STATE OF MINNESOTA

Minnesota Pollution Control Agency

Industrial Division

National Pollutant Discharge Elimination System (NPDES)/
State Disposal System (SDS) Permit MN0057207

PERMITTEE:	US Steel Corp - Minntac
FACILITY NAME:	US Steel - Minntac Tailings Basin Area
RECEIVING WATER:	Dark River (Class 2B,3C,4A,4B,5,6 water)

CITY OR TOWNSHIP:	Mountain Iron	**COUNTY:**	St. Louis
ISSUANCE DATE:	September 30, 1987	**EXPIRATION DATE:**	July 31, 1992
MODIFICATION DATE:	**April 10, 2012**		

The state of Minnesota, on behalf of its citizens through the Minnesota Pollution Control Agency (MPCA), authorizes the Permittee to construct, install and 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 US statutes and rules, including Minn. Stat. chs. 115 and 116, Minn. R. chs. 7001, 7050, 7053, 7060, 7090, and the US Clean Water Act.

This permit is effective on the issuance date identified above, as modified on April 13, 2010. This permit expires at midnight on the expiration date identified above.

Signature: _____

Jeff Udd, P.E., Supervisor
Water Quality Permits Unit
Water Section
Industrial Division

for The Minnesota Pollution Control Agency

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: Belinda Nicholas, 651-757-2613.
- 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.

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Facility Description

The US Steel - Minntac Tailings Basin Area facility (Facility) is located at Section 21, Township 59 North, Range 18 West, Mountain Iron, St. Louis County, Minnesota.

The principal activity at this facility is taconite processing. At the maximum operating rate, the facility will generate 16.5 million long tons of taconite pellets per year.

The facility consists of the Minntac tailings basin, the drainage area contributing surface runoff to the basin, and all wastewater disposal systems within the area designated on the map on page 5. The contributing drainage area includes part of an overburden/rock stockpile area to the southwest of the basin, as well as part of the Minntac plant area. That portion of the plant area which drains to the basin includes the concentrator, the agglomerator, the sewage treatment plant, the lube storage area, a substation, the plant area reservoir, and part of the crushing facilities.

The Minntac plant consists of a series of crushers and screens, a crusher thickener, a concentrator, an agglomerator, and various auxiliary facilities. The concentrator utilizes a series of mills, magnetic separators, classifiers, hydroclones, hydroseparators, screens and thickeners, as well as a flotation process. Chemical additives include flocculants and various flotation reagents. The flocculants comprise Calgon M-5729, added to the crushing plant dust collector slurry at a rate of one pound per hour (lb/hr), and Calgon M-5372 or equivalent cationic homopolymers added to the concentrator tailings slurry prior to the thickening stage, at a rate of 170 lb/hr. The flotation reagents comprise: (a) an alkyl ether primary amine acetate or alkyl ether diamine acetate collector, Arosurf MG-83, Arosurf MG-83A, Tomah DA-17-5% Acetate, or equivalent (alkyl chain R no greater than C_{14}), added at a maximum rate of 295 lb/hr; (b) an alcohol frother, methyl isobutyl carbinol, Arosurf 2057, Nalflote 8848, or equivalent (mixed C_4 to C_9 aliphatic alcohols only), added at a maximum rate of 101 lb/hr; and (c) anti-foaming agents Oreprep D-202 or Nalco 7810 Antifoam, added at a maximum rate of 162 lb/hr.

The agglomerator receives the concentrate, which is then dewatered by disc filters. The filter cake is then mixed with bentonite and formed into pellets in balling drums. The pellets are dried, heated, and fired in a grate kiln, and then loaded for rail transport.

The wastewater discharges to the tailings basin comprise the following, with their estimated average rates:

• Fine tailings slurry/concentrator process water	15,700 gpm
• Agglomerator process water	1,700 gpm
• Sewage plant discharge covered under NPDES/SDS Permit MN0050504	40 gpm
• Laboratory wastewater (neutralized)	3,650 gal/yr
• Plant non-process water (wet scrubber discharge, floor wash, roof runoff, non-contact cooling water	Unknown
• Runoff from plant area, stockpile areas and adjacent upland areas	unknown

The agglomerator process water, sewage plant discharge, laboratory wastewater, plant non-process water and surface runoff from the plant area enter the south side of the basin through a series of pipes and ditches to the north of the concentrator and agglomerator buildings, in Section 28. Surface runoff from the upland area to the southeast of the basin enters through a series of four culverts through the perimeter dam. Runoff from the stockpile area and upland area to the southwest of the basin enters by seepage through the perimeter dam.

An average of 15 million long tons of dry fine tailings and 7 million long tons of dry coarse tailings are disposed of each year in the tailings basin. The coarse tailings are generated from the classifier, following the first stage of milling and magnetic separation. The fine tailings are generated from the crusher thickener overflow and the tailings thickener underflow. The fine tailings slurry and concentrator process water is discharged by gravity flow through pipes from the Step I, II, and III thickeners to a series of open ditches to the Minntac tailings basin. The discharge from the flotation process is restricted to Step I thickeners. The fine tailings slurry and flotation discharge is routed to the tailings basin via one of two discharge routes (east or west). Internal waste stream WS006 is representative of the fine tailings slurry discharge to the east while WS007 is representative of the discharge to the west. The basin is segmented into several cells, and the fine tailings discharge line is periodically moved from one cell to another. A permanent pumping station located on the basin returns water to the plant site reservoir. The station is located on the east side of Cell 1 (SE ¼, Section 15). Calcium chloride is occasionally used as a chemical dust suppressant on the basin and haul roads in the facility. Some coarse tailings are used for sanding on roads in the facility during the winter, and others are sold as aggregate product.

The various basin cells are separated by dikes, each constructed of a single berm of coarse tailings placed by truck and various pieces of auxiliary equipment. Most of the perimeter dam for the tailings basin is constructed by spigotting a fine tailings slurry into the core between parallel inner and outer coarse tailings dikes; that part of the perimeter dam on the southwest side of the basin is constructed in the same manner as the interior basin dikes. The coarse tailings dikes are constructed by truck in ten foot lifts. The perimeter dam spigot lines are located on the dry side of the core; this creates a surface slope from the dry side down to the wet side, thus causing the water from the slurry to pond on the wet side of the core and seep through the wet side dike to the retained water within the disposal facility. Peat was removed from the original ground area to be occupied by the perimeter dam, and a ten foot deep key-way was dug in the core portion of this area.

A demolition debris landfill (Solid Waste Permit SW-240) is located on the southeast corner of Cell A-2. The abandoned Minntac dump site (Agency Landfill Inventory Number SL-183) is located in the southwest corner of Cell 1 (SW ¼, SE ¼, Section 21 and NW ¼, NE ¼, Section 28). Paper, lunch wastes, wood scrapes, scrap metal, mill grease, and waste oil were disposed of at this dump during its period of operation.

The basin is sited on an area of shallow (10 to 55 feet deep to bedrock) glacial and glaciofluvial deposits which are principally sand and gravel. Discreet seepage points have been identified along the toe of the perimeter dam on the west side (NW ¼, Section 18) and east side (Sections 10 and 15) of the tailings basin. Flows at the individual seepage points have been estimated at 0.02 to 0.32 million gallons per day (mgd). Two of the largest seepage points are outfall SD001 (formerly 020) on the west toe in the SE ¼, NE ¼, NW ¼, Section 18 and outfall SD002 (formerly 030) on the east toe in the NE ¼, SW ¼, NE ¼, Section 15. Drainage from the facility flows to the groundwater, the Dark River, and the Sandy River to

the Little Sandy Lake and Sandy Lake. The Sandy River, Little Sandy Lake, and Sandy Lake are Class 2B, 3B, 4A, 4B, 5, and 6 waters. The Dark River is Class 2B, 3B, 4A, 4B, 5 and 6 waters in its upper reaches, and becomes Class 1B, 2A, 3B, 3C, 4A, 4B, 5 and 6 waters approximately 7 miles downstream, below Dark Lake.

