate, the period covered by the contract and provisions for renewal; the duties and responsibilities of the certified operator; the duties and responsibilities of the permittee; and provisions for notifying the MPCA 30 days in advance of termination if the contract is terminated prior to the expiration date.
- 4.4 The Permittee shall notify the MPCA within 30 days of a change in operator certification or contract status.

5. Sanitary Sewer Extension Permit

- 5.1 The Permittee may be required to obtain a Sanitary Sewer Extension Permit from the MPCA for any addition, extension or replacement to the sanitary sewer. If a sewer extension permit is required, construction may not begin until plans and specifications have been submitted and a written permit is granted except as allowed in Minn. Stat. 115.07, Subd. 3(b).

6. Solids Management

- 6.1 The Permittee shall provide the information needed to comply with the biosolids requirements of Minn. R. ch. 7041 to others who treat, store, prepare or use the biosolids.

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Chapter 5. Domestic Wastewater (non-POTW)

6. Solids Management

- 6.2 The Permittee shall keep records of the information necessary to show compliance with pollutant concentrations and loadings, pathogen reduction requirements, vector attraction reduction requirements and management practices as specified in Minn. R. 7041.1600, subp. 3.
- 6.3 The Permittee shall submit a Biosolids Annual Report by December 31 following the end of the cropping year while the existing domestic wastewater treatment system is operational. The report shall state that biosolids were not land applied, how many total dry tons of biosolids were generated, and where they were transferred to. Submit the report to:

Biosolids Coordinator
Minnesota Pollution Control Agency
520 Lafayette Road
St. Paul, Minnesota 55155-4194

The Biosolids Annual Report is not required once the stabilization pond initiates operation and the existing domestic wastewater treatment system is abandoned.

7. General Requirements

- 7.1 The Permittee shall prevent the introduction of the following to its domestic sanitary wastewater treatment system:
- a. pollutants which create a fire or explosion hazard, including any discharge with a flash point less than 60 degrees C;
 - b. pollutants which would cause corrosive structural damage, including any waste stream with a pH of less than 5.0;
 - c. solid or viscous pollutants which would obstruct flow;
 - d. heat that would inhibit biological activity, including any introduction of wastewater that would cause the temperature of the waste stream at the treatment plants to exceed 40 degrees C;
 - e. pollutants which produce toxic gases, vapors or fumes that may endanger the health or safety of workers;
 - f. new sources of non-contact cooling waters, unless there are no cost-effective alternatives; or
 - g. hazardous wastes.
- 7.2 Signs prohibiting the flushing or disposal of solvents and petroleum products shall be posted for employee information at the facility restroom and shower areas.

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Chapter 6. Industrial Process Wastewater

1. Special Requirements

1.1 Mobile equipment and rail equipment service areas in the facility shall be operated in compliance with the following:

a. The Permittee shall collect and dispose of locomotive traction sand, degreasing wastes, motor oil, oil filters, oil sorbent pads and booms, transmission fluids, power steering fluids, brake fluids, coolant/antifreeze, radiator flush wastewater and spent solvents in accordance with applicable solid and hazardous waste management rules. These materials, including the non-aqueous portion from flammable traps and oil/water separators, shall not be discharged to surface or ground waters of the state.

b. The steam-cleaning of mobile equipment and rail equipment, except for limited in-pit cleaning of large drills and shovels, shall be conducted in wash bays that drain to wastewater treatment systems that include the removal of suspended solids and flammable liquids. The only washing of mobile equipment done in outside areas shall be to remove mud and dirt that has accumulated during outside work.

c. The Permittee shall not use solvent-based cleaners, such as brake cleaners and degreasers, to wash mobile and rail equipment unless the cleaning fluids are completely contained and not allowed to flow to surface or ground waters of the state. Soaps and detergents used in washing shall be biodegradable.

d. Hazardous materials shall not be stored or handled in wash bays.

e. The Permittee shall inspect wastewater containment systems regularly, and promptly repair any leaks that are detected.

f. Leaks or spills of petroleum products that enter wastewater containment systems shall be mitigated immediately.

g. The cleaning of floors shall maximize the use of dry sorbent materials and minimize the use of water.

h. Spill cleanup procedures shall be posted in mobile and rail equipment maintenance and repair areas.

1.2 Mobile and rail equipment maintenance and repairs shall not be conducted in wash bays, except for the locomotive maintenance and washing conducted in the Main Shop Complex locomotive stalls that drain to SD017.

2. Prohibited Discharges

2.1 This permit does not authorize the discharge of sewage, wash water, scrubber water, spills, oil, hazardous substances, or equipment/vehicle cleaning and maintenance wastewaters to ditches, wetlands or other surface waters of the state.

2.2 The Permittee shall prevent the routing of pollutants from the facility to a municipal wastewater treatment system in any manner unless authorized by the pretreatment standards of the MPCA and the municipal authority.

2.3 The Permittee shall not transport pollutants to a municipal wastewater treatment system that will interfere with the operation of the treatment system or cause pass-through violations of effluent limits or water quality standards.

2.4 This permit does not authorize the disposal of demolition debris. This permit also does not authorize the disposal of wastes or wastewaters from the cleaning of the boiler preheaters, fireside cleaning, or waterside cleaning.

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Chapter 6. Industrial Process Wastewater

3. Toxic Substance Reporting

- 3.1 The Permittee shall notify the MPCA immediately of any knowledge or reason to believe that an activity has occurred that would result in the discharge of a toxic pollutant listed in Minnesota Rules, pt. 7001.1060, subp. 4 to 10 or listed below that is not limited in the permit, if the discharge of this toxic pollutant has exceeded or is expected to exceed the following levels:
- a. for acrolein and acrylonitrile, 200 ug/L;
 - b. for 2,4-dinitrophenol and 2-methyl-4,6-dinitrophenol, 500 ug/L;
 - c. for antimony, 1mg/L;
 - d. for any other toxic pollutant listed in Minnesota Rules, pt. 7001.1060, subp. 4 to 10, 100 ug/L; or
 - e. five times the maximum concentration value identified and reported for that pollutant in the permit application. (Minnesota Rules, pt. 7001.1090, subp. 2.A)
- 3.2 The Permittee shall notify the MPCA immediately if the Permittee has begun or expects to begin to use or manufacture as an intermediate or final by-product a toxic pollutant that was not reported in the permit application under Minnesota Rules, pt. 7001.1050, subp. 2.J. (Minnesota Rules, pt. 7001.1090, subp. 2.B)

4. Polychlorinated Biphenyls (PCBs)

- 4.1 PCBs, including but not limited to those used in electrical transformers and capacitors, shall not be discharged or released to the environment.

Chapter 7. Phosphorus Management Plan

1. General Requirements

- 1.1 The Permittee shall submit a Phosphorus Management Plan (PMP) or an updated PMP to the MPCA 180 days prior to permit expiration.

At a minimum, the PMP shall include the following:

- a. A summary of influent and effluent concentrations, mass loadings, and percent removal calculations using the most recent five years of monitoring data, if available.
- b. Identification of existing and potential sources of elevated phosphorus concentrations and/or loading to the facility. As appropriate for the facility, consider residential, institutional, municipal, and commercial sources.
- c. An evaluation of past and present WWTF operations to determine those operating procedures that maximize phosphorus removal.
- d. A summary of any phosphorus reduction activities implemented during the last five years.
- e. Phosphorus management and reduction goals for the next five years using the information collected in A through D above.
- f. A plan to implement phosphorus management and reduction measures during the next five years.

PMP guidance can be found on the MPCA internet at <http://www.pca.state.mn.us/enzq8fa> or by contacting the compliance staff listed on the cover page of this permit.

