MINNESOTA POLLUTION CONTROL AGENCY

Water Individual Permit

National Pollutant Discharge Elimination System/State Disposal System

MN0057207

Permittee:	US Steel Corp
Facility name:	US Steel Corp - Minntac Tailings Basin Area
Receiving water:	Dark River - Class 2Bg, 3C, 4A, 4B, 5, 6 (Trout reach 1B, 2A, 3B) water; Timber Creek - Class 2Bg, 3C, 4A, 4B, 5, 6 water; Unnamed wetlands north of the basin and unnamed wetlands tributary to Timber Creek and the Dark River - Class 2D, 3D, 4C, 5, 6 water
City or Township:	Mountain Iron, **County:** St. Louis
Issuance date:	Proposed Permit – not issued
Expiration date:	Proposed Permit – not issued
Modification date:	[date must match issuance (i.e., mod) date in WAL]

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 waters named above, in accordance with the requirements of this permit.

The goal of this permit is to reduce pollutant levels in point source and non-point source discharges and protect water quality in accordance with the U.S. Clean Water Act, Minnesota statutes and rules, and federal laws and regulations.

This permit is effective on the issuance date identified above. This permit expires at midnight on the expiration date identified above.

Signature: [Type e-Signature]

This document has been electronically signed.

for the Minnesota Pollution Control Agency

[Type name]
[Title]
[Office]
[Division]

Submit eDMRs
Submit via the MPCA e-Services at https://rsp.pca.state.mn.us/TEMPO_RSP/Orchestrate.do?initiate=true

Submit other WQ reports to:
Attention: WQ Submittals Center
Minnesota Pollution Control Agency
520 Lafayette Road North
St. Paul, MN 55155-4194

Questions on this permit?
For eDMR and other permit reporting issues, contact:
Tamara Dahl
5074764252

For specific permit requirements, please refer to:
John Thomas (john.thomas@state.mn.us) 218-302-6616

Wastewater Permit Program general questions, contact:
MPCA, 651-282-6143 or 1-800-657-3938.

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1. Permitted facility description

The US Steel Corp - Minntac Tailings Basin Area facility (facility) is located at County Road 102, Mountain Iron, Minnesota 55768, St. Louis County.

Facility Location Legal Description
The U.S. Steel - Minntac Tailings Basin Area facility (facility) is located in multiple Sections of Township 59 North, Ranges 18 and 19 West, Mountain Iron, St. Louis County, Minnesota. The facility covers approximately 8,700 acres (13.6 square miles) and 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.

Facility Operations Description
The principal activity at this facility is taconite processing. At the maximum operating rate, the facility will generate 15 million long tons of taconite pellets per year. 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 and are listed in a table at the end of the permit. 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.

Wastewater inputs to the tailings basin consist of the following, with their estimated average rates: fine tailings slurry/concentrator process water (22,000 gpm), agglomerator process water (14,800 gpm), sewage plant discharge, formerly covered under NPDES/SDS Permit MN0050504 (40 gpm), laboratory wastewater (neutralized - 3650 gal/yr), as well as unknown amounts of plant non-process water (wet scrubber discharge, floor wash, roof runoff, non- contact cooling water), and stormwater runoff from adjacent plant areas and stockpiles.

An average of 21 million long tons of dry fine tailings and 14 million long tons of dry coarse tailings are disposed of each year in the tailings basin. The fine tailings slurry and concentrator process water flows to a fine tailings pump house, which lifts the slurry for disposal through a series of open ditches to the Minntac tailings basin. The basin is segmented into several cells, and the fine tailings spigot point is periodically moved from one cell to another. A permanent pumping station located within the basin returns water to the plant site reservoir. The station is located on the east side of Cell 1. Calcium chloride is occasionally used as a chemical dust suppressant on the basin and haul-roads in the facility.

The various basin cells are separated by dams, each constructed of a single berm of coarse tailings placed by truck. Most of the perimeter dam for the tailings basin was constructed by spigotting a fine tailings slurry into the core between parallel inner and outer coarse tailings dams; that part of the perimeter dam on the southwest side of the basin was constructed in the same manner as the interior basin dams. The coarse tailings dams were constructed by truck in ten foot lifts. 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 glacial drift prior to spigotting fine tailings into the core portion of this area.

A domestic wastewater treatment plant for the facility was previously covered under SDS permit number MN0050504, but will be incorporated into this reissued permit.

Changes to the facility may result in an increase in pollutant loading to surface waters or other causes of degradation to surface waters. If a change to the facility will result in a net increase in pollutant loading or other causes of degradation

that exceed the maximum loading authorized through conditions specified in the existing permit, the changes to the facility are subject to antidegradation requirements found in Minn. R. 7050.0250 to 7050.0335.

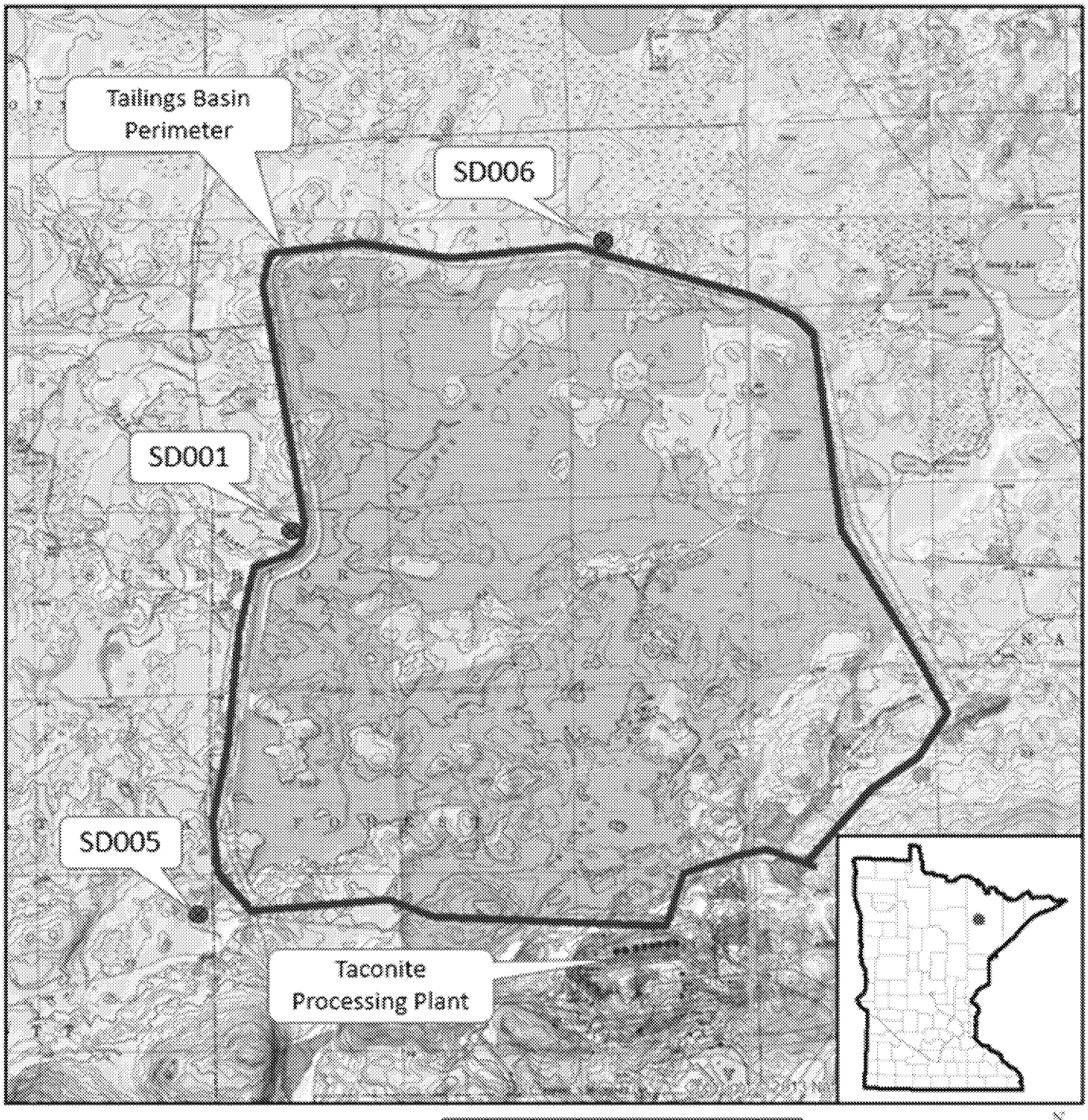
This Permit also complies with Minn. R. 7053.0275 regarding anti-backsliding.

Any point source discharger of sewage, industrial, or other wastes for which a NPDES permit has been issued by the MPCA that contains effluent limits more stringent than those that would be established by Minn. R. 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.]