Ten monitoring wells, installed to depths of 14.5 to 28.0 feet below the ground surface, are located around the tailings basin. Monitoring occurs at seven of these monitoring wells, GW003, GW004, GW006, GW007, GW008, GW009, and GW010 (formerly 603, 604, 606, 607, 608, 609, and 610).

Monitoring station SW001 (formerly 701) is located on the Sandy River at Highway 53 (USGS Station 05128400). Monitoring station SW002 (formerly 702) is located on McNiven Creek at Highway 25.

The facility also includes a wastewater treatment system for the blowdown from the Agglomerator Line wet scrubber. The wastewater treatment system includes: a scrubber water recirculation tank, a equalization/precipitation tank, lime slurry make-up and feed system, 1st stage thickener, polymer make-up and feed system, scrubber solids settling/storage pond, and all related piping and equipment.

Scrubber blowdown water from the recirculation tank is sent to the equalization/precipitation tank at an average rate of 50 gallons per minute (gpm). Lime is added at the equalization/precipitation tank to increase calcium concentrations and promote calcium sulfate (gypsum) precipitation. Settling of the precipitated solids occurs in the 1st Stage Thickener. Polymer may be added to the 1st Stage Thickener to enhance solids settling. The solids are sent to a 25 acre-foot, composite lined settling/storage pond located on-site for the dewatering, and possible ultimate disposal, of the solids generated from the treatment system. The overflow from the 1st Stage Thickener is sent to either the Concentrate Thickener or Slurry Mix Tank. Available alkalinity in the concentrate slurry converts from bicarbonate to carbonate and allows calcium carbonate precipitation. The calcium carbonate precipitate is then removed in the disc filters along with the concentrate and made into pellets. The filtrate from the disc filters is then used as process water and eventually sent to the tailings basin. The treatment system is specifically designed to achieve a "no net increase" in mass loading of sulfate and calcium to the tailings basin. Fluoride removal also occurs due to the reactive nature of fluoride with excess calcium.

Waste stream monitoring stations WS002, WS003, and WS004 are included for the scrubber wastewater treatment system. WS002 is located at the plant water make-up to the scrubber system, WS003 is located at the overflow from the 1st Stage Thickener, and WS004 is located on the concentrate slurry to the Concentrate Thickener or Slurry Mix Tank.

A minor modification was done in 2007 to include the addition of waste stream monitoring station WS005, and the revision of the requirement for "no net increase" in calcium mass loading to the tailings basin to more appropriately require a "no net increase" in hardness (calcium + magnesium) mass loading to the tailings basin. WS005 is located at the influent to the Step I Reclaim Thickener. Monitoring at WS005 is required since the Step I Reclaim Thickener can receive overflow from the 1st Stage Thickener in order to comply with the "no net increase" in hardness requirement as described in Chapter 4 of this permit.

A minor permit modification was done in 2010 to allow for the construction of a Seep Collection and Return System (SCRS) as required by a Schedule of Compliance originally entered into by the Company and the MPCA on November 14, 2007, and as amended by Amendment No. 1 on February 25, 2010.

U. S. Steel has implemented a system of year-round collection and return of tailings basin surface seepage of 13 discrete locations on the east side of the tailings basin reporting to the Sandy River Watershed from the toe of the Minntac tailings basin perimeter dike.

The SCRS system consists of catch basins located in each of the 13 identified seepage locations, hydraulically connected by subsurface HDPE piping to pump stations. Each of the seepage areas have been shaped and graded to promote seepage flow to the catch basins. Sheet pile cut-off walls will be installed downgradient of each catch basin, connecting areas of higher elevation on either side of each discrete seepage location, to a depth of approximately 15 feet below existing ground level to ensure that surrounding wetlands are minimally impacted. The system consists of two subsystems, one collecting seepage from the northern section and the other from the southern section. Each subsystem terminates in a pump station consisting of a concrete vault containing a duplex pump system capable of returning the collected seepage back to the tailings basin clear pool reservoir.

All water formerly reporting to SD002 (previously designated as Seep 030) is now captured and pumped back into the tailings basin clear pool, effectively eliminating the discharge .

Due to safety issues at the current internal monitoring station, WS001, the minor permit modification in 2010 also included the relocation of monitoring station WS001 to two separate monitoring stations now identified as WS006 and WS007. The new internal monitoring stations are representative of the entire fine tailings discharge from the Concentrator which also includes discharge from the flotation process. The fine tailings slurry is discharged through one of two routes at any given time, either to the east portion of the tailings basin past WS006 or to the west portion of the tailings basin past WS007, for uniform tailings distribution and disposal.

This minor permit modification is to permit the construction of a Seep Collection and Return System (SCRS) on the west side of the tailings basin as required by a Schedule of Compliance originally entered into by the Company and the MPCA on June 9, 2011.

U.S. Steel will implement a system for year-round collection and return of tailings basin surface seepage currently reporting to the Dark River Watershed from the toe of the Minntac tailings basin perimeter dike.