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Chapter 8. Facility Specific Definitions

1. Definitions

- 1.1 Please refer to the 'Permit Users Manual' included with the permit for standard definitions.
- 1.2 The Permittee, for purposes of internal communications convenience, uses such terms as "aggregate" or "plant aggregate" in place of historic terms reference tailings material, such as 'coarse tailings', 'mixed tailings', etc. The change in word use to "aggregate" or "plant aggregate" has no regulatory affect. Nothing in the use of these terms waives the requirements of any applicable federal, state or local statute, regulation, rule, law, court decision or ordinance regarding tailings or other mining waste.
- 1.3 "Plant Aggregate" means any combination of dry cobb aggregate and filter sand. This generic term replaces the former terms 'coarse tailings', 'mixed tailings' and 'select coarse tailings' in order to clarify the purpose and origin of the construction material to which it refers and to provide one term for use throughout this permit.

"Dry Cobb Aggregate" means the coarse fraction of plant aggregate. It is a crushed gravel (typical size minus-3/4-inch) separated at the dry cobber building and transported by conveyor belt, rail or other wheeled conveyance. It is generally mixed with filter sand but may be transported and used separately depending on construction needs. This term replaces the former terms 'coarse tailings', 'dry cobb tailings' or 'dry cobber reject' in order to clarify the purpose and origin of the construction material to which it refers.

"Filter Sand" means the fine fraction of plant aggregate. It is a ground and washed sand (typical size minus-10 mesh) that has been cycloned, hydroseparated and then filtered at the extractor belt filters. It is transported by conveyor belt, rail or other wheeled conveyance. It is generally mixed with dry cobb aggregate but may be transported and used separately depending on construction needs. This term replaces the former terms 'coarse tailings', 'filter tailings', or 'belt filter tailings' in order to clarify the purpose and origin of the construction material to which it refers.

"Fine Tailings" means the finely ground material (typical size minus-325 mesh) which must be pumped in a slurry. Fine tailings are not used at the Peter Mitchell mine.

- 1.4 "Fibers", for the purpose of this permit, means amphibole and chrysotile mineral particles with three-to-one or greater aspect ratios.

"Amphibole" means a group of inosilicate minerals, which includes a double-chain of silicon-oxygen tetrahedra, with the general chemical formula $A_2 B_5 (Si, Al)_8 O_{22} (OH)_2$, where A is mainly Mg, Fe, Ca and Na and where B is mainly Mg, Fe and Al.

"Chrysotile" means a hydrated magnesium phyllosilicate mineral that consists of a continuous sheet of silicon-oxygen tetrahedra connected in sandwich fashion to a brucite (magnesium hydroxide) layer in which two of every three hydroxyl groups are replaced by apical oxygens of the silica tetrahedra, and with the chemical formula $Mg_3 Si_2 O_5 (OH)_4$.

- 1.5 "Biosolids" means solid, semisolid or liquid residue generated during the treatment of domestic sewage in a treatment works and is acceptable for recycling on land as a soil conditioner and nutrient source. Biosolids include but are not limited to scum or solids removed in primary, secondary or advanced wastewater treatment processes, and a material derived from sewage sludge. Biosolids do not include ash generated during firing of sewage sludge in an incinerator or grit and screenings generated during preliminary treatment of domestic sewage in a treatment works.

"Pathogens" means organisms that are capable of producing an infection or disease in a susceptible host.

"Vector Attraction" means the characteristic of sewage sludge or biosolids that attracts rodents, flies, mosquitoes, or other organisms capable of transporting infectious agents.

- 1.6 "Stormwater" means stormwater runoff, snowmelt runoff and surface runoff and drainage.

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Chapter 8. Facility Specific Definitions

1. Definitions

- 1.7 "Initiation of operation" means the date that MPCA determines all components of the the wastewater treatment system are complete and functioning and the project begins operating for the purposes for which it was planned, designed, and built.
- 1.8 "Completion of construction" means all the construction is complete except for minor weather-related components and conforms to the approved plans and specifications and change orders.
- 1.9 "Notice to proceed" means a written notice given by the Permittee to the contractor that affixes the contract effective date and the date that the contractor begins performing the work specified in the contract documents.

Chapter 9. Water Treatment Plant, NPDES/SDS

1. Residual Solids Management

- 1.1 The Permittee shall provide for the effective management and/or disposal of residual solids, or other substances resulting from treatment of potable water.
- 1.2 The Permittee shall dispose of residual solids in such a manner and at such locations that disposal practices shall not result in unlawful pollution of the air, surface water or ground water, or create nuisance conditions.

2. Waste Materials - Land Application Restrictions

- 2.1 Land application of Residual Solids shall be limited to those sites approved in writing by the MPCA.

Chapter 10. Stormwater Management

1. Authorization

- 1.1 This chapter authorizes the Permittee to discharge stormwater associated with industrial activity in accordance with the terms and conditions of this chapter. The agency may initiate modification of this chapter in accordance with Minn. R. 7001.0170 and Minn. R. 7001.0190 Subp.1 to incorporate revised requirements in response to the reissuance or modification of the General Stormwater Permit for Industrial Activity (MNG611000).
- 1.2 Actions taken by the Permittee to attain compliance with the requirements of this chapter may take into consideration the unique features of large scale taconite mining; in particular, the circumstances where stormwater runoff flows to, or is directed to, a permitted outfall (SD001 through SD019) for treatment and discharge. The Permittee shall describe and discuss in the Stormwater Pollution Prevention Plan required by this chapter where such considerations have been applied.

2. Prohibited Discharges

- 2.1 This permit, unless specifically authorized by another chapter, does not authorize the discharge of sewage, wash water, scrubber water, spills, oil, hazardous substances, or equipment/vehicle cleaning and maintenance wastewaters to ditches, wetlands or other surface waters of the state.
- 2.2 This permit does not authorize discharges from sites for which Environmental Assessment Worksheets or Environmental Impact Statements are required, in accordance with Minn. R. ch. 4410, until that environmental review is completed.
- 2.3 This permit does not authorize the discharge of stormwater associated with an industrial activity if the pollutant loading in the waste stream does not meet the minimum secondary treatment limits for CBOD5 and/or Total Suspended Solids.

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Chapter 10. Stormwater Management

3. Special Requirements

- 3.1 The Permittee shall notify the MPCA in writing at least 180 days before an expansion of the area covered by excavations or mining waste or other stockpiles beyond the facility area designated on the map on page 7 of this permit.
- 3.2 The Permittee shall not expand the area covered by excavations or mining waste or other stockpiles west of the boundary formed by Ranges 13 West and 14 West.
- 3.3 The Permittee shall notify the MPCA in writing at least 180 days in advance of any planned new storage sites for aggregate material at the facility other than sites that drain directly into the mine pits, and other than the 78 Spur (S93) Pad and the Area 1 Crusher Crude Ore Storage Area.

4. Water Quality Standards

- 4.1 The Permittee shall operate and maintain the facility and shall control runoff, including stormwater, from the facility to prevent the exceedance of water quality standards specified in Minnesota Rules, chs. 7050 and 7060.
- 4.2 The Permittee shall limit and control the use of materials at the facility that may cause exceedances of ground water standards specified in Minnesota Rules, ch. 7060. These materials include, but are not limited to, detergents and cleaning agents, solvents, chemical dust suppressants, lubricants, fuels, drilling fluids, oils, fertilizers, explosives and blasting agents.

5. Stormwater Pollution Prevention Plan

- 5.1 Submit an updated Stormwater Pollution Prevention Plan within one year of permit reissuance.
- 5.2 The Permittee shall develop and implement a Stormwater Pollution Prevention Plan (Plan) to address the specific conditions at the industrial facility. The goal of the Plan is to eliminate or minimize contact of stormwater with significant materials that may result in pollution of the runoff. If contact cannot be eliminated or reduced, stormwater that has contacted significant material should be treated before it is discharged from the site.
- 5.3 Areas at the facility where stormwater is collected, treated, and discharged through permitted outfalls where the discharged waters are subject to effluent limitations identified in this permit, do not need to be included in the Stormwater Pollution Prevention Plan. Areas not subject to the SWPPP requirements shall be identified on the drainage map included with the Plan.
- 5.4 The Plan shall be implemented at the site before the Permittee is covered under this permit.
- 5.5 The Stormwater Pollution Prevention Plan shall include a description of appropriate Best Management Practices for protection of surface and ground water quality at the facility, and a schedule for implementing the practices. The Plan shall also include the procedures to be followed by designated staff employed by the Permittee to implement the plan.
- 5.6 The Permittee shall comply with its Stormwater Pollution Prevention Plan.