2. Location map of permitted facility

Topographic Map of Permitted Facility

MN0057207: U.S. Steel Minntac Tailings Basin
T59N, R18W, Sections 3-10, 14-23, and 27-30
Mt. Iron, St. Louis County, Minnesota



Map produced by: MPCA Staff, 7/31/2018
Source: USGS Quad
Scale: 1:50,000

0 0.5 1 2Miles

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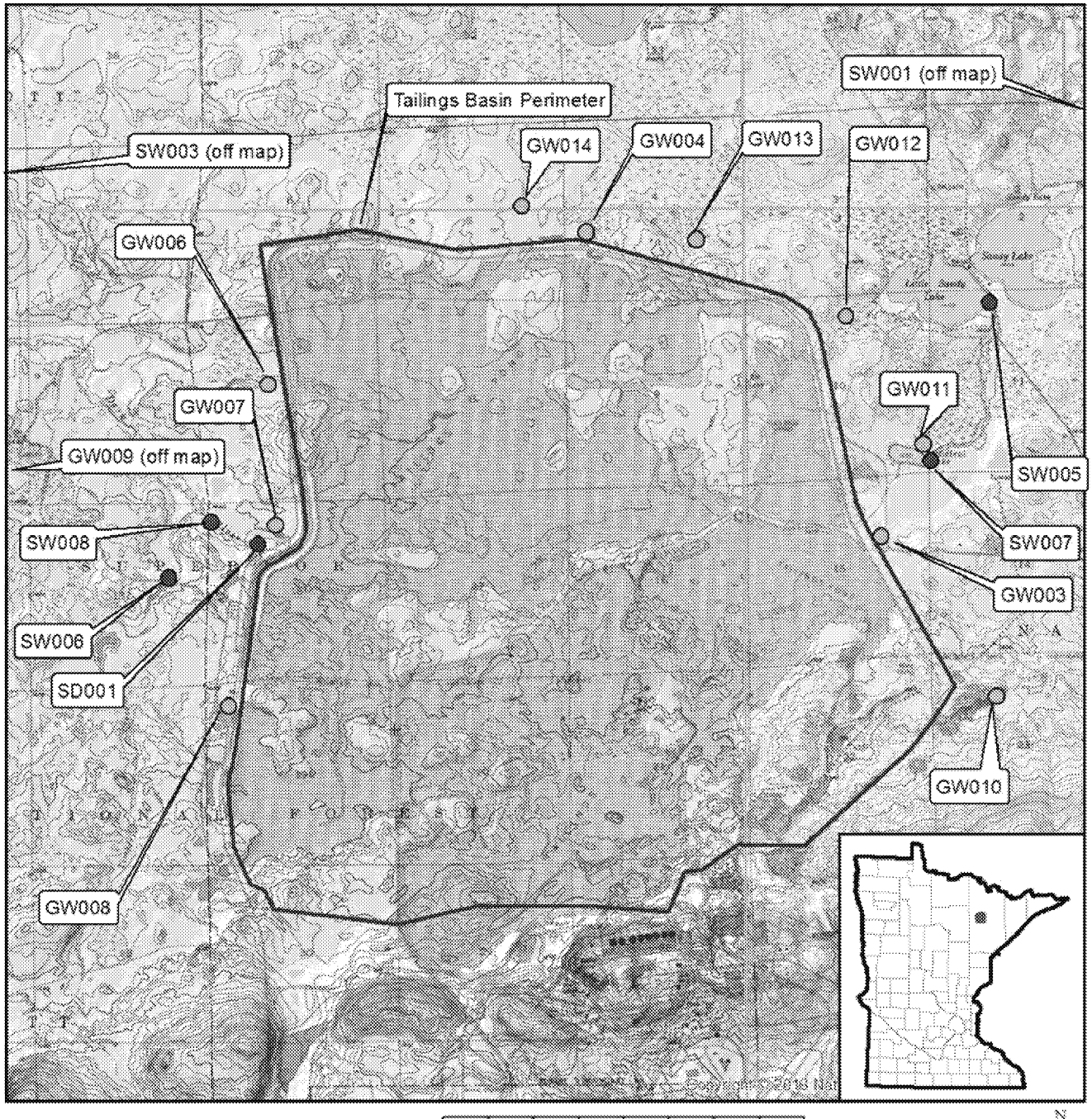
3. Additional Monitoring Locations

Topographic Map of Permitted Facility

MN0057207: US Steel Minntac Tailings Basin
T59N, R18W, Sections 3-10, 14-23, 27-30
Mt. Iron, St. Louis County, Minnesota