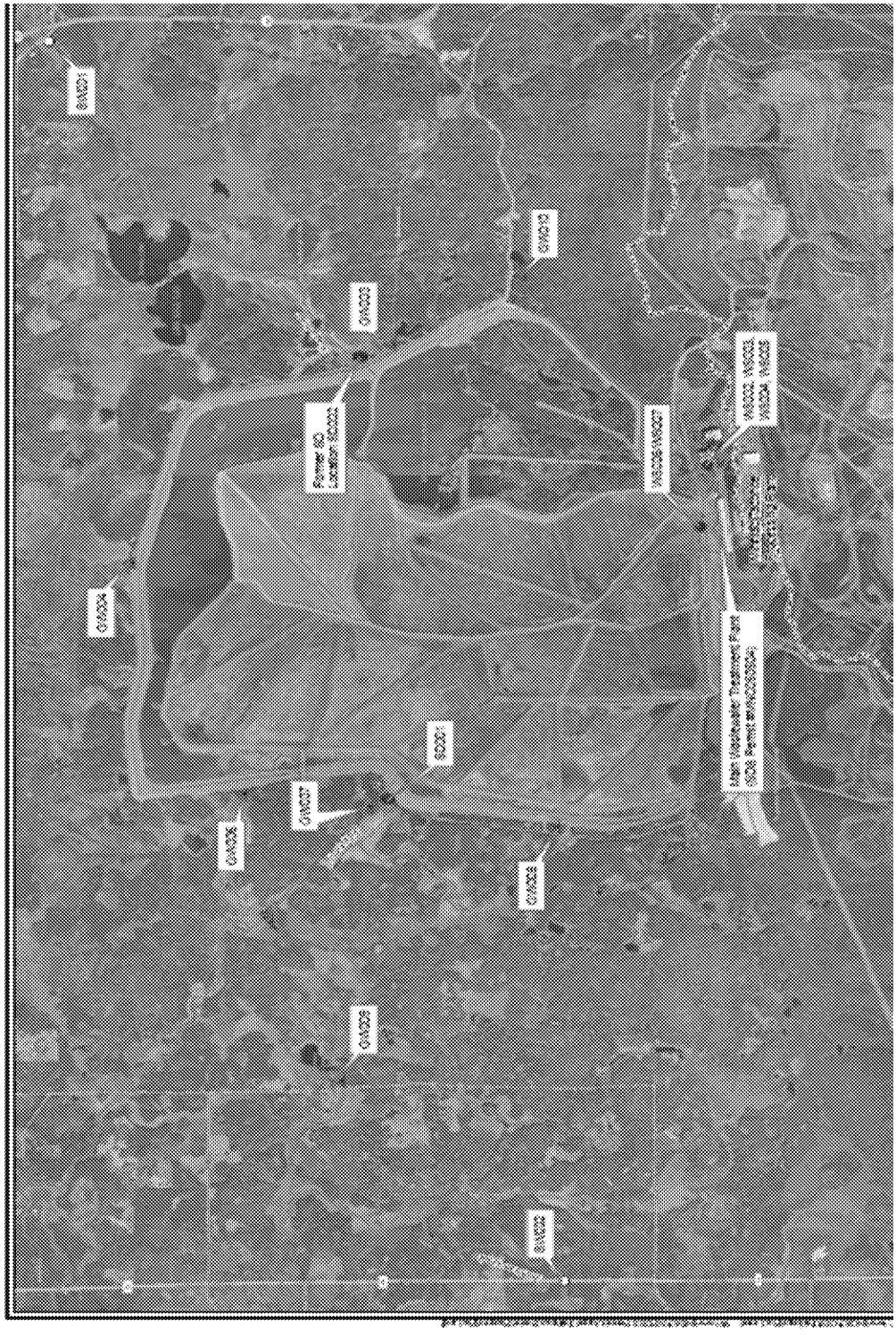
Final design of the Dark River SCRS has yet to be determined, however it will likely consist of a combination of collection swales and catch basins, in combination with French drains or drain tile hydraulically connected by subsurface HDPE piping to pump stations. The SCRS will consist of an undetermined number of subsystems, each terminating in a pump station that will return the collected seepage back to the tailings basin clear pool system. Each of the seepage areas will be shaped and graded to promote seepage flow to the catch basins or French drain/drain tile channels. Sheet pile cut-off walls may be installed downgradient of each seepage area to minimize impact to surrounding wetlands. Plans and specifications will be submitted for the construction of the SCRS in accordance with the June 9, 2011 Schedule of Compliance.

Upon completion of construction of the Dark River SCRS and commencement of its operation, all water formerly reporting to SD001 (previously designated as Seepage Outfall 020) will be captured and pumped back into the tailings basin clear pool system, effectively eliminating discharge through the currently permitted outfall.

The location of designated monitoring stations is specified on the attached "Summary of Stations and Station Locations" report.

The location of the facility is shown on the attached aerial photograph.

Location of Permitted Facility



Ground Water Stations

Station	Type of Station	Local Name	PLS Location
GW003	Well, Downgradient	Monitoring Well 3	NE Quarter of the SE Quarter of Section 15, Township 59 North, Range 18 West
GW004	Well, Downgradient	Monitoring Well 4	SW Quarter of the NW Quarter of Section 4, Township 59 North, Range 18 West
GW006	Well, Downgradient	Monitoring Well 6	NW Quarter of the SE Quarter of Section 7, Township 59 North, Range 18 West
GW007	Well, Downgradient	Monitoring Well 7	NW Quarter of the NE Quarter of Section 18, Township 59 North, Range 18 West
GW008	Well, Downgradient	Monitoring Well 8	NW Quarter of the SW Quarter of Section 19, Township 59 North, Range 18 West
GW009	Well, Downgradient	Monitoring Well 9	NE Quarter of the SE Quarter of Section 10, Township 59 North, Range 19 West
GW010	Well, Upgradient	Monitoring Well 10	NW Quarter of the SE Quarter of Section 23, Township 59 North, Range 18 West

Surface Discharge Stations

Station	Type of Station	Local Name	PLS Location
SD001	Effluent To Surface Water	Seepage outfall 020	NW Quarter of the NW Quarter of Section 18, Township 59 North, Range 18 West
SD002	Effluent To Surface Water	Seepage outfall 030	SW Quarter of the NE Quarter of Section 15, Township 59 North, Range 18 West

Surface Water Stations

Station	Type of Station	Local Name	PLS Location
SW001	Stream/River/Ditch, Other	Sandy River Station 701	NW Quarter of the NW Quarter of Section 6, Township 59 North, Range 17 West
SW002	Stream/River/Ditch, Other	McNiven Creek Station 702	NE Quarter of Section 27, Township 59 North, Range 19 West

Waste Stream Stations

Station	Type of Station	Local Name	PLS Location
WS002	Internal Waste Stream	Plant water to Line 3 scrubber	NE Quarter of the SE Quarter of Section 28, Township 59 North, Range 18 West
WS003	Internal Waste Stream	1st Stage Thickener Overflow	NE Quarter of Section 21, Township 59 North, Range 18 West
WS004	Internal Waste Stream	Concentrate Slurry	NE Quarter of Section 21, Township 59 North, Range 18 West
WS005	Internal Waste Stream	Step I Reclaim Thickener influent	NE Quarter of Section 21, Township 59 North, Range 18 West
WS006	Internal Waste Stream	Concentrator Fine Tailings Slurry Discharge - Eastern Tailings Basin Disposal	NE Quarter of the SW Quarter of Section 28, Township 59 North, Range 18 West
WS007	Internal Waste Stream	Concentrator Fine Tailings Slurry Discharge - Western Tailings Basin Disposal	NE Quarter of the SW Quarter of Section 28, Township 59 North, Range 18 West

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

GW 003, GW 004, GW 006, GW 007, GW 008, GW 009, GW 010

Parameter	Limit	Units	Limit Type	Effective Period	Sample Type	Frequency	Notes
Amines, Organic Total	Monitor Only	mg/L	Single Value	Apr, Jul, Oct	Grab	1 x Month	3
Elevation of GW Relative to Mean Sea Level	Monitor Only	feet	Single Value	Apr, Jul, Oct	Measurement, Instantaneous	1 x Month	3
pH, Field	Monitor Only	SU	Single Value	Apr, Jul, Oct	Grab	1 x Month	3
Specific Conductance, Field	Monitor Only	umh/cm	Single Value	Apr, Jul, Oct	Grab	1 x Month	3
Sulfate, Total (as SO4)	Monitor Only	mg/L	Single Value	Apr, Jul, Oct	Grab	1 x Month	3
Temperature, Water (C)	Monitor Only	Deg C	Single Value	Apr, Jul, Oct	Grab	1 x Month	3

SD 001, SD 002

Parameter	Limit	Units	Limit Type	Effective Period	Sample Type	Frequency	Notes
Flow	Monitor Only	mgd	Calendar Month Average	Jan-Dec	Measurement	2 x Month	
Flow	Monitor Only	MG	Calendar Month Total	Jan-Dec	Measurement	2 x Month	
Flow	Monitor Only	mgd	Daily Maximum	Jan-Dec	Measurement	2 x Month	
Oil & Grease, Total Recoverable (Hexane Extraction)	10	mg/L	Calendar Month Average	Jan-Dec	Grab	2 x Month	
Oil & Grease, Total Recoverable (Hexane Extraction)	15	mg/L	Daily Maximum	Jan-Dec	Grab	2 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	2 x Month	
Solids, Total Suspended (TSS)	60	mg/L	Daily Maximum	Jan-Dec	Grab	2 x Month	
Specific Conductance	Monitor Only	umh/cm	Calendar Month Maximum	Jan-Dec	Grab	1 x Month	
Sulfate, Total (as SO4)	Monitor Only	mg/L	Calendar Month Maximum	Jan-Dec	Grab	1 x Month	