Plan Contents

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Chapter 10. Stormwater Management

5. Stormwater Pollution Prevention Plan

5.7 Complete a drainage map. The map should indicate the following items at or adjacent to the facility:

- a. drainage areas and directions of stormwater runoff (indicated by arrows);
- b. discharge outfalls from the site (structures that carry stormwater runoff from the facility such as ditches or storm sewers);
- c. the name and location of waters of the state that receive facility stormwater runoff (if waters of the state are too distant from the facility to be indicated on the site map, indicate the name, direction and shortest distance to the lake, river, stream or wetland that receives runoff from your site);
- d. areas where significant materials are exposed to stormwater;
- e. locations of storm sewer inlets and an indication of which, if any, structures have floor drains or loading dock drains that are connected to storm sewers; and
- f. locations and types of Best Management Practices (BMPs) currently installed at the facility to reduce or eliminate pollutants to stormwater.

5.8 Complete an inventory of exposed significant materials. Indicate the types of significant materials handled or stored at the site that may potentially contact stormwater. The following are examples of materials that, if exposed to stormwater, must be included in the inventory:

- a. raw materials, such as fuels; solvents; petroleum products; detergents; plastic pellets; materials used in food processing or production; stockpiled sand, salt or coal;
- b. by-products or intermediate products, such as wood dust, chips or bark; screened limestone, taconite or gravel by-product, recycled blacktop;
- c. finished materials, such as metallic products, including scrap metal and recycled or scrap motor vehicle parts, old process equipment/machinery, taconite pellets;
- d. waste products, such as ashes, sludge, solid and liquid waste, slag;
- e. hazardous substances designated under section 101(14) of the Comprehensive Environmental Response Compensation and Liability Act (CERCLA);
- f. any chemical the facility is required to report under section 313 of the Emergency Planning and Community Right-to-Know Act (EPCRA).

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Chapter 10. Stormwater Management

5. Stormwater Pollution Prevention Plan

- 5.9 Evaluate facility areas for exposure of significant materials to stormwater. In creating the inventory of exposed significant materials, the Permittee must, at a minimum, evaluate the following areas at the industrial site (as well as other areas where appropriate) to determine whether or not significant materials are exposed in these areas:
- a. vehicle and equipment maintenance, parking and storage areas including fueling and washing/cleaning areas, to determine if there is discolored soil in these areas as a result of fuel and lubricant leaks and spills;
 - b. liquid storage tanks and other bulk material stockpile areas;
 - c. loading and unloading areas;
 - d. outdoor manufacturing, processing or storage areas and industrial plant yards, to determine if there is discolored soil in these areas as a result of leaked or spilled solvents, fuels, or lubricants;
 - e. dust or particulate generating areas including dust collection devices that may release dust;
 - f. rooftops contaminated by industrial activity or operation of a pollution control device;
 - g. on-site waste disposal areas, such as waste ponds, dumpsters, solid waste storage or management areas; and
 - h. exposed (non-vegetated) soil areas where there is a potential for erosion to occur.
- 5.10 Describe appropriate BMPs, including structural and non-structural BMPs, that will be used at the facility to minimize or eliminate pollution of stormwater at the site. The description must include an objective for each BMP, as well as a description of how to evaluate proper functioning of the BMP and any maintenance requirements of the BMP. BMPs should target significant materials and areas identified in subparts 7 and 8 of this part. The following general categories of BMPs shall be considered and one or more shall be incorporated into the facility's Plan if significant materials are exposed to stormwater on-site:
- a. Source reduction: reduce or eliminate the significant materials that are exposed to stormwater. Materials management practices should be evaluated to determine whether inventories of exposed materials can be reduced or eliminated. This can include clean-up of equipment yards, periodic checking of dust control equipment to ensure minimal accumulation of dust in the area of control equipment, removal and treatment of petroleum contaminated soil, consolidation of materials from multiple areas into one area, and training employees regarding proper handling and disposal of materials. Significant materials may also be moved indoors or covered with a tarp or structure to eliminate contact with precipitation.
 - b. Diversion: divert stormwater drainage away from exposed significant materials through use of curbing, berms, sewers or other forms of drainage control or elevate exposed significant material above surrounding drainage.
 - c. Treatment: where contact of stormwater with significant materials is unavoidable, use treatment devices to reduce the concentration and amount of pollutants in the discharge. Such devices include oil/water separators, stormwater detention/retention ponds, and vegetative swales.

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Chapter 10. Stormwater Management

5. Stormwater Pollution Prevention Plan

- 5.11 Evaluate all discharge conveyances from the site (storm sewers, pipes, tile lines, ditches, etc.) to determine if liquids other than stormwater are being discharged from these devices. This should be done during dry weather when stormwater discharge is not occurring. The evaluation should cover sewer inlets and floor drains to determine which inlets/drains are connected to sanitary sewer lines, storm sewer lines, or septic tanks/drainage fields; appropriate methods such as dye or smoke testing or video imaging should be used to determine the source of discharges.

The Plan must certify that discharges from the site have been evaluated for the presence of non-stormwater discharges. The certification shall indicate the date of testing, location of testing, describe the method used to determine the source of discharges and the results of testing. Discharge of non-stormwater (such as sanitary sewer or floor drain connections to storm sewers) is not authorized by this permit; before such discharge may continue, authorization under an appropriate NPDES permit must be obtained.

- 5.12 Develop a preventive maintenance program. The program must require regular inspection and maintenance of stormwater management devices (e.g. cleaning oil/water separators and catch basins), as well as inspecting and testing plant equipment and systems to uncover conditions that could cause breakdowns or failures resulting in discharges of pollutants (e.g. hydraulic leaks, torn bag-house filters) to surface waters.
- 5.13 Develop a spill prevention and response procedure. In order to develop this procedure, Permittees should evaluate where spills have occurred and where they have the potential to occur. Determine drainage points for potential spill areas and develop appropriate spill prevention and containment measures, should a spill occur. Detailed procedures for cleaning-up spills shall be identified and made available to appropriate personnel. If your facility has any other spill contingency plan that satisfies the above requirements, that plan may be incorporated by reference into this Plan to satisfy this requirement.
- 5.14 Develop and implement an employee training program to inform appropriate personnel of the components and goals of the Plan. Training shall address spill response, good housekeeping and materials management practices. The Plan shall identify periodic dates for such training.
- 5.15 Identify personnel responsible for managing and implementing the Plan as well as those responsible for the reporting requirements of this permit. This should include the facility contact person as indicated on the permit application. Identified personnel must be available at reasonable times of operation.

6. Temporary Protection and Permanent Cover

- 6.1 The Permittee shall provide and maintain temporary protection or permanent cover for the exposed areas at the facility.
- 6.2 Temporary protection methods are used to prevent erosion on a short-term basis, such as the placement of mulching straw, wood fiber blankets, wood chips, erosion control netting, or temporary seeding.
- 6.3 Permanent cover or final stabilization methods are used to prevent erosion, such as the placement of rip rap, sodding, or permanent seeding or planting. Permanent seeding and planting must have a uniform perennial vegetation cover of at least 70 percent density to constitute final stabilization.