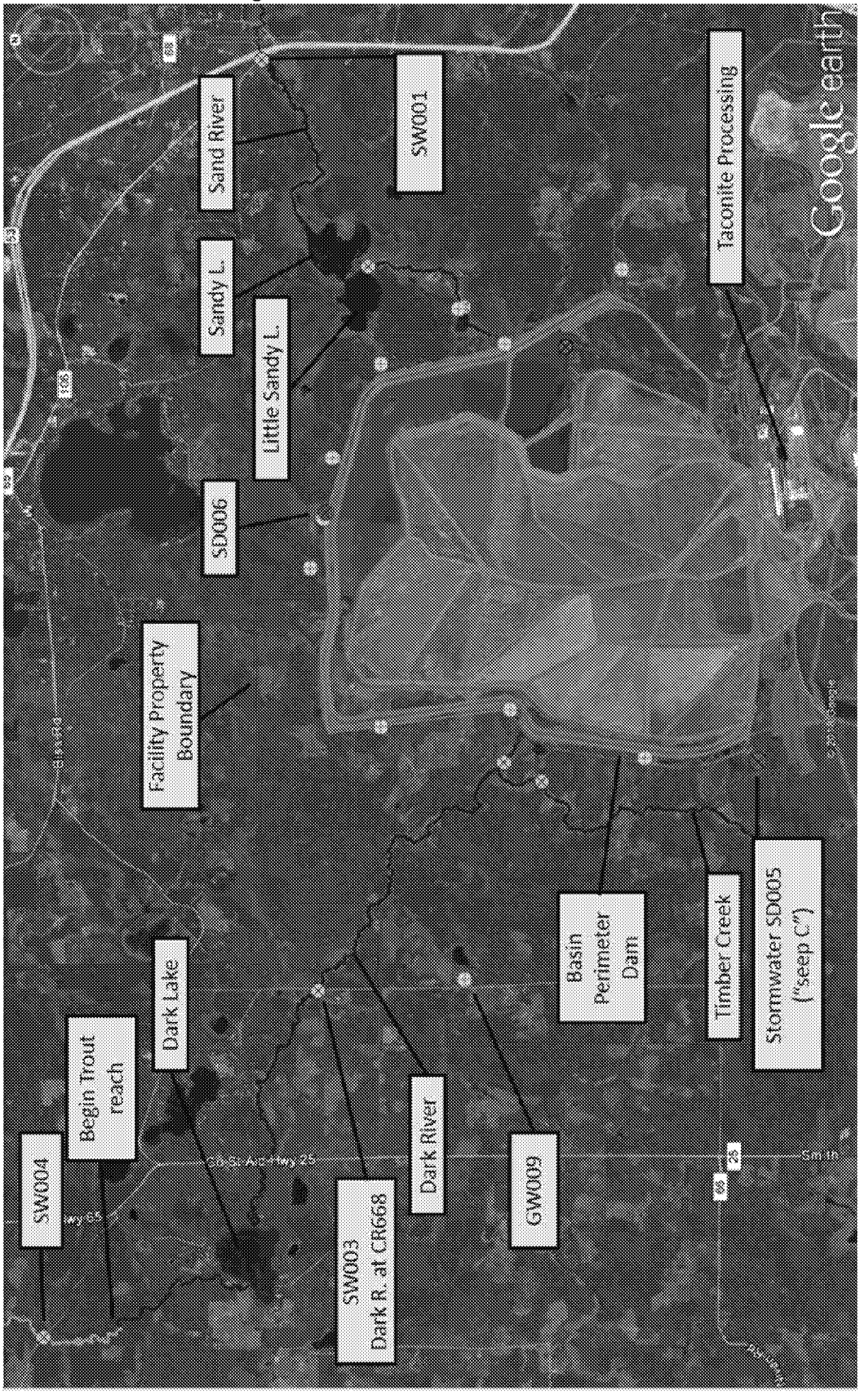


Map produced by: MPCA Staff, 1/30/2015
Source: USGS Quad
Scale: 1:50,000

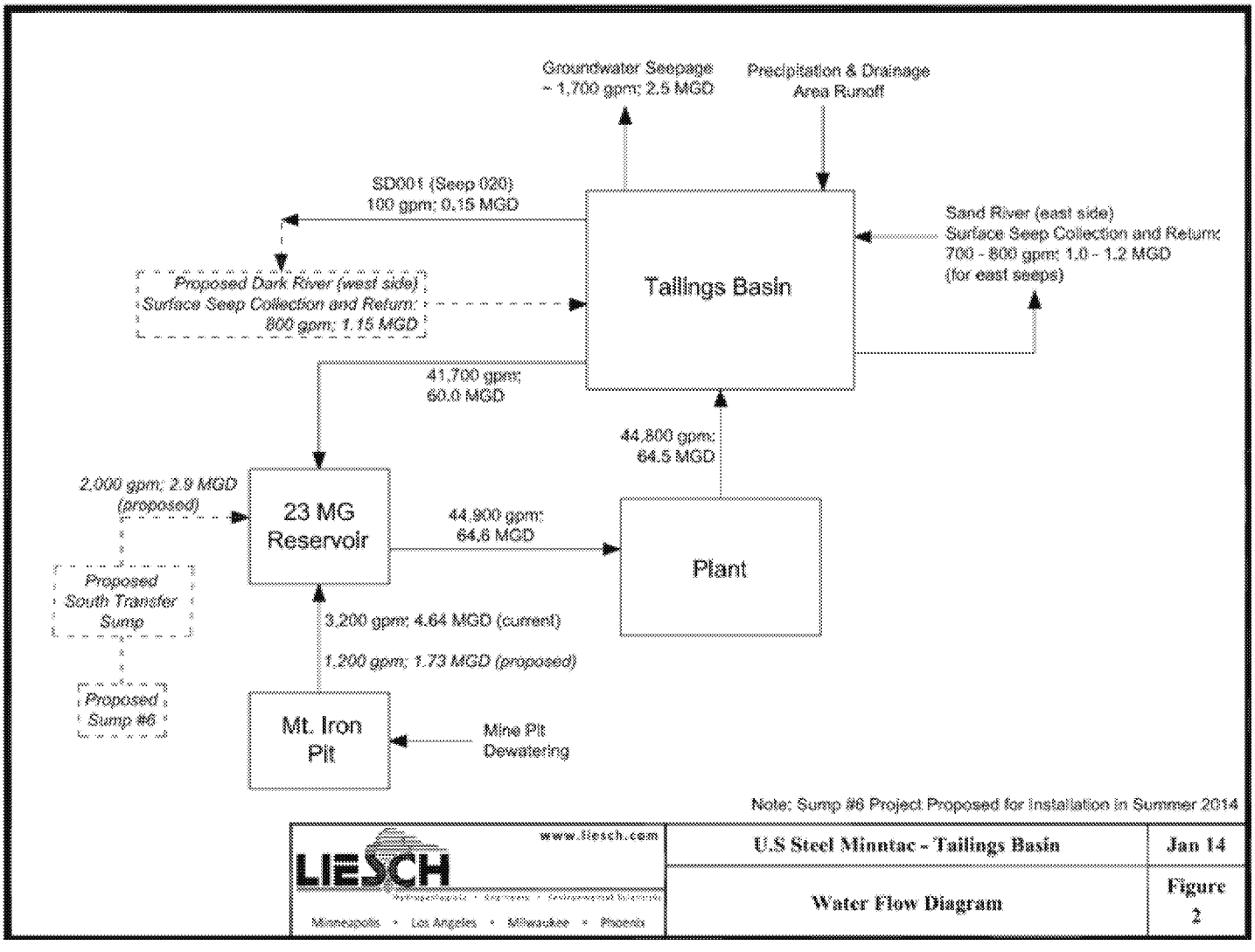
0 0.5 1 2 Miles

N

4. Additional Monitoring Locations – SW001 and SW004



5. Flow diagram



6. Summary of stations and station locations

Station	Type of station	Local name	PLS location
GW 003	Well, Downgradient	Monitoring Well 3	T59N, R18W, S15, NE Quarter of the SE Quarter
GW 004	Well, Downgradient	Monitoring Well 4	T59N, R18W, S04, NW Quarter of the SW Quarter
GW 006	Well, Downgradient	Monitoring Well 6	T59N, R18W, S07, NE Quarter of the NW Quarter
GW 007	Well, Downgradient	Monitoring Well 7	T59N, R18W, S18, NE Quarter of the NW Quarter
GW 008	Well, Downgradient	Monitoring Well 8	T59N, R18W, S19, NW Quarter of the NW Quarter
GW 009	Well, Downgradient	Monitoring Well 9	T59N, R19W, S10, SW Quarter of the NW Quarter
GW 010	Well, Upgradient	Monitoring Well 10	T59N, R18W, S23, NW Quarter of the NW Quarter
GW 011	Well, Downgradient	Monitoring Well 11	T59N, R18W, S10, SE Quarter of the SE Quarter
GW 012	Well, Downgradient	Monitoring Well 12	T59N, R18W, S10, SE Quarter of the NE Quarter of the NW Quarter
GW 013	Well, Downgradient	Monitoring Well 13	T59N, R18W, S04, SE Quarter of the NW Quarter of the SE Quarter
GW 014	Well, Downgradient	Monitoring Well 14	T59N, R18W, S05, NE Quarter of the NW Quarter of the SE Quarter
SD 001	Effluent To Surface Water	Seepage outfall 020	T59N, R18W, S18, SE Quarter of the NE Quarter of the NW Quarter
SD 005	Stormwater, Non-specific Runoff	Stormwater, Non-specific Runoff	T59N, R18W, S30, NW Quarter of the SW Quarter of the NW Quarter
SD 006	Effluent To Surface Water	Seep Discharge to north wetlands	T59N, R18W, S04, SE Quarter of the NW Quarter of the SW Quarter
SW 001	Stream/River/Ditch, Other	Sandy River Station 701	T59N, R17W, S06, NW Quarter of the NW

			Quarter
SW 003	Stream/River/Ditch, Downstream	Dark River at CR668	T59N, R19W, S03, SE Quarter of the SE Quarter of the NE Quarter
SW 004	Stream/River/Ditch, Downstream	Dark River at CH65	T60N, R19W, S30, NE Quarter
SW 005	Lake/Reservoir	Little Sandy Lake Inlet	T59N, R18W, S11, NW Quarter of the NE Quarter of the NW Quarter
SW 006	Stream/River/Ditch, Downstream	Timber Creek	T59N, R19W, S13, SW Quarter of the SE Quarter of the NE Quarter
SW 007	Lake/Reservoir	Admiral Lake	T59N, R18W, S10, SE Quarter of the SE Quarter of the SE Quarter
SW 008	Stream/River/Ditch, Downstream	Dark River near Basin	T59N, R19W, S13, NE Quarter of the NE Quarter of the NE Quarter
WS 008	Internal Waste Stream	Domestic plant effluent to basin	T59N, R18W, S28, SW Quarter of the NE Quarter
WS 009	Internal Waste Stream	Basin Water	T59N, R18W, S15, SW Quarter of the NE Quarter of the SE Quarter

7. Permit requirements

GW 003	Well, Downgradient	
		Facility Specific Limit and Monitoring Requirements
	5.1.1	The Permittee shall submit a monthly DMR : Due by 21 days after the end of each calendar month following permit issuance. [Minn. R. 7001.0150, Subp. 2(B)]
	5.1.2	Sampling Location. [Minn. R. 7001.0150, Subp. 2(B)]
	5.1.3	Samples for Station GW003 shall be taken at: monitoring well 03. [Minn. R. 7001.0150, Subp. 2(B)]
	5.1.4	The Permittee shall submit monitoring results in accordance with the limits and monitoring requirements for this station. If conditions are such that no sample can be acquired, the Permittee shall report "No Flow" or "No Discharge" on Discharge Monitoring Report (DMR) and shall add a Comments attachment to the DMR detailing why the sample was not collected. [Minn. R. 7001.0150, Subp. 2(B)]
GW 004	Well, Downgradient	
		Facility Specific Limit and Monitoring Requirements
	5.2.1	The Permittee shall submit a monthly DMR : Due by 21 days after the end of each calendar month following permit issuance. [Minn. R. 7001.0150, Subp. 2(B)]
	5.2.2	Sampling Location. [Minn. R. 7001.0150, Subp. 2(B)]
	5.2.3	Samples for Station GW004 shall be taken at: monitoring well 04. [Minn. R. 7001.0150, Subp. 2(B)]
	5.2.4	The Permittee shall submit monitoring results in accordance with the limits and monitoring requirements for this station. If conditions are such that no sample can be acquired, the Permittee shall report "No Flow" or "No Discharge" on Discharge Monitoring Report (DMR) and shall add a Comments attachment to the DMR detailing why the sample was not collected. [Minn. R. 7001.0150, Subp. 2(B)]
GW 006	Well, Downgradient	
		Facility Specific Limit and Monitoring Requirements
	5.3.1	The Permittee shall submit a monthly DMR : Due by 21 days after the end of each calendar month following permit issuance. [Minn. R. 7001.0150, Subp. 2(B)]
	5.3.2	Sampling Location. [Minn. R. 7001.0150, Subp. 2(B)]
	5.3.3	Samples for Station GW006 shall be taken at: monitoring well 06. [Minn. R. 7001.0150, Subp. 2(B)]
	5.3.4	The Permittee shall submit monitoring results in accordance with the limits and monitoring requirements for this station. If conditions are such that no sample can be acquired, the Permittee shall report "No Flow" or "No Discharge" on Discharge Monitoring Report (DMR) and shall add a Comments attachment to the DMR detailing why the sample was not collected. [Minn. R. 7001.0150, Subp. 2(B)]
GW 007	Well, Downgradient	
		Facility Specific Limit and Monitoring Requirements
	5.4.1	The Permittee shall submit a monthly DMR : Due by 21 days after the end of each calendar month following permit issuance. [Minn. R. 7001.0150, Subp. 2(B)]
	5.4.2	Sampling Location. [Minn. R. 7001.0150, Subp. 2(B)]
	5.4.3	Samples for Station GW007 shall be taken at: monitoring well 07. [Minn. R. 7001.0150, Subp. 2(B)]
	5.4.4	The Permittee shall submit monitoring results in accordance with the limits and