SW 001

Parameter	Limit	Units	Limit Type	Effective Period	Sample Type	Frequency	Notes
Flow	Monitor Only	mgd	Single Value	Jan-Dec	Measurement, Instantaneous	1 x Month	
Sulfate, Total (as SO4)	Monitor Only	mg/L	Single Value	Jan-Dec	Grab	1 x Month	

SW 002

Parameter	Limit	Units	Limit Type	Effective Period	Sample Type	Frequency	Notes
Amines, Organic Total	Monitor Only	mg/L	Single Value	Jan-Dec	Grab	2 x Year	2

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

SW 002

Parameter	Limit	Units	Limit Type	Effective Period	Sample Type	Frequency	Notes
Toxicity, Whole Effluent (Acute)	Monitor Only	TUa	Single Value	Jan-Dec	Grab	2 x Year	2

WS 002

Parameter	Limit	Units	Limit Type	Effective Period	Sample Type	Frequency	Notes
Flow	Monitor Only	mgd	Calendar Month Average	Jan-Dec	Measurement, Continuous	1 x Week	2
Hardness, Calcium & Magnesium, Calculated (as CaCO3)	Monitor Only	mg/L	Calendar Month Average	Jan-Dec	Grab	1 x Week	2
Sulfate, Dissolved (as SO4)	Monitor Only	ug/L	Calendar Month Average	Jan-Dec	Grab	1 x Week	2

WS 003

Parameter	Limit	Units	Limit Type	Effective Period	Sample Type	Frequency	Notes
Chloride, Total	Monitor Only	mg/L	Calendar Month Average	Jan-Dec	Grab	1 x Month	
Flow	Monitor Only	mgd	Calendar Month Average	Jan-Dec	Measurement, Continuous	1 x Week	2
Fluoride, Total (as F)	Monitor Only	mg/L	Calendar Month Average	Jan-Dec	Grab	1 x Month	
Hardness, Calcium & Magnesium, Calculated (as CaCO3)	Monitor Only	mg/L	Calendar Month Average	Jan-Dec	Grab	1 x Week	2
pH	Monitor Only	SU	Calendar Month Minimum	Jan-Dec	Grab	1 x Week	2
Sulfate, Dissolved (as SO4)	Monitor Only	ug/L	Calendar Month Average	Jan-Dec	Grab	1 x Week	2

WS 004, WS 005

Parameter	Limit	Units	Limit Type	Effective Period	Sample Type	Frequency	Notes
pH	Monitor Only	SU	Calendar Month Maximum	Jan-Dec	Grab	1 x Week	2

WS 006, WS 007

Parameter	Limit	Units	Limit Type	Effective Period	Sample Type	Frequency	Notes
Amines, Organic Total	Monitor Only	mg/L	Single Value	Jan-Dec	Grab	1 x Year	2
Evaporation, Accumulated	Monitor Only	in	Calendar Month Total	Jan-Dec	Measurement	1 x Month	1
Precipitation	Monitor Only	in	Calendar Month Total	Jan-Dec	Measurement, Continuous	1 x Month	
Toxicity, Whole Effluent (Acute)	Monitor Only	TUa	Single Value	Jan-Dec	Grab	1 x Year	2

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

Notes:
1 -- May be estimated from data at measurement stations near the facility.
2 -- See Chapter 4 Special Requirements.
3 -- Three times annually: between March 28 and May 14; between July 1 and July 31; and between October 1 and October 31.

Chapter 1. Ground Water Station Requirements - General

1. Monitoring Wells

1.1 The Permittee shall install, maintain and abandon groundwater monitoring wells according to the Minnesota Water Well Construction Code, Minnesota Rules, ch. 4725. Damaged or improperly constructed monitoring wells shall be repaired or properly abandoned and replaced. Information on licensed water well contractors is available from the Minnesota Department of Health.

1.2 Each monitoring well shall be clearly numbered on the outside of the well with either indelible paint or an inscribed number.

1.3 The monitoring wells shall be sampled in accordance with "Minnesota Pollution Control Agency, Water Quality Division: Sampling Protocol for Ground Water Monitoring Wells, July 1997," Triplett, et. al. Copies of this publication are available on the internet at http://www.pca.state.mn.us/water/groundwater/wqsampling.html or may be obtained from the MPCA by calling 651-282-6143 or 800-657-3938.

Chapter 2. Surface Discharge Station Requirements - General

1. Surface Discharges

1.1 Floating solids or visible foam shall not be discharged in other than trace amounts.

1.2 Oil or other substances shall not be discharged in amounts that create a visible color film.

1.3 The Permittee shall install and maintain outlet protection measures at the discharge stations to prevent erosion.

2. Discharge Monitoring Reports

2.1 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).

3. Winter Sampling Conditions

3.1 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.

4. Special Requirements

Seep Collection and Return System - Sandy River Watershed

Chapter 2. Surface Discharge Station Requirements - General

4. Special Requirements

4.1 As required by the Schedule of Compliance issued on November 14, 2007 and as amended by Amendment No. 1 on February 25, 2010, U. S. Steel will implement a system of year-round collection and return of tailings basin surface seepage currently reporting to the Sandy River Watershed from the toe of Minntac's tailings basin perimeter dike.

4.2 Upon completion of construction of the Seepage Collection and Return System (SC&R) and commencement of its operation, all water formerly reporting to SD002 will be captured and pumped back into the tailings basin clear pool, effectively eliminating the discharge through the currently permitted outfall.

The Permittee shall submit notice of initiation of operation of the SC&R system within 10 days of initiation of operation as required by the Schedule of Compliance dated November 14, 2007 and as amended on February 25, 2010.

Seep Collection and Return System - Dark River Watershed

4.3 As required by the Schedule of Compliance issued on June 9, 2011, U.S. Steel will implement a system of year-round collection and return of tailings basin surface seepage currently reporting to the Dark River watershed from the toe of the Minntac tailings basin perimeter dike.

4.4 The Permittee shall submit plans and specifications for the Dark River Seepage Collection and Return System by May 10, 2012.

4.5 The Permittee shall submit notice of completion of construction within 10 days of completion of the Dark River Seepage Collection and Return System.

Chapter 3. Surface Water Station Requirements - General

1. Sampling Location

1.1 Samples shall be taken at mid-stream, mid-depth. Record location, date, time and results for each sample on the supplemental Discharge Monitoring Report form.

2. Discharge Monitoring Reports

2.1 The Permittee shall submit monitoring results in accordance with the limits and monitoring requirements for this station. If flow conditions are such that no sample could be acquired, the Permittee shall check the "No Flow" box and note the conditions on the Discharge Monitoring Report (DMR).

Chapter 4. Waste Stream Station Requirements - General

1. Sampling Location

1.1 Samples for Stations WS002, WS003, WS004, WS005, WS006 and WS007 shall be representative of the monitored activity.

2. Sampling Frequency

2.1 For WS002, WS003, WS004, and WS005, the Permittee may request a reduction in monitoring frequency from the Agency. Reduced monitoring may be allowed if it is determined that the variation of the monitored parameters within the waste stream is small. The Permittee shall be notified in writing if a reduction in monitoring has been authorized; a reduction in monitoring frequency shall not occur until written authorization has been given.