7. Inspection and Maintenance

- 7.1 Site inspections shall be conducted at least once every two months throughout the calendar year. During winter months, the inspections shall be conducted during non-frozen conditions. Inspections shall be conducted by an appropriately trained personnel at the facility site, as identified in part 5.13 of this chapter. The purpose of inspections is to: 1) determine whether structural and non-structural BMPs require maintenance or changes, and 2) evaluate the completeness and accuracy of the Plan.

At least one inspection during a reporting period shall be conducted while stormwater is discharging from the facility. Inspections may be documented using an inspection form provided by the MPCA. A Storm Water Site Inspection Form is provided in the appendices section of this permit.

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Chapter 10. Stormwater Management

7. Inspection and Maintenance

- 7.2 Inspections shall be documented and a copy of all documentation shall remain on the permitted site whenever Permittee staff are available on the site, and be available upon request. The inspection form developed for the General Storm Water Permit for Industrial Activity may be used for recording inspection results, and is included in the appendices section of this permit.
- 7.3 The following compliance items will be inspected, and documented where appropriate:
- a. evaluate the facility to determine that the Plan accurately reflects site conditions as described in subpart 6 of this part, and document any inaccuracies;
 - b. evaluate the facility to determine whether new exposed materials have been added to the site since completion of the Plan, and document any new significant materials;
 - c. during the inspection conducted during the runoff event, observe the runoff to determine if it is discolored or otherwise visibly contaminated, and document observations; and,
 - d. determine if the non-structural and structural BMPs as indicated in the Plan are installed and functioning properly.
- 7.4 The Permittee shall ensure that temporary protection and permanent cover for the exposed areas at the site are maintained.
- 7.5 Indicate the date and time of the inspection as well as the name of the inspector on the inspection form.
- 7.6 When the depth of sediment collected in the final sedimentation basin above the outfall reaches one-half of the riser height, or one-half of the basin design hydraulic storage volume, the Permittee shall drain the basin and remove the sediment within three days of discovery. No outflow from the sedimentation basin shall occur while sediment is being removed from that basin. The sediment removed from the basin shall be disposed of at a site which drains to sedimentation basin(s) at the facility.
- 7.7 If conditions are observed at the site that require changes in the Plan, such changes shall be made to the Plan prior to submission of the annual report for that calendar year.
- 7.8 The Permittee shall minimize vehicle tracking of gravel, soil or mud onto paved surfaces at the facility.
- 7.9 If the findings of a site inspection indicate that BMPs are not meeting the objectives as identified in subpart 9 of this part, corrective actions must be initiated within 30 days and the BMP restored to full operation as soon as field conditions allow.
- 7.10 The Permittee shall remove tracked material from the road surface and return it to the facility within one (1) day of discovery so that the materials drain to sedimentation basin(s) at the facility.

8. Sedimentation Basin Design and Construction

New Sedimentation Basins

- 8.1 Sedimentation basins shall be designed by a registered professional engineer, and installed under the direct supervision of a registered professional engineer.
- 8.2 The basin shall provide at least 1800 cubic feet, per acre drained, of hydraulic storage volume below the top of the outlet riser pipe.
- 8.3 Inlet(s) and outlet(s) shall be designed to prevent short circuiting and the discharge of floating debris.
- 8.4 The inlet(s) shall be placed at an elevation at least above one-half of the basin design hydraulic storage volume.
- 8.5 The outlet(s) shall consist of a perforated riser pipe wrapped with filter fabric and covered with crushed gravel. The perforated riser pipe shall be designed to allow complete drawdown of the basin(s).

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Chapter 10. Stormwater Management

8. Sedimentation Basin Design and Construction

- 8.6 Permanent erosion control, such as rip rap, splash pads or gabions shall be installed at the outlet(s) to prevent downstream erosion.
- 8.7 The basins shall be designed to allow for regular removal of accumulated sediment by a backhoe or other suitable equipment.

9. Application of Chemical Dust Suppressants

- 9.1 If chemical dust suppressants are applied, the Permittee shall submit a Chemical Dust Suppressant Annual Report due 90 days after the end of each calendar year following the application of a chemical dust suppressant.
- 9.2 The Chemical Dust Suppressant Annual Report shall include:
 - a. a record of the dates, methods, locations and amounts by volume of chemical application at the facility;
 - b. whether the product was applied in the preceding year; and,
 - c. the results of a chemical analysis of the materials applied each year.
- 9.3 If a material applied is mixed with water or another solvent before application, the chemical analysis shall be done on the aqueous or other mixture that is representative of the solution applied. This analysis shall be conducted during the same calendar year of application. This analysis shall include the parameters that may be determined by U.S. Environmental Protection Agency (EPA) Methods 624 and 625 which are described in 40 CFR Part 136.
- 9.4 Chemical dust suppressants, if used, shall not be applied within 100 feet of the surface receiving waters identified in the 'Facility Description' section of this permit. These materials also shall not be applied within 100 feet of ditches that conduct surface flow to the surface receiving waters identified on Page 1 of this permit.
- 9.5 Chemical dust suppressants shall not be applied within 200 feet of any private water supply well nor within 1,000 feet of any public water supply well.
- 9.6 Chemical dust suppressants shall be applied in a manner that does not exceed product application guide rates and does not result in surface runoff. Chemical dust suppressants shall not be applied to paved or other impervious areas.

10. Reporting

- 10.1 Submit a Stormwater Annual Report by March 31 of each year following permit issuance. A copy of the Stormwater Annual Report Form is provided in the appendices section of this permit.
- 10.2 The Permittee shall, upon request of the Agency, submit within a reasonable time the information and reports that are relevant to compliance with this Chapter, including the Plan, inspection reports, annual reports, original laboratory sheets from analyses conducted on the waste stream, and BMP plans and specifications.

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Chapter 10. Stormwater Management

11. Records

- 11.1 The Plan shall be retained for the duration of the permit. A copy of the Plan shall remain on the permitted site whenever Permittee staff are available on the site, and be available upon request. The Permittee shall maintain the following records for the period of permit coverage:
- a. dates of inspections;
 - b. findings of inspections;
 - c. corrective actions taken;
 - d. documentation of all changes to the Plan; and,
 - e. a copy of annual reports.

12. Notification

- 12.1 If the Permittee discharges stormwater into a municipal storm sewer, the Permittee shall notify the operator of the municipal storm sewer of the existence of this permit.

13. Request for Termination of Stormwater Permit Coverage

- 13.1 All Permittees regulated by 40 CFR 122.26(b)(14)(i) through (ix) and (xi) may request termination of permit coverage by applying for the no exposure exclusion from permitting. The Permittee must submit (form provided by the Agency) a written certification that a condition of no exposure exists at the facility and that the facility meets the definition of no exposure of industrial activities and materials to storm water.

The application for the no exposure exclusion must be completed by the Permittee and sent to: MPCA, Industrial Storm Water Program, 520 Lafayette Rd N, St Paul, MN 55155-4194.

Failure to complete an accurate application will result in the facility being denied the no exposure exclusion from permitting. The facility must submit the application to the Agency once every five years.

- 13.2 The no exposure exclusion is conditional. The Permittee must maintain a condition of no exposure at the facility in order for the no exposure exclusion to remain applicable. In the event of any change or circumstance that causes exposure of industrial activities or materials to stormwater, the Permittee must comply with the stormwater requirements of this chapter.
- 13.3 The no exposure certification is non-transferrable. In the event that the facility operator changes, then the new operator must submit a new no exposure certification to the MPCA, Industrial Stormwater Program, 520 Lafayette Rd N, St Paul, MN 55155-4194.
- 13.4 The Commissioner retains the authority to require the facility operator to comply with the requirements of this chapter, even when an industrial operator certifies no exposure, if the Commissioner has determined that the discharge is contributing to the violation of, or interfering with the attainment or maintenance of water quality standards, including designated uses.