		monitoring requirements for this station. If conditions are such that no sample can be acquired, the Permittee shall report "No Flow" or "No Discharge" on Discharge Monitoring Report (DMR) and shall add a Comments attachment to the DMR detailing why the sample was not collected. [Minn. R. 7001.0150, Subp. 2(B)]
GW 008	Well, Downgradient	
		Facility Specific Limit and Monitoring Requirements
	5.5.1	The Permittee shall submit a monthly DMR : Due by 21 days after the end of each calendar month following permit issuance. [Minn. R. 7001.0150, Subp. 2(B)]
	5.5.2	Sampling Location. [Minn. R. 7001.0150, Subp. 2(B)]
	5.5.3	Samples for Station GW008 shall be taken at: monitoring well 08. [Minn. R. 7001.0150, Subp. 2(B)]
	5.5.4	The Permittee shall submit monitoring results in accordance with the limits and monitoring requirements for this station. If conditions are such that no sample can be acquired, the Permittee shall report "No Flow" or "No Discharge" on Discharge Monitoring Report (DMR) and shall add a Comments attachment to the DMR detailing why the sample was not collected. [Minn. R. 7001.0150, Subp. 2(B)]
GW 009	Well, Downgradient	
		Facility Specific Limit and Monitoring Requirements
	5.6.1	The Permittee shall submit a monthly DMR : Due by 21 days after the end of each calendar month following permit issuance. [Minn. R. 7001.0150, Subp. 2(B)]
	5.6.2	Sampling Location. [Minn. R. 7001.0150, Subp. 2(B)]
	5.6.3	Samples for Station GW009 shall be taken at: monitoring well 09. [Minn. R. 7001.0150, Subp. 2(B)]
	5.6.4	The Permittee shall submit monitoring results in accordance with the limits and monitoring requirements for this station. If conditions are such that no sample can be acquired, the Permittee shall report "No Flow" or "No Discharge" on Discharge Monitoring Report (DMR) and shall add a Comments attachment to the DMR detailing why the sample was not collected. [Minn. R. 7001.0150, Subp. 2(B)]
GW 010	Well, Upgradient	
		Facility Specific Limit and Monitoring Requirements
	5.7.1	The Permittee shall submit a monthly DMR : Due by 21 days after the end of each calendar month following permit issuance. [Minn. R. 7001.0150, Subp. 2(B)]
	5.7.2	Sampling Location. [Minn. R. 7001.0150, Subp. 2(B)]
	5.7.3	Samples for Station GW010 shall be taken at: monitoring well 10. [Minn. R. 7001.0150, Subp. 2(B)]
	5.7.4	The Permittee shall submit monitoring results in accordance with the limits and monitoring requirements for this station. If conditions are such that no sample can be acquired, the Permittee shall report "No Flow" or "No Discharge" on Discharge Monitoring Report (DMR) and shall add a Comments attachment to the DMR detailing why the sample was not collected. [Minn. R. 7001.0150, Subp. 2(B)]
GW 011	Well, Downgradient	
		Facility Specific Limit and Monitoring Requirements
	5.8.1	The Permittee shall submit a monthly DMR : Due by 21 days after the end of each calendar month following permit issuance. [Minn. R. 7001.0150, Subp. 2(B)]
	5.8.2	Sampling Location. [Minn. R. 7001.0150, Subp. 2(B)]

	5.8.3	Samples for Station GW011 shall be taken at: monitoring well 11, which shall be determined as described in section 5.8.7. [Minn. R. 7001.0150, Subp. 2(B)]
	5.8.4	The Permittee shall submit monitoring results in accordance with the limits and monitoring requirements for this station. If conditions are such that no sample can be acquired, the Permittee shall report "No Flow" or "No Discharge" on Discharge Monitoring Report (DMR) and shall add a Comments attachment to the DMR detailing why the sample was not collected. [Minn. R. 7001.0150, Subp. 2(B)]
		Facility Specific Requirements
	5.9.5	The Permittee shall install one downgradient monitoring well cluster (GW011-S, I, and D) near the property boundary by the Admiral Lake outlet, within the bedrock trench underlying the Sand River within 270 days of permit issuance. The cluster shall consist of shallow, intermediate and deep wells. The shallow well shall be screened just beneath the observed water table or in the uppermost mineral soil unit, whichever is deeper. The intermediate well shall be screened in a permeable unit near the middle depth of the trench, based on the observed depth to bedrock in the deep boring. The deep well shall be screened just above the bedrock surface. Well screens should be 10 feet in length. install monitoring well : Due 270 calendar days after Permit Issuance Date. [Minn. R. 7060.0800]
	5.9.6	The Permittee shall submit a ground water monitoring well installation report : Due 30 calendar days after Installation Date The Installation Report shall include at a minimum: a. detailed monitoring well log b. unique well number identifying the well c. surveyed top of casing elevations for the well d. USGS topographic map of location of well in relation to the Minntac tailings basin and property boundaries. [Minn. R. 4725]
	5.9.7	The Permittee shall submit a baseline ground water monitoring report : Due 120 calendar days after Installation Date The Baseline Groundwater Monitoring Report shall contain the results of a minimum of three samples from each depth interval at monitoring well GW011 prior to initiating quarterly DMR sampling. Samples shall be taken at a frequency of no less than 2 weeks apart, and shall be analyzed for the parameters required for GW011 in the Limits and Monitoring section of this permit. The report shall specify which of the intermediate and deep depth intervals has the greater concentration of sulfate, and this well shall be used to fulfill quarterly DMR sampling requirements. [Minn. R. 4725]
	5.9.8	The well screen and riser should be constructed of either plastic or PVC in accordance with the requirements in MN Rule 4725. [Minn. R. 4725]
GW 012	Well, Downgradient	
		Facility Specific Limit and Monitoring Requirements
	5.10.1	The Permittee shall submit a monthly DMR : Due by 21 days after the end of each calendar month following permit issuance. [Minn. R. 7001.0150, Subp. 2(B)], Phases: Phase 1, Phase 2, Phase 3
	5.10.2	Sampling Location. [Minn. R. 7001.0150, Subp. 2(B)]
	5.10.3	Samples for Station GW012 shall be taken at: monitoring well 12 (aka PZ-12D). [Minn. R. 7001.0150, Subp. 2(B)]
	5.10.4	The Permittee shall submit monitoring results in accordance with the limits and monitoring requirements for this station. If conditions are such that no sample can be acquired, the Permittee shall report "No Flow" or "No Discharge" on Discharge Monitoring Report (DMR) and shall add a Comments attachment to the DMR detailing why the sample was not collected. [Minn. R. 7001.0150, Subp. 2(B)]