3. Special Requirements

Determination of no net increase in sulfate mass loading to the tailings basin

3.1 Sampling and analysis shall be done in accordance with the Limits and Monitoring requirements section of this permit. The following steps shall be completed during each sample event:

Step 1: Measure the dissolved sulfate concentration and flow rate of water in the scrubber makeup stream (WS002). Calculate the mass of sulfate in the makeup stream. This is the mass loading of sulfate entering the scrubber system.

Step 2: Measure the dissolved sulfate concentration and flow rate of the overflow from the calcium sulfate thickener (WS003). Calculate the mass of sulfate in the thickener overflow. This is the mass loading of sulfate leaving the scrubber system.

The calculations described above shall be compiled for each calendar year. On an annual basis, the mass of sulfate leaving the scrubber system shall be less than or equal to the mass of sulfate entering the scrubber system.

Determination of no net increase in hardness mass loading to the tailings basin

Chapter 4. Waste Stream Station Requirements - General

3. Special Requirements

3.2 Sampling and analysis shall be done in accordance with the Limits and Monitoring requirements section of this permit. The following steps shall be completed during each sample event:

Step 1: Measure the hardness (calcium + magnesium) concentration and flow rate of water in the scrubber makeup stream (WS002). Calculate the mass of hardness in the makeup stream. This is the mass loading of hardness entering the scrubber system.

Step 2: Measure the hardness concentration and flow rate of the overflow from the calcium sulfate thickener (WS003). Calculate the mass of hardness in the thickener overflow.

Step 3: Subtract the mass of hardness in the makeup stream (Step 1) from the mass of hardness in the thickener overflow (Step 2). This is the mass of hardness that must be removed to satisfy the no net increase requirement. Convert the calculated mass of hardness to the appropriate moles of calcium and magnesium.

Step 4: Measure the pH of the thickener overflow (WS003) and the pH of the concentrate slurry stream (WS004) and/or the influent to the Step I Reclaim Thickener (WS005). Using the difference between the pH of the thickener overflow and the appropriate slurry stream(s) and the flow rate of the thickener overflow, calculate the mass of excess hydroxide ions that are present in the thickener overflow (which will convert bicarbonate in the concentrate stream to carbonate). Convert the mass to moles of hydroxide ions.

The calculations described above shall be compiled for each calendar year. On an annual basis, the number of moles of excess hydroxide ion (Step 4) must be equal to or greater than the number of moles of excess calcium and magnesium (Step 3) in the thickener overflow stream.

3.3 If the oveflow from the calcium sulfate thickener is sent to both the Concentrate Thickener (or Slurry Mix Tank) and the Step I Reclaim Thickener in the same reporting period, the mass of excess hydroxide ions present in the thickener overflow (Step 4 above) shall be total of the individual calculations based on the pH of the each slurry stream and the average flow rate of the thickener overflow to each location during the reporting period.

3.4 As part of the Annual Pollution Control Report, as required in Chapter 6, Requirement 1.3, to be submitted by February 14 of each year, submit a summary of the Line 3 scrubber wastewater treatment system monitoring activities and calculations for the preceding calendar year. The submittal shall include the determination of compliance with the no net increase in mass loading from the Line 3 scrubber wastewater treatment system. If compliance with the no net increase in the mass loading of sulfate and hardness to the tailings basin has not been achieved, the submittal shall include a discussion of why compliance was not achieved, as well as a work plan and schedule, for MPCA review and approval, to achieve compliance.

Toxicity Testing Requirements

Chapter 4. Waste Stream Station Requirements - General

3. Special Requirements

3.5 The Permittee shall conduct acute toxicity testing of the waste stream from WS006 or WS007 (formerly WS001), depending upon which route of fine tailings slurry discharge is being used. Acute toxicity testing shall be conducted at least two times per year from WS006 or WS007 to represent the fine tailings slurry discharge stream. The test organisms shall be the fathead minnow (Pimephales promelas). The acute tests shall consist of a screen of 100 percent of the waste stream once every six months, beginning on the effective date of this permit.

3.6 Based upon review by the Commissioner of the toxicity test results, the permit may be reopened and subject to modification under requirements specified in Minnesota Rules Parts 7001.0170 to 7001.0190. The modified permit may include new requirements for toxicity testing, toxicity limitations, and a toxicity reduction evaluation (TRE) program.

Procedural Requirements for Toxicity Testing

3.7 1) Tests shall be conducted in accordance with procedures outlined in EPA-600/4-85-013 entitled "Methods for Measuring the Acute Toxicity of Effluents to Aquatic Organisms." Any circumstances not covered by this procedural manual, or that require deviation from that which is specified in the manual shall first be approved by the Commissioner.

2) The waste stream sample shall be allowed to settle for 24 hours. The sample supernatant shall then be filtered through a 0.45 um filter. The filtrate shall serve as the sample for toxicity testing.

3) The control water shall be taken from SW002 (formerly 702), and shall undergo settling and filtering as in item 2 above.

4) Analysis for amine shall be conducted on each waste stream sample and control for which a toxicity test is conducted.

5) Submittal of the toxicity testing results shall include the date of sample collection, date of the toxicity tests, enumeration of mortality in samples, and the raw data used in making the calculations. Submittal of the amine results shall include the date of sample collection, date of amine analysis, and the concentrations detected.

3.8 If acute toxicity testing at WS006 and/or WS007 or in the Minntac tailings basin indicates that the waste stream is acutely toxic, the Commissioner may require acute toxicity testing at outfalls SD001, SD002, stations GW001-GW008, or other locations designated by the Commissioner. No discharge from the facility to waters of the state shall be acutely toxic to humans or other animals or plant life, directly damaging to real property, or such as to actually or potentially preclude or limit the use of underground waters as a potable water supply.

Chapter 5. Station Requirements - Specific

1. Ground Water Stations

1.1 GW 003: Submit a monthly DMR monthly: due 21 days after end of each calendar month following permit issuance.

1.2 GW 004: Submit a monthly DMR monthly: due 21 days after end of each calendar month following permit issuance.

1.3 GW 006: Submit a monthly DMR monthly: due 21 days after end of each calendar month following permit issuance.

1.4 GW 007: Submit a monthly DMR monthly: due 21 days after end of each calendar month following permit issuance.

1.5 GW 008: Submit a monthly DMR monthly: due 21 days after end of each calendar month following permit issuance.

1.6 GW 009: Submit a monthly DMR monthly: due 21 days after end of each calendar month following permit issuance.

1.7 GW 010: Submit a monthly DMR monthly: due 21 days after end of each calendar month following permit issuance.

2. Surface Discharge Stations

2.1 SD 001: Submit a monthly DMR monthly: due 21 days after end of each calendar month following permit issuance.

2.2 SD 002: Submit a monthly DMR monthly: due 21 days after end of each calendar month following permit issuance.

3. Surface Water Stations

3.1 SW 001: Submit a monthly DMR monthly: due 21 days after end of each calendar month following permit issuance.

3.2 SW 002: Submit a monthly DMR monthly: due 21 days after end of each calendar month following permit issuance.

4. Waste Stream Stations

4.1 WS 002: Submit a monthly DMR monthly by 21 days after the end of each calendar month following issuance of major permit modification.

4.2 WS 003: Submit a monthly DMR monthly by 21 days after the end of each calendar month following issuance of major permit modification.

Chapter 5. Station Requirements - Specific

4. Waste Stream Stations

4.3 WS 004: Submit a monthly DMR monthly by 21 days after the end of each calendar month following issuance of major permit modification.

4.4 WS 005: Submit a monthly DMR monthly by 21 days after the end of each calendar month following issuance of minor permit modification.