14. Definitions

- 14.1 "No exposure" means all industrial materials and activities are protected by a storm resistant shelter to prevent exposure to rain, snow, snow melt, and/or runoff. Industrial activities or materials include, but are not limited to, material handling equipment or activities, industrial machinery, raw materials, intermediate products, by-products, final products, or waste products.
- 14.2 "Non-stormwater discharge" means any discharge not comprised entirely of stormwater discharges authorized by a NPDES permit.

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Chapter 10. Stormwater Management

14. Definitions

14.3 "Runoff" means any liquid that drains over land from any part of a facility.

Chapter 11. Total Facility Requirements

1. General Requirements

General Requirements

- 1.1 Incorporation by Reference. The following applicable federal and state laws are incorporated by reference in this permit, are applicable to the Permittee, and are enforceable parts of this permit: 40 CFR pts. 122.41, 122.42, 136, 403 and 503; Minn. R. pts. 7001, 7041, 7045, 7050, 7060, and 7080; and Minn. Stat. Sec. 115 and 116.
- 1.2 Permittee Responsibility. The Permittee shall perform the actions or conduct the activity authorized by the permit in compliance with the conditions of the permit and, if required, in accordance with the plans and specifications approved by the Agency. (Minn. R. 7001.0150, subp. 3, item E)
- 1.3 Toxic Discharges Prohibited. Whether or not this permit includes effluent limitations for toxic pollutants, the Permittee shall not discharge a toxic pollutant except according to Code of Federal Regulations, Title 40, sections 400 to 460 and Minnesota Rules, parts 7050.0100 to 7050.0220 and 7052.0010 to 7052.0110 (applicable to toxic pollutants in the Lake Superior Basin) and any other applicable MPCA rules. (Minn. R. 7001.1090, subp.1, item A)
- 1.4 Nuisance Conditions Prohibited. The Permittee's discharge shall not cause any nuisance conditions including, but not limited to: floating solids, scum and visible oil film, acutely toxic conditions to aquatic life, or other adverse impact on the receiving water. (Minn. R. 7050.0210 subp. 2)
- 1.5 Property Rights. This permit does not convey a property right or an exclusive privilege. (Minn. R. 7001.0150, subp. 3, item C)
- 1.6 Liability Exemption. In issuing this permit, the state and the 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 this permit. To the extent the state and the MPCA may be liable for the activities of its employees, that liability is explicitly limited to that provided in the Tort Claims Act. (Minn. R. 7001.0150, subp. 3, item O)
- 1.7 The MPCA's issuance of this permit does not obligate the MPCA to enforce local laws, rules, or plans beyond what is authorized by Minnesota Statutes. (Minn. R. 7001.0150, subp.3, item D)
- 1.8 Liabilities. The MPCA's issuance of this permit does not release the Permittee from any liability, penalty or duty imposed by Minnesota or federal statutes or rules or local ordinances, except the obligation to obtain the permit. (Minn. R. 7001.0150, subp.3, item A)
- 1.9 The issuance of this permit does not prevent the future adoption by the MPCA of pollution control rules, standards, or orders more stringent than those now in existence and does not prevent the enforcement of these rules, standards, or orders against the Permittee. (Minn. R. 7001.0150, subp.3, item B)
- 1.10 Severability. The provisions of this permit are severable and, if any provisions of this permit or the application of any provision of this permit to any circumstance are held invalid, the application of such provision to other circumstances and the remainder of this permit shall not be affected thereby.
- 1.11 Compliance with Other Rules and Statutes. The Permittee shall comply with all applicable air quality, solid waste, and hazardous waste statutes and rules in the operation and maintenance of the facility.

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Chapter 11. Total Facility Requirements

1. General Requirements

- 1.12 Inspection and Entry. When authorized by Minn. Stat. Sec. 115.04; 115B.17, subd. 4; and 116.091, and upon presentation of proper credentials, the agency, or an authorized employee or agent of the agency, 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, item I)
- 1.13 Control Users. The Permittee shall regulate the users of its wastewater treatment facility so as to prevent the introduction of pollutants or materials that may result in the inhibition or disruption of the conveyance system, treatment facility or processes, or disposal system that would contribute to the violation of the conditions of this permit or any federal, state or local law or regulation.

Sampling

- 1.14 Representative Sampling. Samples and measurements required by this permit shall be conducted as specified in this permit and shall be representative of the discharge or monitored activity. (40 CFR 122.41 (j)(1))
- 1.15 Additional Sampling. If the Permittee monitors more frequently than required, the results and the frequency of monitoring shall be reported on the Discharge Monitoring Report (DMR) or another MPCA-approved form for that reporting period. (Minn. R. 7001.1090, subp. 1, item E)
- 1.16 Submit a monthly DMR monthly by 21 days after the end of each calendar month following issuance of major permit modification.
- 1.17 Change in Monitoring Frequency. The MPCA may approve a decrease or an increase in the monitoring frequency for a parameter for which monitoring is required under this permit, based upon the following:
- a. the complete compliance record of the Permittee under this permit;
 - b. the variability of past monitoring data; and
 - c. the variability of activities that may affect the past and future data at the monitoring station.

Upon MPCA approval, such a change in monitoring frequency is an enforceable part of this permit.

- 1.18 Certified Laboratory. A laboratory certified by the Minnesota Department of Health shall conduct analyses required by this permit. Analyses of dissolved oxygen, pH, temperature and total residual oxidants (chlorine, bromine) do not need to be completed by a certified laboratory but shall comply with manufacturers specifications for equipment calibration and use. (Minn. Stat. Sec. 144.97 through 144.98 and Minn. R. 4740.2010 and 4740.2050 through 4740.2120) (Minn. R. 4740.2010 and 4740.2050 through 2120)
- 1.19 Sample Preservation and Procedure. Sample preservation and test procedures for the analysis of pollutants shall conform to 40 CFR Part 136 and Minn. R. 7041.3200.
- 1.20 Mercury Analyses. The mercury sampling and analyses required by this permit shall be conducted using EPA Methods 1669 and 1631. The metals analyses required by this permit, except for iron, shall be conducted using low-level detections, for example atomic absorption (AA) furnace methods.

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Chapter 11. Total Facility Requirements

1. General Requirements

- 1.21 Fiber Analyses. Fiber analyses and reporting to the MPCA shall include a mineralogical breakdown of the fibers found and their concentrations consistent with Minnesota Department of Health (MDH) statistical procedures. Monitoring for fibers shall be performed according to MDH Method Code 851, "Transmission Electron Microscope Analysis for Asbestos in Water" (March 19, 1991). The Permittee, at its discretion, may also perform fibers monitoring according to USEPA Method EPA-600/4-83-043, "Analytical Method for Determination of Asbestos Fibers in Water" (September 1983), but this monitoring shall not substitute for monitoring according to MDH Method 851.
- 1.22 Equipment Calibration: Flow meters, pumps, flumes, lift stations or other flow monitoring equipment used for purposes of determining compliance with permit shall be checked and/or calibrated for accuracy at least twice annually. (Minn. R. 7001.0150, subp. 2, items B and C)
- 1.23 Maintain Records. The Permittee shall keep the records required by this permit for at least three years, including any calculations, original recordings from automatic monitoring instruments, and laboratory sheets. The Permittee shall extend these record retention periods upon request of the MPCA. The Permittee shall maintain records for each sample and measurement. The records shall include the following information (Minn. R. 7001.0150, subp. 2, item C):
- a. The exact place, date, and time of the sample or measurement;
 - b. The date of analysis;
 - c. The name of the person who performed the sample collection, measurement, analysis, or calculation; and
 - d. The analytical techniques, procedures and methods used; and
 - e. The results of the analysis.
- 1.24 Completing Reports. The Permittee shall submit the results of the required sampling and monitoring activities on the forms provided, specified, or approved by the MPCA. The information shall be recorded in the specified areas on those forms and in the units specified. (Minn. R. 7001.1090, subp. 1, item D; Minn. R. 7001.0150, subp. 2, item B)

Required forms may include:

Supplemental Report Form (Supplemental)

Individual values for each sample and measurement must be recorded on the Supplemental which, if required, will be provided by the MPCA. Supplementals shall be submitted with the appropriate DMRs. You may design and use your own Supplemental; however it must be approved by the MPCA. Note: Required Summary information **MUST** also be recorded on the DMR. Summary information that is submitted **ONLY** on the Supplemental does not comply with the reporting requirements.