GW 013	Well, Downgradient	
		Facility Specific Limit and Monitoring Requirements
	5.11.1	The Permittee shall submit a monthly DMR : Due by 21 days after the end of each calendar month following permit issuance. [Minn. R. 7001.0150, Subp. 2(B)], Phases: Phase 1, Phase 2, Phase 3
	5.11.2	Sampling Location. [Minn. R. 7001.0150, Subp. 2(B)]
	5.11.3	Samples for Station GW013 shall be taken at: monitoring well 13. [Minn. R. 7001.0150, Subp. 2(B)]
	5.11.4	The Permittee shall submit monitoring results in accordance with the limits and monitoring requirements for this station. If conditions are such that no sample can be acquired, the Permittee shall report "No Flow" or "No Discharge" on Discharge Monitoring Report (DMR) and shall add a Comments attachment to the DMR detailing why the sample was not collected. [Minn. R. 7001.0150, Subp. 2(B)]
GW 014	Well, Downgradient	
		Facility Specific Limit and Monitoring Requirements
	5.12.1	The Permittee shall submit a monthly DMR : Due by 21 days after the end of each calendar month following permit issuance. [Minn. R. 7001.0150, Subp. 2(B)]
	5.12.2	Sampling Location. [Minn. R. 7001.0150, Subp. 2(B)]
	5.12.3	Samples for Station GW014 shall be taken at: monitoring well 14. [Minn. R. 7001.0150, Subp. 2(B)]
	5.12.4	The Permittee shall submit monitoring results in accordance with the limits and monitoring requirements for this station. If conditions are such that no sample can be acquired, the Permittee shall report "No Flow" or "No Discharge" on Discharge Monitoring Report (DMR) and shall add a Comments attachment to the DMR detailing why the sample was not collected. [Minn. R. 7001.0150, Subp. 2(B)]
SD 001	Effluent To Surface Water	
		Facility Specific Limit and Monitoring Requirements
	5.13.1	The Permittee shall submit a monthly DMR : Due by 21 days after the end of each calendar month following permit issuance. [Minn. R. 7001.0150, Subp. 2(B)]
	5.13.2	Sampling Location. [Minn. R. 7001.0150, Subp. 2(B)]
	5.13.3	Samples for Station SD001 shall be taken at the weir outfall for the impounded seep. Approximately 47.5988 degrees north, 92.6799 degrees west. [Minn. R. 7001.0150, Subp. 2(B)]
	5.13.4	The Permittee shall submit monitoring results in accordance with the limits and monitoring requirements for this station. If conditions are such that no sample can be acquired, the Permittee shall report "No Flow" or "No Discharge" on Discharge Monitoring Report (DMR) and shall add a Comments attachment to the DMR detailing why the sample was not collected. [Minn. R. 7001.0150, Subp. 2(B)]
		Chronic Toxicity Requirements
	5.14.5	General Requirements. [Minn. R. 7001]
	5.14.6	This permit does not include a chronic whole effluent toxicity limit; however the facility is required to conduct chronic toxicity tests at the SD001 discharge location, or the nearest downstream location in the Dark River after the installation of a seepage collection system ceases discharge at the station. Results of chronic toxicity tests will be evaluated against a monitoring threshold value of 1.0 TUc. [Minn. R. 7001]

	5.14.7	The Permittee shall submit annual chronic toxicity test battery results : Due annually following permit issuance. [Minn. R. 7001]
	5.14.8	Any test that exceeds 1.0 TUc shall be re-tested according to the Positive Toxicity Results requirement(s) that follow to determine if toxicity is still present above 1.0 TUc. [Minn. R. 7001]
	5.14.9	Species and Procedural Requirements. [Minn. R. 7001]
	5.14.10	Any test that is begun with an effluent sample that exceeds a total ammonia concentration of 5 mg/l shall use the carbon dioxide-controlled atmosphere technique to control pH drift. [Minn. R. 7001]
	5.14.11	Test organisms for each test battery shall include the fathead minnow (Pimephales promelas)-Method 1000.0 and Ceriodaphnia dubia-Method 1002.0. [Minn. R. 7001]
	5.14.12	Static renewal chronic serial dilution tests of the effluent shall consist of a control, 12.5%, 25%, 50%, 75% and 100% effluent. [Minn. R. 7001]
	5.14.13	All effluent samples shall be grab samples. Test solutions shall be renewed daily. Testing of the effluent shall begin within 36 hours of sample collection. Receiving water collected outside of the influence of discharge shall be used for dilution and controls. Chronic toxicity tests shall be conducted in accordance with procedures outlined in EPA-821-R-02-013 "Short-term Methods for Measuring the Chronic Toxicity of Effluents and Receiving Waters to Freshwater Organisms" - Fourth Edition (Chronic Manual) and any revisions to the Manual. [Minn. R. 7001]
	5.14.14	Any other circumstances not addressed in the previous requirements or that require deviation from that specified in the previous requirements shall first be approved by the MPCA. [Minn. R. 7001]
	5.14.15	Quality Control and Report Submittals. [Minn. R. 7001]
	5.14.16	Any test that does not meet quality control measures, or results which the Permittee believes reflect an artifact of testing shall be repeated within two (2) weeks. These reports shall contain information consistent with the report preparation section of the Chronic Manual. The MPCA shall make the final determination regarding test validity. [Minn. R. 7001]
	5.14.17	Positive Toxicity Result for WET. [Minn. R. 7001]
	5.14.18	Should a test exceed 1.0 TUc for whole effluent toxicity based on results from the most sensitive test species, the Permittee shall conduct two repeat test batteries on all species. The repeat tests are to be completed within forty-five (45) days after completion of the positive test. These tests will be used to determine if toxicity exceeding 1.0 TUc remains present for any test species. For both retests, if no toxicity is present above 1.0 TUc for any test species, the Permittee shall return to the test frequency specified by the permit. If either of the repeat test batteries indicate toxicity above 1.0TUc for any test species, the Permittee shall submit for MPCA review a plan for conducting a Toxicity Reduction Evaluation (TRE), including the Facility Performance Review (to be submitted to the MPCA WQ Submittals Center within 60 days after toxicity discovery date) and, at a minimum, provide quarterly reports starting from the date of TRE submittal, regarding progress towards the identity, source, and any plans for the removal of the toxicity. The TRE shall be consistent with EPA guidance or subsequent procedures approved by the MPCA in attempting to identify and remove the source of the toxicity. Routinely scheduled chronic toxicity test batteries required in this permit section shall be suspended for the duration of the TRE. [Minn. R. 7001]
	5.14.19	Following successful completion of the TRE the Permittee shall conduct one year of quarterly testing, with the results of the first quarterly test due the first full calendar quarter following TRE completion (For example, if the TRE is completed on April 28, the first quarterly results are due on or before September 30.) Following completion of one year of quarterly testing the return to routine annual acute toxicity testing is subject to the discretion of the MPCA. Amendments to the initial TRE shall be

		approved by MPCA staff and the schedules identified therein. [Minn. R. 7001]
	5.14.20	WET Data and Test Acceptability Criteria (TAC) Submittal. [Minn. R. 7001]
	5.14.21	All WET test data and TAC must be submitted to the MPCA by the dates required by this section of the permit using the Minnesota Pollution Control Agency Ceriodaphnia dubia Chronic Toxicity Test Report and/or Minnesota Pollution Control Agency Fathead Minnow Chronic Toxicity Test Report and associated instruction forms. Data not submitted on the correct form(s), or submitted incomplete, will be returned to the permittee and deemed incomplete until adequately submitted on the designated form (identified above). Data should be submitted to: MPCA Attn: WQ Submittals Center 520 Lafayette Road North St. Paul, Minnesota 55155-4194. [Minn. R. 7001]
	5.14.22	Permit Re-opening for WET. [Minn. R. 7001]
	5.14.23	Based on the results of the testing, the permit may be modified to include additional toxicity testing and a whole effluent toxicity limit. [Minn. R. 7001]
	5.14.24	Whole Effluent Toxicity Requirement Definitions. [Minn. R. 7001]
	5.14.25	"Chronic Whole Effluent Toxicity (WET) Test is a static renewal test conducted on an exponentially diluted series of effluent. The purpose is to calculate appropriate biological effect endpoints (NOEC or IC25), specified in the referenced chronic manual. A statistical effect level less than the Receiving Water Concentration (RWC) constitutes a positive test for chronic toxicity. The RWC equals the 100 percent effluent concentration or 1.0 TUc. [Minn. R. 7001]
	5.14.26	"Chronic toxic unit (TUc)" is the reciprocal of the effluent dilution that causes no unacceptable effect on the test organisms by the end of the chronic exposure period. For example, a TUc equals [7Q10flow (mgd) + effluent average dry weather flow (mgd)]/[effluent average dry weather flow (mgd)]. [Minn. R. 7001]
	5.14.27	"Test" refers to an individual species. [Minn. R. 7001]
	5.14.28	"Test Battery" consists of WET testing of all test species for the specified test. For chronic WET testing, all test species includes Fathead minnows and ceriodaphnia dubia. [Minn. R. 7001]
SD 005	Stormwater, Non-specific Runoff	
		Surface Discharge: Industrial Stormwater Sector G Requirements
	5.15.1	The Permittee shall submit an annual DMR : Due by 21 days after the end of each calendar year following permit issuance. [Minn. R. 7001.0150, Subp. 2(B)]
	5.15.2	Sampling Location. [Minn. R. 7001.0150, Subp. 2(B)]
	5.15.3	Samples for Station SD005 shall be taken at an area representative of the confluence of flows from the Dark Pond underdrain and the ponded are directly to the south of tailings cell D1. [Minn. R. 7001.0150, Subp. 2(B)]
	5.15.4	The Permittee shall submit monitoring results in accordance with the limits and monitoring requirements for this station. If conditions are such that no sample can be acquired, the Permittee shall report "No Flow" or "No Discharge" on Discharge Monitoring Report (DMR) and shall add a Comments attachment to the DMR detailing why the sample was not collected. [Minn. R. 7001.0150, Subp. 2(B)]
SD 006	Effluent To Surface Water	
		Facility Specific Limit and Monitoring Requirements