4.5 WS 006: Submit an annual DMR annually by February 14 of each year following permit issuance.

4.6 WS 007: Submit an annual DMR annually by February 14 of each year following permit issuance.

Chapter 6. Industrial Process Wastewater, NPDES/SDS

1. Mine Tailings Basin

1.1 The Permitee shall notify the Commissioner in writing at least 180 days in advance of any expansion of the area covered by mining waste beyond that area contained within the perimeter dam for the tailings basin on the date of issuance of this permit.

1.2 The Permittee shall control surface runoff from mining waste disposal areas when such runoff has caused or is likely to cause the limits specified in the water quality standards, including but not limited to those for turbidity, to be exceeded in the following receiving waters: the Sandy River.

1.3 The Permittee shall submit an Annual Pollution Control Report to the Commissioner. The annual report shall be due on February 14 of each year, and shall detail for the previous year:

a. changes in plant processing from that shown on the flow sheets submitted with the application for this permit, including rates of reagent addition;

b. changes in water balance flow from those flow data submitted with the application for this permit;

c. a current map of the tailings basin, showing all dikes, dams, and cells, and current topographic and water level elevations in the basin;

d. changes in the tailings basin operation from that described in the facility description; and

e. Line 3 scrubber wastewater treatment system submittal required in Chapter 4.

Chapter 6. Industrial Process Wastewater, NPDES/SDS

1. Mine Tailings Basin

1.4 The Permittee shall summarize the following water input and output data on a monthly basis, and shall include these data with the Discharge Monitoring Reports required by this permit:

a. Precipitation depth (this may be estimated from data at measurement stations near the facility);

b. Sources and volumes of non-precipitation water inputs to the facility;

c. Lake evaporation (this may be estimated from data at measurement stations near the facility);

d. Volume discharged from outfall SD001; and

e. Volume discharged from outfall SD002.

2. Toxic Substance Reporting

2.1 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)

2.2 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)

Chapter 6. Industrial Process Wastewater, NPDES/SDS

3. Mobile and Rail Equipment Service Areas

3.1 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 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 outdoor 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 those available for brake cleaning and degreasing, 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. Mobile and rail equipment maintenance and repairs shall not be conducted in wash bays.

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

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

g. If the Permittee discovers that recoverable amounts of petroleum products have entered wastewater containment systems, they shall be recovered immediately and reported to the MPCA.

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

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.

5. New Proposed Dewatering

5.1 The Permittee shall obtain a permit modification before discharging from a new dewatering outfall.

Chapter 6. Industrial Process Wastewater, NPDES/SDS

6. Application for Permit Reissuance

6.1 The Permittee shall include, as part of the application for reissuance of this permit, an updated operating plan for the basin for the next five years.

7. Special Requirements

7.1 The Permittee will be constructing a new scrubber solids settling/storage pond located in the SW 1/4 of the NW 1/4 of the NW 1/4, Section 27, T59N, R18W. The scrubber solids pond may eventually serve as a disposal pond for scrubber solids. The scrubber pond is designed in accordance with MPCA pond design and solid waste design criteria and will include a composite liner and a dewatering system to accommodate dewatering of the pond contents. At closure the pond will be capped with a liner system in accordance with MPCA solid waste capping design criteria.

The scrubber solids pond shall be constructed in accordance with the pond design plans and specifications submitted for the project and in accordance with MPCA approval conditions of the engineering plans and specifications for the pond. The final cover/cap for the pond shall be installed in accordance with the submitted plans, as described in Requirement 7.2 below, and any additional MPCA design specifications required by the MPCA at the time of pond closure.

The scrubber pond is expected to have a useful life of approximately 20 years. Dewatering of pond wastewater will occur periodically using the approved dewatering system. Water removed from the pond shall be returned to the head of the Line 3 scrubber wastewater treatment system. If not returned to the treatment system, collected pond water shall be treated in accordance with MPCA requirements at that time and discharged to the tailings basin or otherwise treated off site. Discharge of pond dewatering to the tailings basin may require a permit modification.

7.2 The Permittee shall submit for MPCA approval, at least 120 days prior to the closure of any scrubber solids pond at the plant, a plan to provide a clay or geosynthetic cap, or other method to minimize erosion and infiltration from the former pond. The plan shall conform to MPCA design criteria in effect at that time, and shall include provisions for perpetual maintenance. The Permittee shall implement the plan upon closure of the disposal pond.

Upon completion of the disposal pond closure project, a detailed description, including a plat, shall be recorded with the county register of deeds. The description shall include general types and location of wastes, depth of fill, and other information of interest to future land owners.

7.3 The Permittee shall submit for MPCA review and approval, plans and specifications, as well as any additional information required by the MPCA, for any additional scrubber solids settling/storage ponds. The scrubber pond(s) shall be designed in accordance with MPCA pond design criteria and include a dewatering system to accommodate dewatering of the pond contents. No construction shall begin until the Permittee has received written approval of plans and specifications for the construction from the MPCA.

Chapter 7. Total Facility Requirements

1. Sampling and Analyses

1.1 Sample preservation and test procedures for the analysis of pollutants shall conform to 40 CFR Part 136 and Minnesota Rules, part 7041.3200.

1.2 Volatile organics shall be analyzed using Minnesota Department of Health Method 465E or equivalent method.

1.3 All monitoring and analytical instruments used to monitor as required by this permit shall be calibrated and maintained at a frequency necessary to ensure accuracy. The Permittee shall measure flows to ensure accuracy within plus or minus ten percent of the true flow values. The Permittee shall maintain written records of all calibrations and maintenance.

1.4 Samples and measurements required by this permit shall be representative of the monitored activity and shall be analyzed by a laboratory certified by the Minnesota Department of Health for the applicable permitted parameters. Analyses of dissolved oxygen, pH, temperature and total residual chlorine do not need to be completed by a certified laboratory.

1.5 The "sample type", "sampling frequency" and "effective period" identified in the Limits and Monitoring section of this permit together designate the minimum required monitoring frequency.

1.6 If a Permittee monitors more frequently than required by this permit, the results and the frequency of monitoring shall be reported on the Discharge Monitoring Report (DMR) or other form for that reporting period.

1.7 For bypasses, upsets, spills or any other discharge that may cause pollution of the waters of the state, the Permittee shall take at least one (1) grab sample for permitted effluent parameters two (2) 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. Appropriate sampling shall be determined in consultation with the MPCA.

2. Facility Closure

2.1 The Permittee is responsible for closure and postclosure care of the facility. The Permittee shall notify the MPCA of a significant reduction or cessation of operations described in this permit.

2.2 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. An application for permit modification shall be submitted to the MPCA for approval before the proposed change is implemented.

Chapter 7. Total Facility Requirements

2. Facility Closure

2.3 The MPCA may require the Permittee to establish financial assurance for closure, postclosure care and remedial action at the facility.

2.4 The Commissioner may require the Permittee to submit a Pollution Control Deactivation Plan for approval. The Permittee shall notify the Commissioner of any significant reduction or cessation of the operations described in the Facility Description. If a plan is required, the Commissioner 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 submitted. The plan shall provide for the implementation, including continued maintenance if necessary, of best management practices and best available technology and shall assure compliance with all applicable laws and Agency regulations which apply to air quality, water quality, and the disposal of hazardous substances.

3. Reporting

3.1 The Permittee shall report monitoring results for the completed reporting period in the units specified by this permit on a Discharge Monitoring Report (DMR) form or other report form provided by the MPCA.