- 1.25 Additional Information on Reports. The Permittee shall report the following information on the Discharge Monitoring Report:
- a. any substantial changes in operational procedures;
 - b. activities which alter the nature or frequency of the discharge; and
 - c. material factors affecting compliance with the conditions of this permit.

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Chapter 11. Total Facility Requirements

1. General Requirements

1.26 Submitting Reports. DMRs and Supplementals shall be submitted to:

MPCA
Attn: Discharge Monitoring Reports
520 Lafayette Road North
St. Paul, Minnesota 55155-4194.

DMRs and Supplementals shall be postmarked by the 21st day of the month following the sampling period or as otherwise specified in this permit. A DMR shall be submitted for each required station even if no discharge occurred during the reporting period. (Minn. R. 7001.0150, subps. 2.B and 3.H)

Other reports required by this permit shall be postmarked by the date specified in the permit to:

MPCA
Attn: WQ Submittals Center
520 Lafayette Road North
St. Paul, Minnesota 55155-4194

1.27 Incomplete or Incorrect Reports. The Permittee shall immediately submit an amended report or DMR to the MPCA upon discovery by the Permittee or notification by the MPCA that it has submitted an incomplete or incorrect report or DMR. The amended report or DMR shall contain the missing or corrected data along with a cover letter explaining the circumstances of the incomplete or incorrect report. (Minn. R. 7001.0150 subp. 3, item G)

1.28 Required Signatures. All DMRs, forms, reports, and other documents submitted to the MPCA shall be signed by the Permittee or the duly authorized representative of the Permittee. Minn. R. 7001.0150, subp. 2, item D. The person or persons that sign the DMRs, forms, reports or other documents must certify that he or she understands and complies with the certification requirements of Minn. R. 7001.0070 and 7001.0540, including the penalties for submitting false information. Technical documents, such as design drawings and specifications and engineering studies required to be submitted as part of a permit application or by permit conditions, must be certified by a registered professional engineer. (Minn. R. 7001.0540)

1.29 Detection Level. The Permittee shall report monitoring results below the reporting limit (RL) of a particular instrument as "<" the value of the RL. For example, if an instrument has a RL of 0.1 mg/L and a parameter is not detected at a value of 0.1 mg/L or greater, the concentration shall be reported as "<0.1 mg/L." "Non-detected," "undetected," "below detection limit," and "zero" are unacceptable reporting results, and are permit reporting violations. (Minn. R. 7001.0150, subp. 2, item B)

Where sample values are less than the level of detection and the permit requires reporting of an average, the Permittee shall calculate the average as follows:

- a. If one or more values are greater than the level of detection, substitute zero for all nondetectable values to use in the average calculation.
- b. If all values are below the level of detection, report the averages as "<" the corresponding level of detection.
- c. Where one or more sample values are less than the level of detection, and the permit requires reporting of a mass, usually expressed as kg/day, the Permittee shall substitute zero for all nondetectable values. (Minn. R. 7001.0150, subp. 2, item B)

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Chapter 11. Total Facility Requirements

1. General Requirements

- 1.30 Records. The Permittee shall, when requested by the Agency, 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, item H)
- 1.31 Confidential Information. Except for data determined to be confidential according to Minn. Stat. Sec. 116.075, subd. 2, all reports required by this permit shall be available for public inspection. Effluent data shall not be considered confidential. To request the Agency maintain data as confidential, the Permittee must follow Minn. R. 7000.1300.

Noncompliance and Enforcement

- 1.32 Subject to Enforcement Action and Penalties. Noncompliance with a term or condition of this permit subjects the Permittee to penalties provided by federal and state law set forth in section 309 of the Clean Water Act; United States Code, title 33, section 1319, as amended; and in Minn. Stat. Sec. 115.071 and 116.072, including monetary penalties, imprisonment, or both. (Minn. R. 7001.1090, subp. 1, item B)
- 1.33 Criminal Activity. The Permittee may not knowingly make a false statement, representation, or certification in a record or other document submitted to the Agency. A person who falsifies a report or document submitted to the Agency, or tampers with, or knowingly renders inaccurate a monitoring device or method required to be maintained under this permit is subject to criminal and civil penalties provided by federal and state law. (Minn. R. 7001.0150, subp.3, item G., 7001.1090, subps. 1, items G and H and Minn. Stat. Sec. 609.671)
- 1.34 Noncompliance Defense. It shall not be a defense for the Permittee in an enforcement action that it would have been necessary to halt or reduce the permitted activity in order to maintain compliance with the conditions of this permit. (40 CFR 122.41(c))
- 1.35 Effluent Violations. If sampling by the Permittee indicates a violation of any discharge limitation specified in this permit, the Permittee shall immediately make every effort to verify the violation by collecting additional samples, if appropriate, investigate the cause of the violation, and take action to prevent future violations. Violations that are determined to pose a threat to human health or a drinking water supply, or represent a significant risk to the environment shall be immediately reported to the Minnesota Department of Public Safety Duty Officer at 1(800)422-0798 (toll free) or (651)649-5451 (metro area). In addition, you may also contact the MPCA during business hours. Otherwise the violations and the results of any additional sampling shall be recorded on the next appropriate DMR or report.
- 1.36 Unauthorized Releases of Wastewater Prohibited. Except for conditions specifically described in Minn. R. 7001.1090, subp. 1, items J and K, all unauthorized bypasses, overflows, discharges, spills, or other releases of wastewater or materials to the environment, whether intentional or not, are prohibited. However, the MPCA will consider the Permittee's compliance with permit requirements, frequency of release, quantity, type, location, and other relevant factors when determining appropriate action. (40 CFR 122.41 and Minn. Stat. Sec 115.061)

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Chapter 11. Total Facility Requirements

1. General Requirements

1.37 Discovery of a release. Upon discovery of a release, the Permittee shall:

- a. Take all reasonable steps to immediately end the release.
- b. Notify the Minnesota Department of Public Safety Duty Officer at 1(800)422-0798 (toll free) or (651)649-5451 (metro area) immediately upon discovery of the release. In addition, you may also contact the MPCA during business hours at 1(800) 657-3864.
- c. Recover as rapidly and as thoroughly as possible all substances and materials released or immediately take other action as may be reasonably possible to minimize or abate pollution to waters of the state or potential impacts to human health caused thereby. If the released materials or substances cannot be immediately or completely recovered, the Permittee shall contact the MPCA. If directed by the MPCA, the Permittee shall consult with other local, state or federal agencies (such as the Minnesota Department of Natural Resources and/or the Wetland Conservation Act authority) for implementation of additional clean-up or remediation activities in wetland or other sensitive areas.
- d. Collect representative samples of the release. The Permittee shall sample the release for parameters of concern immediately following discovery of the release. The Permittee may contact the MPCA during business hours to discuss the sampling parameters and protocol. In addition, Fecal Coliform Bacteria samples shall be collected where it is determined by the Permittee that the release contains or may contain sewage. If the release cannot be immediately stopped, the Permittee shall consult with MPCA regarding additional sampling requirements. Samples shall be collected at least, but not limited to, two times per week for as long as the release continues.
- e. Submit the sampling results as directed by the MPCA. At a minimum, the results shall be submitted to the MPCA with the next DMR.