	5.16.1	The Permittee shall submit a monthly DMR : Due by 21 days after the end of each calendar month following permit issuance. [Minn. R. 7001.0150, Subp. 2(B)]
	5.16.2	Sampling Location. [Minn. R. 7001.0150, Subp. 2(B)]
	5.16.3	Samples for Station SD 006 shall be taken at any seep adjacent to the basin dam with an observable discharge to the nearby wetland at the time of sampling in the SE 1/4 of the NW 1/4 of the SW 1/4 of Section 4, Township 59N, Range 18W. Approximately 47.62 degrees north, 92.64 degrees west. If more than one seep has an observable discharge at the time of sampling, sampling shall be conducted from the seep with the greatest estimated or measured flow. [Minn. R. 7001.0150, Subp. 2(B)]
	5.16.4	The Permittee shall submit monitoring results in accordance with the limits and monitoring requirements for this station. If conditions are such that no sample can be acquired, the Permittee shall report "No Flow" or "No Discharge" on Discharge Monitoring Report (DMR) and shall add a Comments attachment to the DMR detailing why the sample was not collected. [Minn. R. 7001.0150, Subp. 2(B)]
SW 001	Stream/River/Ditch, Other	
		Facility Specific Limit and Monitoring Requirements
	5.17.1	The Permittee shall submit a monthly DMR : Due by 21 days after the end of each calendar month following permit issuance. [Minn. R. 7001.0150, Subp. 2(B)]
	5.17.2	Sampling Location. [Minn. R. 7001.0150, Subp. 2(B)]
	5.17.3	Samples for Station SW001 shall be taken at the culvert inlet where the Sand River crosses Reid Road, just west of Highway 53, which is located in the NW 1/4 of the NW 1/4 of Section 6, Township 59 N, Range 17 W. [Minn. R. 7001.0150, Subp. 2(B)]
	5.17.4	The Permittee shall submit monitoring results in accordance with the limits and monitoring requirements for this station. If conditions are such that no sample can be acquired, the Permittee shall report "No Flow" or "No Discharge" on Discharge Monitoring Report (DMR) and shall add a Comments attachment to the DMR detailing why the sample was not collected. [Minn. R. 7001.0150, Subp. 2(B)]
SW 003	Stream/River/Ditch, Downstream	
		Facility Specific Limit and Monitoring Requirements
	5.18.1	The Permittee shall submit a monthly DMR : Due by 21 days after the end of each calendar month following permit issuance. [Minn. R. 7001.0150, Subp. 2(B)]
	5.18.2	Sampling Location. [Minn. R. 7001.0150, Subp. 2(B)]
	5.18.3	Samples for Station SW003 shall be taken at the bridge where the Dark River crosses County Road 668, which is located in the SE 1/4 of the SE 1/4 of the NE 1/4 of Section 3, Township 59 N, Range 19 W. Approximately 47.624 degrees north, 92.732 degrees west. [Minn. R. 7001.0150, Subp. 2(B)]
	5.18.4	The Permittee shall submit monitoring results in accordance with the limits and monitoring requirements for this station. If conditions are such that no sample can be acquired, the Permittee shall report "No Flow" or "No Discharge" on Discharge Monitoring Report (DMR) and shall add a Comments attachment to the DMR detailing why the sample was not collected. [Minn. R. 7001.0150, Subp. 2(B)]
SW 004	Stream/River/Ditch, Downstream	
		Facility Specific Limit and Monitoring Requirements
	5.19.1	The Permittee shall submit a monthly DMR : Due by 21 days after the end of each calendar month following permit issuance. [Minn. R. 7001.0150, Subp. 2(B)]

	5.19.2	Sampling Location. [Minn. R. 7001.0150, Subp. 2(B)]
	5.19.3	Samples for Station SW004 shall be taken at the bridge where the Dark River crosses County Road 65, which is located in the NE 1/4 of Section 30, Township 60 N, Range 19 W. Approximately 47.658 degrees north, 92.797 degrees west. [Minn. R. 7001.0150, Subp. 2(B)]
	5.19.4	The Permittee shall submit monitoring results in accordance with the limits and monitoring requirements for this station. If conditions are such that no sample can be acquired, the Permittee shall report "No Flow" or "No Discharge" on Discharge Monitoring Report (DMR) and shall add a Comments attachment to the DMR detailing why the sample was not collected. [Minn. R. 7001.0150, Subp. 2(B)]
SW 005	Lake/Reservoir	
		Facility Specific Limit and Monitoring Requirements
	5.20.1	The Permittee shall submit a monthly DMR : Due by 21 days after the end of each calendar month following permit issuance. [Minn. R. 7001.0150, Subp. 2(B)]
	5.20.2	Sampling Location. [Minn. R. 7001.0150, Subp. 2(B)]
	5.20.3	Samples for Station SW005 shall be taken at the Sand River inflow to Little Sandy Lake, which is located in the NW 1/4 of the NE 1/4 of the NW 1/4 of Section 11, Township 59 N, Range 18 W. Approximately 47.617 degrees north, 92.596 degrees west. [Minn. R. 7001.0150, Subp. 2(B)]
	5.20.4	The Permittee shall submit monitoring results in accordance with the limits and monitoring requirements for this station. If conditions are such that no sample can be acquired, the Permittee shall report "No Flow" or "No Discharge" on Discharge Monitoring Report (DMR) and shall add a Comments attachment to the DMR detailing why the sample was not collected. [Minn. R. 7001.0150, Subp. 2(B)]
SW 006	Stream/River/Ditch, Downstream	
		Facility Specific Limit and Monitoring Requirements
	5.21.1	The Permittee shall submit a monthly DMR : Due by 21 days after the end of each calendar month following permit issuance. [Minn. R. 7001.0150, Subp. 2(B)]
	5.21.2	Sampling Location. [Minn. R. 7001.0150, Subp. 2(B)]
	5.21.3	Samples for Station SW006 shall be taken in Timber Creek in the vicinity of the abandoned road, which is located in the SW 1/4 of the SE 1/4 of the NE 1/4 of Section 13, Township 59 N, Range 19 W. Approximately 47.595 degrees north, 92.692 degrees west. [Minn. R. 7001.0150, Subp. 2(B)]
	5.21.4	The Permittee shall submit monitoring results in accordance with the limits and monitoring requirements for this station. If conditions are such that no sample can be acquired, the Permittee shall report "No Flow" or "No Discharge" on Discharge Monitoring Report (DMR) and shall add a Comments attachment to the DMR detailing why the sample was not collected. [Minn. R. 7001.0150, Subp. 2(B)]
SW 007	Lake/Reservoir	
		Facility Specific Limit and Monitoring Requirements
	5.22.1	The Permittee shall submit a monthly DMR : Due by 21 days after the end of each calendar month following permit issuance. [Minn. R. 7001.0150, Subp. 2(B)]
	5.22.2	Sampling Location. [Minn. R. 7001.0150, Subp. 2(B)]
	5.22.3	Samples for Station SW007 shall be taken in a location as yet to be determined in Admiral Lake, which is located in the SE 1/4 of the SE 1/4 of Section 10, Township 59 N, Range 18 W. Approximately 47.605 degrees north, 92.603 degrees west. [Minn. R.