3.2 The Permittee shall report ground water monitoring results on the Discharge Monitoring Report.

3.3 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.

3.4 A Discharge Monitoring Report (DMR) shall be submitted for each station even if no discharge occurred during the reporting period. The Permittee shall report 'No Discharge', 'No Flow' or 'No Materials Generated' on a DMR or other monitoring report form only if no discharge, flow or materials are generated during the entire reporting period. The schedule for reporting can be found on the Submittals Summary section of this permit.

3.5 Individual values for each sample and measurement must be reported on the Supplemental Report Form provided by the MPCA and submitted with the Discharge Monitoring Report (DMR).

Chapter 7. Total Facility Requirements

3. Reporting

3.6 The Permittee shall report the following information on the Discharge Monitoring Report (DMR):

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.

3.7 The Permittee shall report monitoring results of bypass events on its Discharge Monitoring Report (DMR). If no bypass events occurred, check the "No Discharge" box on the DMR.

3.8 The Permittee or the duly authorized representative of the Permittee shall sign the reports and documents submitted to the MPCA by the Permittee. (Minnesota Rules, pt. 7001.0150, subp. 2.D)

3.9 A person who falsifies, tampers with, or knowingly renders inaccurate a monitoring device or method required to be maintained under this permit is subject to penalties provided by federal and state law. (Minnesota Rules, pt. 7001.1090, subp. 1.G)

3.10 The Permittee shall report noncompliance with the permit not reported under Minnesota Rules, part 7001.0150, subpart 3, item K as a part of the next report which the Permittee is required to submit under this permit. If no reports are required within 30 days of the discovery of the noncompliance, the Permittee shall submit the information listed in Minnesota Rules, part 7001.0150, subpart 3, item K within 30 days of the discovery of the noncompliance. (Minnesota Rules, pt. 7001.1090, subp. 1.H)

3.11 A person who knowingly makes a false statement, representation, or certification in a record or other document submitted or required to be maintained under this permit, including monitoring reports or reports of compliance or noncompliance is subject to penalties provided by federal and state law set forth. (Minnesota Rules, pt. 7001.0150, subp. 3.L)

Chapter 7. Total Facility Requirements

4. Records

4.1 The Permittee shall maintain records for each sample and measurement. The records shall include the following information:

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;

d. the analytical techniques, procedures and methods used; and,

e. the results of the analysis.

4.2 The Permittee shall keep the records required by this permit for at least three (3) 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 and/or during the course of an unresolved enforcement action. (Minnesota Rules, pt. 7001.0150, subp. 2.C.)

4.3 Except for data determined to be confidential according to Minnesota Statutes, ch. 116.075, subd. 2, all reports required by this permit shall be available for public inspection at the MPCA St. Paul office. Effluent data shall not be considered confidential. Confidential material shall be submitted according to Minnesota Rules, pt. 7000.1300.

4.4 The Permittee shall, when requested by the commissioner, submit within a reasonable time the information and reports that are relevant to the control of pollution regarding the construction, modification, or operation of the facility covered by the permit or regarding the conduct of the activity covered by the permit. (Minnesota Rules, pt. 7001.0150, subp. 3.H.)

5. Compliance Responsibility

5.1 The Permittee shall perform the actions or conduct the activity authorized by the permit in accordance with the plans and specifications approved by the agency and in compliance with the conditions of the permit. (Minnesota Rules, pt. 7001.0150, subp. 3.E.)

6. Noncompliance

6.1 Noncompliance with the requirements of this permit subjects the Permittee to penalties provided by federal and state law including monetary penalties, imprisonment, or both. (Minnesota Rules, pt. 7001.1090, subp. 1.B.; U.S.C. title 33, sect. 1319; Minn. Stat. sect. 115.071)

Chapter 7. Total Facility Requirements

6. Noncompliance

6.2 If the Permittee discovers that noncompliance with a condition of the permit has occurred, the Permittee shall:

a. take all reasonable steps to minimize the adverse impacts to human health, public drinking water supplies, or the environment resulting from a permit violation.

b. notify the Minnesota Department of Public Safety Duty Officer at 1(800)422-0798 or (651)649-5451 within 24 hours of becoming aware of a permit violation that may endanger human health, public drinking water supplies or the environment. The Permittee shall submit a written description of the exceedance to the MPCA within five (5) days of discovery of the exceedance.

Nothing in this requirement relieves the Permittee from immediately notifying the MPCA of any release to surface waters of the state. (Minnesota Rules, pt. 7001.0150, subp. 3. J, K)

6.3 The Permittee shall submit a written description of any bypass, spill, upset or permit violation during the reporting period to the MPCA with its Discharge Monitoring Report (DMR). If no DMR is required within 30 days, the Permittee shall submit a written report within 30 days of the discovery of the noncompliance. This description shall include the following information:

a. a description of the event including volume, duration, monitoring results and receiving waters;

b. the cause of the event;

c. the steps taken to reduce, eliminate and prevent reoccurrence of the event;

d. the exact dates and times of the event; and

e. steps taken to reduce any adverse impact resulting from the event. (Minnesota Rules, pt. 7001.0150, subp. 3.K)

Chapter 7. Total Facility Requirements

7. Upset Defense

7.1 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 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 Minnesota Rules, part 7001.0150, subpart 3, items K and L; and

f. that the Permittee implemented the remedial measures required by Minnesota Rules, part 7001.0150, subpart 3, item J. (Minnesota Rules, pt. 7001.1090, subp. 1.L)

8. Duty to Notify and Avoid Water Pollution

8.1 The Permittee shall notify the Minnesota Department of Public Safety Duty Officer at (800)422-0798 or (651)649-5451 immediately of the discharge, accidental or otherwise, of any substance or material under its control which, if not recovered, may cause pollution of waters of the state. Notification is not required for a discharge of five (5) gallons or less of petroleum. (Minnesota Statutes, section 115.061)

8.2 The Permittee shall report to the Duty Officer all pertinent information regarding the discharge. Refer to the MPCA "Emergency Notification Guidance for Wastewater Treatment Systems" for further information.

8.3 The Permittee shall take all reasonable steps to minimize the adverse impacts to human health, public drinking water supplies or to the environment resulting from the discharge. This may include restricting or preventing untreated or partially treated wastewater, plant chemicals or feedlot materials from entering waterways, containing spilled materials, recycling by-passed wastewater through the plant, or using auxiliary treatment methods. (Minnesota Statutes, section 115.061)

Chapter 7. Total Facility Requirements

9. Anticipated Bypasses

9.1 The Permittee may allow a bypass to occur if the bypass will not cause the exceedance of an effluent limitation but only if the bypass is necessary for essential maintenance to assure efficient operation of the facility. The permittee shall submit notice of the need for the bypass at least ten days before the date of the bypass. (Minnesota Rules, pt. 7001.1090, subp. 1.J)

9.2 The notice of the need for a bypass shall include the following information:

a. The proposed date and estimated duration of the bypass.

b. The alternatives to bypassing.

c. The proposed measures to mitigate environmental harm caused by the bypass.

d. A proposal for bypass monitoring.