1.38 Upset Defense. In the event of temporary noncompliance by the Permittee with an applicable effluent limitation resulting from an upset at the Permittee's facility due to factors beyond the control of the Permittee, the Permittee has an affirmative defense to an enforcement action brought by the Agency as a result of the noncompliance if the Permittee demonstrates by a preponderance of competent evidence:

- a. The specific cause of the upset;
- b. That the upset was unintentional;
- c. That the upset resulted from factors beyond the reasonable control of the Permittee and did not result from operational error, improperly designed treatment facilities, inadequate treatment facilities, lack of preventative maintenance, or increases in production which are beyond the design capability of the treatment facilities;
- d. That at the time of the upset the facility was being properly operated;
- e. That the Permittee properly notified the Commissioner of the upset in accordance with Minn. R. 7001.1090, subp. 1, item I; and
- f. That the Permittee implemented the remedial measures required by Minn. R. 7001.0150, subp. 3, item J.

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Chapter 11. Total Facility Requirements

1. General Requirements

Operation and Maintenance

- 1.39 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, item F.
- 1.40 In the event of a reduction or loss of effective treatment of wastewater at the facility, the Permittee shall control production or curtail its discharges to the extent necessary to maintain compliance with the terms and conditions of this permit. The Permittee shall continue this control or curtailment until the wastewater treatment facility has been restored or until an alternative method of treatment is provided. (Minn. R. 7001.1090, subp. 1, item C)
- 1.41 Solids Management. The Permittee shall properly store, transport, and dispose of biosolids, septage, sediments, residual solids, filter backwash, screenings, oil, grease, and other substances so that pollutants do not enter surface waters or ground waters of the state. Solids should be disposed of in accordance with local, state and federal requirements. (40 CFR 503 and Minn. R. 7041 and applicable federal and state solid waste rules)
- 1.42 Scheduled Maintenance. The Permittee shall schedule maintenance of the treatment works during non-critical water quality periods to prevent degradation of water quality, except where emergency maintenance is required to prevent a condition that would be detrimental to water quality or human health. (Minn. R. 7001.0150. subp. 3, item F and Minn. R. 7001.0150. subp. 2, item B)
- 1.43 Control Tests. In-plant control tests shall be conducted at a frequency adequate to ensure compliance with the conditions of this permit. (Minn. R. 7001.0150. subp. 3, item F and Minn. R. 7001.0150. subp. 2, item B)

Changes to the Facility or Permit

- 1.44 Permit Modifications. No person required by statute or rule to obtain a permit may construct, install, modify, or operate the facility to be permitted, nor shall a person commence an activity for which a permit is required by statute or rule until the Agency has issued a written permit for the facility or activity. (Minn. R. 7001.0030)

Permittees that propose to make a change to the facility or discharge that requires a permit modification must follow Minn. R. 7001.0190. If the Permittee cannot determine whether a permit modification is needed, the Permittee must contact the MPCA prior to any action. It is recommended that the application for permit modification be submitted to the MPCA at least 180 days prior to the planned change.

- 1.45 Permit Modification Triggers. The following changes may require a permit modification:

- a. proposed changes to the facility described in the "Permitted Facility Description" of this permit;
- b. changes in the characteristics, concentrations or frequency of wastewater flows. These changes may include: an increase in design discharge greater than 200,000 gallons per day, an increase in the mass loading discharge of a toxic pollutant that is likely to increase the concentration of the pollutant in the receiving water by more than one percent over the baseline receiving water quality; significant rerouting of wastewater for land disposal; or significant changes in the levels of indicator characteristics.
- c. changes in biosolids or residual solids use and disposal practices.

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Chapter 11. Total Facility Requirements

1. General Requirements

- 1.46 New Outfalls. The Permittee shall obtain a permit modification or reissuance of this permit in order to begin discharge from a new outfall, including new pit dewatering locations and fuel/spill contaminated ground water pumpout discharges. It is recommended that the application for permit modification be submitted to the MPCA at least 180 days prior to the planned change. The permit modification must be finalized before discharge from the new outfall may commence.

The Agency recognizes that mine pit dewatering locations will change during the course of routine mining activities. Relocation of an existing mine dewatering discharge does not constitute a new discharge, provided that the outfall remains within the DNR "permit to mine" area and within its original watershed.

- 1.47 Submittals for New Outfalls. In addition to the requirements in Minn. R. 7001.0190, the Permittee shall submit to the MPCA:
- a. detailed plans and specifications for the proposed methods of achieving discharge limits for turbidity and total suspended solids, based in part upon representative water quality data for untreated wastewater and a detailed map and diagram description of the proposed design for the flow control structures, and route of the discharge to receiving waters;
 - b. a detailed map and diagram description of the proposed design for the flow control structures; and
 - c. the proposed route of the discharge to receiving waters.
- 1.48 Construction. No construction shall begin until the Permittee receives written approval of plans and specifications from the MPCA (Minn. Stat. Sec. 115.03(f)).

Plans, specifications and MPCA approval are not necessary when maintenance dictates the need for installation of new equipment, provided the equipment is the same design size and has the same design intent. For instance, a broken pipe, lift station pump, aerator, or blower can be replaced with the same design-sized equipment without MPCA approval.

If the proposed construction is not expressly authorized by this permit, it may require a permit modification. If the construction project requires an Environmental Assessment Worksheet under Minn. R. 4410, no construction shall begin until a negative declaration is issued and all approvals are received or implemented.

- 1.49 Report Changes. The Permittee shall give advance notice as soon as possible to the MPCA of any substantial changes in operational procedures, activities that may alter the nature or frequency of the discharge, and/or material factors that may affect compliance with the conditions of this permit.

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Chapter 11. Total Facility Requirements

1. General Requirements

- 1.50 Chemical Additives. The Permittee shall receive prior written approval from the MPCA before increasing the use of a chemical additive authorized by this permit, or using a chemical additive not authorized by this permit, in quantities or concentrations that have the potential to change the characteristics, nature and/or quality of the discharge.

The Permittee shall request approval for an increased or new use of a chemical additive at least 60 days, or as soon as possible, before the proposed increased or new use.

This written request shall include at least the following information for the proposed additive:

- a. The process for which the additive will be used;
- b. Material Safety Data Sheet (MSDS) which shall include aquatic toxicity, human health, and environmental fate information for the proposed additive;
- c. A complete product use and instruction label;
- d. The commercial and chemical names and Chemical Abstract Survey (CAS) number for all ingredients in the additive (If the MSDS does not include information on chemical composition, including percentages for each ingredient totaling to 100%, the Permittee shall contact the supplier to have this information provided); and
- e. The proposed method of application, application frequency, concentration, and daily average and maximum rates of use.

Upon review of the information submitted regarding the proposed chemical additive, the MPCA may require that additional information be submitted for consideration. Also, this permit may be modified to restrict the use or discharge of a chemical additive and include additional influent and effluent monitoring requirements. (Minn. R. 7001.0170)

- 1.51 The Permittee shall request approval for an increased or new use of a chemical additive at least 60 days, or as soon as possible, before the proposed increased or new use.

- 1.52 This written request shall include at least the following information for the proposed additive:

- a. The process for which the additive will be used;
- b. Material Safety Data Sheet (MSDS) which shall include aquatic toxicity, human health, and environmental fate information for the proposed additive;
- c. A complete product use and instruction label;
- d. The commercial and chemical names and Chemical Abstract Survey (CAS) number for all ingredients in the additive (If the MSDS does not include information on chemical composition, including percentages for each ingredient totaling to 100%, the Permittee shall contact the supplier to have this information provided); and
- e. The proposed method of application, application frequency, concentration, and daily average and maximum rates of use.

- 1.53 Upon review of the information submitted regarding the proposed chemical additive, the MPCA may require that additional information be submitted for consideration. Also, this permit may be modified to restrict the use or discharge of a chemical additive and include additional influent and effluent monitoring requirements.