		7001.0150, Subp. 2(B)]
	5.22.4	The Permittee shall submit monitoring results in accordance with the limits and monitoring requirements for this station. If conditions are such that no sample can be acquired, the Permittee shall report "No Flow" or "No Discharge" on Discharge Monitoring Report (DMR) and shall add a Comments attachment to the DMR detailing why the sample was not collected. [Minn. R. 7001.0150, Subp. 2(B)]
SW 008	Stream/River/Ditch, Downstream	
		Facility Specific Limit and Monitoring Requirements
	5.23.1	The Permittee shall submit a monthly DMR : Due by 21 days after the end of each calendar month following permit issuance. [Minn. R. 7001.0150, Subp. 2(B)]
	5.23.2	Sampling Location. [Minn. R. 7001.0150, Subp. 2(B)]
	5.23.3	Samples for Station SW008 shall be taken in the Dark River in the vicinity of the abandoned road, which is located in the NE 1/4 of the NE 1/4 of the NE 1/4 of Section 13, Township 59 N, Range 19 W. Approximately 47.600 degrees north, 92.689 degrees west. [Minn. R. 7001.0150, Subp. 2(B)]
	5.23.4	The Permittee shall submit monitoring results in accordance with the limits and monitoring requirements for this station. If conditions are such that no sample can be acquired, the Permittee shall report "No Flow" or "No Discharge" on Discharge Monitoring Report (DMR) and shall add a Comments attachment to the DMR detailing why the sample was not collected. [Minn. R. 7001.0150, Subp. 2(B)]
WS 008	Internal Waste Stream	
		Facility Specific Limit and Monitoring Requirements
	5.24.1	The Permittee shall submit a monthly DMR : Due by 21 days after the end of each calendar month following permit issuance. [Minn. R. 7001.0150, Subp. 2(B)]
	5.24.2	Sampling Location. [Minn. R. 7001.0150, Subp. 2(B)]
	5.24.3	Samples for Station WS008 shall be taken at: an accessible location after the waste stream leaves the domestic plant and prior to mixing with any other waters or wastes. [Minn. R. 7001.0150, Subp. 2(B)]
	5.24.4	The Permittee shall submit monitoring results in accordance with the limits and monitoring requirements for this station. If conditions are such that no sample can be acquired, the Permittee shall report "No Flow" or "No Discharge" on Discharge Monitoring Report (DMR) and shall add a Comments attachment to the DMR detailing why the sample was not collected. [Minn. R. 7001.0150, Subp. 2(B)]
WS 009	Internal Waste Stream	
		Facility Specific Limit and Monitoring Requirements
	5.25.1	The Permittee shall submit a monthly DMR : Due by 21 days after the end of each calendar month following permit issuance. [Minn. R. 7001.0150, Subp. 2(B)], Phases: Phase 4, Phase 1, Phase 2, Phase 3
	5.25.2	Sampling Location. [Minn. R. 7001.0150, Subp. 2(B)]
	5.25.3	Samples for Station WS009 shall be taken at: a location in Basin Cell 1 that is representative of the overall composition of the process wastewater that is stored in the basin and recirculated through the taconite processing plant. If physical measurements are made for the parameters precipitation and evaporation, these may be made at any suitable and representative location at the facility. [Minn. R. 7001.0150, Subp. 2(B)]

	5.25.4	The Permittee shall submit monitoring results in accordance with the limits and monitoring requirements for this station. If conditions are such that no sample can be acquired, the Permittee shall report "No Flow" or "No Discharge" on Discharge Monitoring Report (DMR) and shall add a Comments attachment to the DMR detailing why the sample was not collected. [Minn. R. 7001.0150, Subp. 2(B)]
MN0057207	US Steel Corp - Minntac Tailings Basin Area	
		Groundwater Station General Requirements
	5.26.1	Monitoring Wells. [Minn. R. 7001]
	5.26.2	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. [Minn. R. 4725]
	5.26.3	The Permittee shall submit a detailed monitoring well log for each monitoring well at the facility and a detailed US Geological Survey topographical map identifying the location of each well. [Minn. R. 7001]
	5.26.4	Each monitoring well shall be clearly numbered on the outside of the well with either indelible paint or an inscribed number. [Minn. R. 7001]
	5.26.5	The monitoring wells shall be sampled in accordance with "Minnesota Pollution Control Agency, Water Quality Division: Sampling Procedures for Ground Water Monitoring Wells, July 1997, Reviewed and re-approved September 2006" or any updates to this document. A copy of this publication is available on the MPCA website at: http://www.pca.state.mn.us. [Minn. R. 7001]
	5.26.6	Grab samples shall be collected at all ground water monitoring points (lysimeters or wells) after stabilization tests are conducted. [Minn. R. 7001]
	5.26.7	Prior to well purging and sampling, depths to groundwater shall be measured to the nearest 0.01 foot below the top of the well casing, and groundwater elevations shall be reported to the nearest 0.01 foot above mean sea level. [Minn. R. 7001]
	5.26.8	Temperature, specific conductance and pH shall be reported as the final field measurements from well stabilization. [Minn. R. 7001]
		Surface Discharge Station General Requirements
	5.27.9	Sampling Location. [Minn. R. 7001]
	5.27.10	Upon completion of construction of the Dark River Seepage Collection and Return System and commencement of its operation, all surface and shallow groundwater seepage formerly reporting to SD001 must be captured and pumped back into the tailings basin clear pool, eliminating the discharge through the currently permitted outfall . [Minn. R. 7001]
	5.27.11	Representative Samples. [Minn. R. 7001]
	5.27.12	Samples and measurements required by this permit shall be representative of the monitored activity. [Minn. R. 7001]
	5.27.13	Surface Discharge Prohibitions. [Minn. R. 7001]
	5.27.14	Floating solids or visible foam shall not be discharged in other than trace amounts. [Minn. R. 7001]
	5.27.15	Oil or other substances shall not be discharged in amounts that create a visible color film. [Minn. R. 7001]
	5.27.16	The Permittee shall install and maintain outlet protection measures at the discharge stations to prevent erosion. [Minn. R. 7001]

	5.27.17	Winter Sampling Conditions. [Minn. R. 7001]
	5.27.18	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. [Minn. R. 7001]
	5.27.19	Mercury Limits and Monitoring Requirements. [Minn. R. 7001]
	5.27.20	Permittees are required to sample for TSS (grab sample) at the same time that Total/Dissolved Mercury samples are taken. Total Mercury, Dissolved Mercury, and TSS (grab sample) samples shall be collected via grab samples. All results shall be recorded on DMRs. [Minn. R. 7001]
	5.27.21	Total and Dissolved Mercury samples shall be analyzed using the most current versions of EPA Method 1631 with clean techniques method 1669. Should another mercury analytical method that has a reportable quantitation level of <0.5 ng/L that allows for low-level sample characterization be approved by the EPA and certified by an MPCA recognized accreditation body, the method may be used in place of 1631/1669. [Minn. R. 7001]
		Surface Water Station General Requirements
	5.28.22	Sampling Protocol. [Minn. R. 7001]
	5.28.23	Record location, date, time and results for each sample on the supplemental Discharge Monitoring Report form. [Minn. R. 7001]
	5.28.24	All instruments used for field measurements shall be maintained and calibrated to ensure accuracy of measurements. [Minn. R. 7001]
	5.28.25	Sample water shall be preserved according to lab instructions and delivered to a certified lab within the maximum holding times. [Minn. R. 7001]
	5.28.26	Winter Sampling Conditions. [Minn. R. 7001]
	5.28.27	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. [Minn. R. 7001]
		Compliance Schedule
	5.29.28	To mitigate impacts from the Tailings Basin discharge to groundwater (SDS Compliance Schedule), the Permittee shall meet the following limits in the shortest reasonable period of time, but in no event later than the following times, unless the Permittee establishes through the investigation required under Part 2 below (Hydrological Investigation Work Plan) and/or Part 3 below (Basin Treatment Methods Study Plan) and other reliable data that other limits will result in compliance with the applicable water quality standards at all waters shown to be affected by pollutants released from the Tailings Basin or that other deadlines are necessary, and this permit has been amended to reflect those limits and/or deadlines: a) 357 mg/L sulfate within the tailings basin pool water no later than ten years after permit issuance; and b) 250 mg/L sulfate in the groundwater at the property boundary by December 31, 2025. [Minn. R. 7001]
	5.29.29	For the discharge of seepage to surface water along the tailings basin dam perimeter, the Permittee shall meet the terms of the NPDES compliance schedule (detailed below in part 5.29.57) as soon as possible, but not later than 18 months after permit issuance. [Minn. R. 7001]

	5.29.30	**Hydrological Investigation Work Plan**. [Minn. R. 7001]
	5.29.31	Within 180 days after permit issuance, the Permittee must submit a Hydrological Investigation Work Plan that describes how the Permittee proposes to investigate and evaluate site conditions critical to the selection and implementation of treatment, mitigation efforts and/or other activities that could be taken to meet all applicable water quality standards and support designated uses in waters of the state that are impacted by pollutants from the Basin. submit a plan : Due by 180 days after permit issuance. [Minn. R. 7001]
	5.29.32	The Hydrological Investigation Work Plan shall include a field data collection and analysis plan sufficient to accomplish the following: a) identify the significant surface and subsurface flow paths from the tailings basin to surrounding surface waters and groundwater under existing and foreseeable hydrologic conditions at the tailings basin; b) evaluate water quality with respect to all applicable uses potentially impacted by the tailings basin along the identified flow paths; c) determine potential aggregate acute and chronic toxic effects to aquatic organisms at compliance locations (identified in this permit) in the Sand River and Dark River watersheds; d) develop an understanding of the fate and transport of tailings basin-derived chemical constituents at a level sufficient to assess the effectiveness of considered mitigation technologies and strategies, including calculated estimates of the recirculated tailings basin pool water sulfate concentration necessary to meet applicable water quality standards and support designated uses in surface water and groundwater; e) determine sources and potential quantities of pollutants released from each source in the basin, including sources such as coarse tails, fine tails, recirculating process water, air emissions control contributions, and tailings lock-up water (pore water); and, f) identify and quantify any other pollutants the Permittee could reasonably expect to be released from the tailings basin, taking into account contributions from tailings lock-up water, continued oxidation of emplaced tails, and secondary pollutants that could be released or re-mobilized, and estimate the timeframe over which the tailings basin will continue to release pollutants. [Minn. R. 7001]
	5.29.33	The Hydrological Investigation Work Plan shall also include a field data collection and analysis plan sufficient to develop a site conceptual flow and transport model(s) that describes the sources, fate, and transport of tailings basin pollutants sufficiently for the purpose of estimating future hydrogeological and water quality conditions at the tailings basin and along the flowpaths identified for 5.29.32(a) during basin operation, and post closure, and which will allow the Permittee to evaluate the effectiveness of potential passive and/or active treatment technologies, mitigation alternatives or combinations of actions, with regard to meeting all applicable water quality standards and supporting designated uses in waters of the state that are impacted by pollutants from the Basin. The conceptual flow and transport model(s) shall provide a system mass balance that accounts for the transport or transformation of parameters of concern to within plus or minus ten percent of the mass calculated to be emanating from the tailings basin, as well as estimates for pollutant travel times along identified flow paths. [Minn. R. 7001]
	5.29.34	The Permittee must also comply with the following interim requirements before submitting its final plan. Within 90 days after permit issuance, the Permittee must submit to the MPCA a status report identifying: a) All waters of the state that are believed to be impacted by pollutants from the Basin; b) All waters of the state within a 2 mile radius of the Basin perimeter that the Permittee contends are not impacted by pollutants from the Basin and detailing the