9.3 The Permittee shall not allow an anticipated bypass to occur that will cause an exceedance of an applicable effluent limitation unless the following conditions are met:

a. The bypass is unavoidable to prevent loss of life, personal injury, or severe property damage. For the purposes of this paragraph, "severe property damage" means substantial damage to property of the Permittee or of others; damage to the wastewater treatment facilities that may cause them to become inoperable; or substantial and permanent loss of natural resources that can be reasonably expected to occur in the absence of a bypass. "Severe property damage" does not mean economic loss as a result of a delay in production.

b. There is no feasible alternative to the bypass, such as the use of auxiliary treatment facilities, retention of untreated wastes, or performance of maintenance during normal periods of equipment downtime. This condition is not satisfied if adequate backup equipment should have been installed in the exercise of reasonable engineering judgment to prevent a bypass which occurred during normal periods of equipment downtime or preventative maintenance.

c. The Permittee has notified the commissioner of the anticipated bypass and the commissioner has approved the bypass. The commissioner shall approve the bypass if the commissioner finds that the conditions set forth in Minnesota Statutes, part 7001.1090, subpart 1, items A and B are met. (Minnesota Rules, pt. 7001.1090, subp. 1.K)

10. Facilities Operation

10.1 The Permittee shall properly operate and maintain the systems used to achieve permit compliance. Proper operation and maintenance includes effective performance, adequate funding, adequate staffing and training, and adequate process and laboratory controls, including appropriate quality assurance procedures. (Minnesota Rules, pt. 7001.0150, subp. 3.F)

Chapter 7. Total Facility Requirements

10. Facilities Operation

10.2 The Permittee is responsible for insuring system reliability and shall install adequate backup or support systems to achieve permit compliance and prevent the discharge of untreated or inadequately treated waste. These systems may include alternative power sources, auxiliary treatment works and sufficient storage volume for untreated wastes. (Minnesota Rules, pt. 7001.0150, subp. 3.F)

10.3 The Permittee shall store, transport and dispose of biosolids, 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.

10.4 The Permittee's discharge shall not cause any nuisance conditions, acutely toxic conditions to aquatic life or other adverse impact on the receiving water.

10.5 The Permittee shall comply with all applicable water quality, air quality, solid waste and hazardous waste statutes and rules in the operation and maintenance of the facility.

10.6 The Permittee shall schedule maintenance of the treatment works during non-critical water quality periods to prevent degradation of water quality.

10.7 In-plant control tests shall be conducted at a frequency adequate to ensure continuous efficient operation of the treatment facility.

11. Chemical Additives

11.1 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. "Chemical additive" includes processing reagents, water treatment products, cooling water additives, freeze conditioning agents, chemical dust suppressants, detergents and solvent cleaners used for equipment and maintenance cleaning, among other materials.

11.2 The Permittee shall request approval for an increased or new use of a chemical additive 60 days before the proposed increased or new use.

Chapter 7. Total Facility Requirements

11. Chemical Additives

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

a. Material Safety Data Sheet.

b. A complete product use and instruction label.

c. The commercial and chemical names of all ingredients.

d. Aquatic toxicity and human health or mammalian toxicity data including a carcinogenic, mutagenic or teratogenic concern or rating.

e. Environmental fate information including, but not limited to, persistence, half-life, intermediate breakdown products, and bioaccumulation data.

f. The proposed method, concentration, and average and maximum rates of use.

g. If applicable, the number of cycles before wastewater bleedoff.

h. If applicable, the ratio of makeup flow to discharge flow.

11.4 This permit may be modified to restrict the use or discharge of a chemical additive.

12. Inspection And Entry

12.1 The Permittee shall allow a representative of the MPCA, in accordance with Section 308 of the Act and Minnesota Statutes, section 115.04, and upon presentation of proper credentials, to:

a. enter the premises where the facility is located or activity conducted;

b. review and copy the records required by this permit;

c. inspect the facilities, systems, equipment, practices or operations regulated or required by this permit;

d. sample or monitor to determine compliance; and

e. bring equipment upon the Permittee's premises necessary to conduct surveys and investigations. (Minnesota Rules, pt. 7001.0150, subp. 3.I)

Chapter 7. Total Facility Requirements

13. Permit Modifications

13.1 Changes to the facility or operation of the facility may require a permit modification. The Permittee shall submit an application describing the changes to the facility or operation to the MPCA and receive a permit modification prior to implementing the changes. The Permittee must submit the permit modification application fee in accordance with Minnesota Rules, part 7002.0250 with the application.

13.2 The following changes may require a permit modification:

a. Increased use or new use of a chemical additive.

b. Changes in the characteristics, concentrations or frequency of the wastewater flow, which may include new significant industrial discharges to a sanitary sewage treatment system, significant changes in existing industrial discharges to a sanitary system, significant rerouting of wastewater for reuse or for land disposal or significant changes in the levels of indicator characteristics.

c. Changes in biosolids or residual solids use and disposal practices.

13.3 The procedures as set forth in Minnesota Rules, pt. 7001.0100 through 7001.0130, including public notice, apply to applications for permit modifications, with the following exceptions:

a. Modifications solely as to ownership or control as described in Minnesota Rules, pt. 7001.0190, subp. 2.

b. Minor modifications as described in Minnesota Rules, pt. 7001.0190, subp. 3.

13.4 No permit may be assigned or transferred by the holder without the approval of the MPCA. A person to whom the permit has been transferred shall comply with the conditions of the permit. (Minnesota Rules, pt. 7001.0150, subp. 3.N)

14. Construction

14.1 Construction related to facility modifications, additions or expansions that is not expressly authorized by this permit requires a permit modification. If the construction project requires an Environmental Assessment Worksheet under Minnesota Rules, ch. 4410, no construction shall begin until a negative declaration has been issued and all approvals have been received or implemented. (Minnesota Rules, pt. 7001.0030)

14.2 No construction shall begin until the Permittee has received written approval of plans and specifications for the construction from the MPCA.

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15. Permit Modification, Suspension or Revocation

15.1 This permit may be modified, suspended, or revoked for the following reasons:

a. A violation of permit requirements.

b. Misrepresentation or failure to disclose fully all relevant information to obtain the permit.

c. A change in a condition that alters the discharge.

d. The establishment of a new or amended pollution standard, limitation or effluent guideline that is applicable to the permitted facility or activity.

e. Failure to pay permit fees.

f. Other reasons listed in Minnesota Rules, pt. 7001.0170.

16. Permit Reissuance

16.1 The Permittee shall submit an application for permit reissuance at least 180 days before permit expiration. (Minnesota Rules, pt. 7001.0040, subp. 3)

16.2 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 one of the following:

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. (Minnesota Rules, pt. 7001.0160)

16.3 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. The MPCA may require the Permittee to apply for reissuance or a major modification of this permit to authorize facility closure.

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17. Property Rights

17.1 The permit does not convey a property right or an exclusive privilege. (Minnesota Rules, pt. 7001.0150, subp. 3.C)

18. Liability Exemption

18.1 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 actions, including those activities authorized, directed, or undertaken to achieve compliance with this permit. To the extent the state and MPCA may be liable for the activities of its employees, that liability is explicitly limited to that provided in the Tort Claims Act, Minnesota Statutes, section 3.736. (Minnesota Rules, pt. 7001.0150, subp. 3.O)

18.2 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. (Minnesota Rules, pt. 7001.0150, subp. 3.D)

19. Liabilities

19.1 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. (Minnesota Rules, pt. 7001.0150, subp. 3.A)

19.2 The issuance of a 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. (Minnesota Rules, pt. 7001.0150, subp. 3.B)

20. Severability

20.1 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, is held invalid, the application of such provision to other circumstances and the remainder of this permit shall not be affected thereby.

21. Incorporation By Reference

21.1 The Permittee shall comply with the provisions of 40 CFR Parts 122.41 and 122.42, Minnesota Rules, pt. 7001.0150, subp. 3, and pt. 7001.1090, which are incorporated into this permit by reference, and are enforceable parts of this permit.