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Chapter 11. Total Facility Requirements

1. General Requirements

- 1.54 MPCA Initiated Permit Modification, Suspension, or Revocation. The MPCA may modify or revoke and reissue this permit pursuant to Minn. R. 7001.0170. The MPCA may revoke without reissuance this permit pursuant to Minn. R. 7001.0180.
- 1.55 TMDL Impacts. Facilities that discharge to an impaired surface water, or to a watershed or drainage basin that contains impaired waters, may be required, at some future date, to comply with additional permits, or permit requirements, including additional restriction or relaxation of limits and monitoring as authorized by the CWA 303(d)(4)(A)) and 40 CFR 122.44.1.2.i, based on the conclusions of any applicable US EPA approved Total Maximum Daily Load (TMDL) studies, their associated implementation plans or additional sampling or monitoring.
- 1.56 Permit Transfer. The permit is not transferable to any person without the express written approval of the Agency 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, item N)
- 1.57 Facility Closure. The Permittee is responsible for closure and post-closure care of the facility. The Permittee shall notify the MPCA of a significant reduction or cessation of the activities described in this permit at least 180 days before the reduction or cessation. The MPCA may require the Permittee to provide to the MPCA a facility Closure Plan for approval.

Facility closure that could result in a potential long-term water quality concern, such as the ongoing discharge of wastewater to surface or ground water, may require a permit modification or reissuance.

The MPCA may require the Permittee to establish and maintain financial assurance to ensure performance of certain obligations under this permit, including closure, post-closure care and remedial action at the facility. If financial assurance is required, the amount and type of financial assurance, and proposed modifications to previously MPCA-approved financial assurance, shall be approved by the MPCA.

- 1.58 Closure Plan. If a Closure Plan (Plan) is required, the MPCA will inform the Permittee in writing of this request, and will state the site-specific concerns that the Plan shall address and the date by which the Plan shall be completed. The Plan shall provide for the implementation, including continued maintenance if needed, of Best Management Practices and Best Available Technology and shall assure compliance with the applicable statutes, rules and regulations administered by the MPCA. The Plan shall also specify how the Permittee will ensure that adequate funding will be available to cover the costs of closure. If a Plan is required, closure activities shall not proceed until this Plan is approved by the MPCA.

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Chapter 11. Total Facility Requirements

1. General Requirements

Permit Reissuance

- 1.59 Permit Reissuance. If the Permittee desires to continue permit coverage beyond the date of permit expiration, the Permittee shall submit an application for reissuance at least 180 days before permit expiration. If the Permittee does not intend to continue the activities authorized by this permit after the expiration date of this permit, the Permittee shall notify the MPCA in writing at least 180 days before permit expiration.

If the Permittee has submitted a timely application for permit reissuance, the Permittee may continue to conduct the activities authorized by this permit, in compliance with the requirements of this permit, until the MPCA takes final action on the application, unless the MPCA determines any of the following (Minn. R. 7001.0040 and 7001.0160):

- a. The Permittee is not in substantial compliance with the requirements of this permit, or with a stipulation agreement or compliance schedule designed to bring the Permittee into compliance with this permit;
 - b. The MPCA, as a result of an action or failure to act by the Permittee, has been unable to take final action on the application on or before the expiration date of the permit;
 - c. The Permittee has submitted an application with major deficiencies or has failed to properly supplement the application in a timely manner after being informed of deficiencies.
- 1.60 Permit may be Required at Closure. If the Permittee does not intend to continue the activities authorized by this permit beyond the expiration date of this permit, the MPCA may require the Permittee to apply for the reissuance or major modification of this permit to authorize activities related to facility closure.
- 1.61 Permit Application Sampling. The permit application shall include analytical data as part of the application for reissuance of this permit. These analyses shall be done on individual samples taken during the twelve-month period before the reissuance application is submitted. The application shall identify the sampling date(s).
- 1.62 Permit Application Sampling - Nondischarging Dewatering Outfalls. If a particular pit dewatering outfall is not discharging at the time of permit reissuance sampling, the Permittee may substitute sampling from an outfall that directly dewateres the same portion of the pit, or sampling from the pit waters directly. If the Permittee substitutes such sampling, the permit application shall include an explanation for each particular substituted outfall.
- 1.63 Permit Application Sampling - Nondischarging Outfalls. If a particular outfall that is not a mine pit dewatering outfall has not discharged for a period of six months prior to the time of permit reissuance sampling and is not expected to discharge for the remainder of the permit term, no sample is required. The Permittee shall be responsible for reasonably anticipating discharge conditions and collecting samples accordingly. The Permittee shall include in the permit application an explanation for each outfall for which a sample was not collected.

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Chapter 11. Total Facility Requirements

1. General Requirements

1.64 Permit Application Sampling Parameters - Dewatering. The permit application shall include analytical data for at least the following parameters at monitoring stations SD001 through SD012:

- a. biochemical oxygen demand, chemical oxygen demand, total organic carbon, gasoline range organics, diesel range organics, fecal coliform, ammonia, temperature;
- b. color, fluoride, nitrate-nitrite (as nitrogen), total organic nitrogen, oil and grease, total phosphorus, chloride, sulfate, sulfide (as sulfur), surfactants, bicarbonates, alkalinity, total salinity, total dissolved solids, specific conductance;
- c. aluminum, antimony, arsenic, barium, beryllium, boron, cadmium, calcium, chromium, cobalt, copper, iron, lead, lithium, magnesium, manganese, molybdenum, nickel, potassium, selenium, silver, sodium, strontium, thallium, tin, titanium, vanadium, zinc (all in total form) using atomic absorption (AA) furnace methods according to 40 CFR Part 136.3;
- d. total mercury using EPA Method 1631.

1.65 Permit Application Sampling Parameters - Other Discharges. The permit application shall include analytical data for at least the following parameters at monitoring stations SD013 through SD019:

- a. biochemical oxygen demand, chemical oxygen demand, total organic carbon, gasoline range organics, diesel range organics, fecal coliform, ammonia, temperature;
- b. color, fluoride, nitrate-nitrite (as nitrogen), total organic nitrogen, oil and grease, total phosphorus, chloride, sulfate, sulfide (as sulfur), surfactants, bicarbonates, alkalinity, total salinity, total dissolved solids, specific conductance;
- c. aluminum, antimony, arsenic, barium, beryllium, boron, cadmium, calcium, chromium, cobalt, copper, iron, lead, lithium, magnesium, manganese, molybdenum, nickel, potassium, selenium, silver, sodium, strontium, thallium, tin, titanium, vanadium, zinc (all in total form) using atomic absorption (AA) furnace methods according to 40 CFR Part 136.3;
- d. total mercury using EPA Method 1631;
- e. gross alpha particles, radium-226, radium-228, radon-222, uranium;
- f. PCB-1016, PCB-1221, PCB-1232, PCB-1242, PCB-1248, PCB-1254, PCB-1260; and
- g. a scan of constituents using EPA Methods 624 and 625, in 40 CFR Part 136.

The Permittee shall identify, in addition to those pollutants noted in Methods 624 and 625 (Appendix D, Table II), the concentrations of at least ten of the most abundant constituents of the acid and base/neutral organic fractions shown to be present by peaks on the total ion plots (reconstructed gas chromatograms) within ten percent of the nearest internal standard. Identification shall be through the use of U.S. EPA/NIH computerized library of mass spectra, with visual confirmation and potential quantification.

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Chapter 11. Total Facility Requirements

1. General Requirements

- 1.66 Permit Application - Other Information. The Permittee shall include, as part of the application for reissuance of this permit:
- a. a current map of the facility, showing the current mining areas, mining support facilities, outfalls and receiving waters;
 - b. current and proposed discharge flow rates for the next five years;
 - c. an updated generalized operating or mining plan for the next five years; and
 - d. an updated Pollution Prevention Plan for the facility.
- 1.67 Pollution Prevention Plan. The Pollution Prevention Plan may be a revision of or an attachment to the current Pollution Prevention Plan.