		reasons the Permittee contends those waters are not impacted by pollutants from the Basin; and c) A preliminary list of locations where field investigation monitoring activities are planned. submit a report : Due by 90 days after permit issuance. [Minn. R. 7001]
	5.29.35	The Permittee shall complete the actions listed in the Hydrological Investigation Work Plan within 18 months of permit issuance. [Minn. R. 7001]
	5.29.36	Upon submittal of the Hydrological Investigation Work Plan and schedule, the Permittee shall commence work on the Plan in accordance with the schedule contained therein and provide written notice to the MPCA that it has commenced work and thereafter report to the MPCA on its progress as required by part 5.29.37 (reports). The MPCA reserves the right to submit comments to the Permittee on the adequacy of the Investigation Work Plan. If the Permittee does not address comments submitted by the MPCA to the satisfaction of the MPCA, the MPCA reserves the right to determine that the results do not provide adequate scientific support for any proposed change in the schedule of compliance limits. [Minn. R. 7001]
	5.29.37	Following submittal of its Investigation Work Plan, the Permittee must provide a status report every 90 days identifying, at a minimum, the following: a) The work conducted in the last 90 days; b) Any reports prepared by the Permittee, or its consultants, related to the work performed; c) Milestones to be met before the next 90 day status report and work the Permittee intends to perform to meet those milestones. [Minn. R. 7001]
	5.29.38	A final report documenting the findings of the fully implemented Hydrological Investigation Work Plan shall be submitted within 18 months of permit issuance. The report shall include all of the information and analyses described in Parts 5.29.32 and the site conceptual flow and transport model described in 5.29.33. submit a report : Due 548 calendar days after Permit Issuance Date. [Minn. R. 7001]
	5.29.39	Failure to complete the Investigation Work Plan and submit the required report within 18 months of permit issuance will not extend the deadline for the Basin Treatment Methods Study Plan. [Minn. R. 7001]
	5.29.40	**Basin Treatment Methods Study Plan**. [Minn. R. 7001]
	5.29.41	Within 20 months of permit issuance, the Permittee shall submit a Basin Treatment Methods Study Plan that identifies feasible technologies (including at a minimum, nano-filtration, reverse osmosis, ion exchange, and dry emissions controls), for non-mechanical or mechanical treatment/mitigation to reduce the concentration of sulfate as required under part 5.29.28 above. submit a report : Due 610 calendar days after Permit Issuance Date. [Minn. R. 7001]
	5.29.42	The Basin Treatment Methods Study Plan must identify how the Permittee will evaluate the treatment methods to determine which method will reduce surface water and groundwater quality impacts from the tailings basin in the shortest reasonable period of time, considering the reliability of the treatment methods, the cost to install and to operate the treatment methods, compatibility with MDNR closure requirements, and the secondary environmental impacts of the treatment methods, if any. [Minn. R. 7001]
	5.29.43	The Basin Treatment Methods Study Plan must include a detailed schedule that justifies the time period proposed to complete the technical feasibility analysis. [Minn. R. 7001]
	5.29.44	The Basin Treatment Methods Study Plan must be of sufficient scope to provide for the following, which shall be detailed in the Final Compliance Plan described in Part 5.29.51: a) a description of each possible treatment method that the Permittee has identified, an analysis of the technical feasibility of each method, and the estimated cost to install or implement each method;

		b) an estimate of the length of time that each technology/treatment method would require to attain and maintain compliance with a basin sulfate concentration identified in Part 5.29.28(a); c) an estimate of operation and maintenance costs associated with each treatment method and the reliability of that method; d) analysis of how each identified potential passive and/or active treatment method may impact site closure in accordance with MDNR requirements, which include a dry basin; e) identification of secondary environmental impacts and costs for each method; f) whether mitigation adjacent to the basin will be necessary, in addition to basin water treatment, to meet all applicable water quality standards and supported designated uses for the waters of the state that are impacted by pollutants from the Basin, including any water quality standards and supported designated uses identified by the MPCA, in the shortest reasonable period of time. [Minn. R. 7001]
	5.29.45	All tasks described under the Basin Treatment Methods Study Plan must be completed within 29 months of permit issuance. The plan provides the basis for the Permittee to submit the Final Compliance Plan described in Part 5.29.51 below. [Minn. R. 7001]
	5.29.46	Upon submittal of the Basin Treatment Methods Study Plan and schedule, the Permittee shall initiate the plan of action identified in the Plan in accordance with the schedule contained therein, and provide written notice to the MPCA that it has done so within 14 days. [Minn. R. 7001]
	5.29.47	The MPCA reserves the right to submit comments to the Permittee on the adequacy of the Basin Treatment Methods Study Plan and schedule. If the Permittee does not address comments submitted by the MPCA to the satisfaction of the MPCA, the MPCA reserves the right to determine that the results do not provide adequate scientific support for a change in the schedule of compliance limits. [Minn. R. 7001]
	5.29.48	If the Permittee proposes an alternative final basin concentration, the Permittee must submit an application to modify the permit. To be approved, the Permittee must demonstrate scientific support for the ability of the alternative to meet applicable water quality standards in all water bodies identified as being affected or potentially affected by water released from the Tailings Basin as demonstrated in the Hydrological Investigation Work Plan. [Minn. R. 7001]
	5.29.49	**Final Compliance Plan**. [Minn. R. 7001]
	5.29.50	Within 30 months of permit issuance, or within 60 days of MPCA's approval or denial of a permit amendment, if requested, the Permittee shall submit a Final Compliance Plan. submit a compliance plan : Due by 2.5 years after permit issuance. [Minn. R. 7001]
	5.29.51	The Final Compliance Plan shall include the following: a) the findings of the Hydrological Investigation and Basin Treatment Methods Study, including an estimate of how quickly the identified potential passive and/or active treatment technologies, mitigation alternatives or combinations of actions will reduce the basin sulfate concentration to 357 mg/L, or an alternative concentration if the permit has been amended to include an alternative concentration. b) an explanation of why the technology/treatment method(s) selected represent the best means of meeting final compliance limits. Factors to be considered the best technology/treatment method(s) include rate of reduction of sulfate concentration, reliability, feasibility, compatibility with the approved basin closure plan, and limitation of secondary environmental impacts that will not be mitigated; c) an estimate of operation and maintenance costs associated with treatment/mitigation to maintain compliance with applicable water quality standards and support designated uses in surface water and groundwater; d) an estimate of the length of time that active treatment or maintenance of

		passive systems would be required to maintain compliance with applicable water quality standards and support designated uses in surface water and groundwater (pre and post closure); e) a predicted timeline, based on information collected under the Investigation Work Plan, for when the reduction of pollutant load to the watershed will be first observed at the monitoring stations; f) analysis of how the identified potential passive and/or active treatment technologies, mitigation alternatives or combinations of actions may impact site closure in accordance with MDNR requirements, which include a dry basin; g) a detailed proposal identifying the specific treatment systems and/or mitigation that will be implemented to achieve compliance with final permit limits and applicable water quality standards, including basin sulfate concentration limits, in the shortest reasonable period of time; h) the design, site plan, process schematic(s), preliminary design and specifications for major components of the specific treatment systems, and/or mitigation to be implemented; i) a schedule that will incorporate any pilot testing, (which must be completed by month 42), if necessary, to finalize the design process; and j) a schedule for attaining any necessary permits in the shortest reasonable period of time. [Minn. R. 7001]
	5.29.52	**Final Plans and Specifications**. [Minn. R. 7001]
	5.29.53	Within 48 months of permit issuance, the Permittee shall submit to MPCA: a) a final design package, which includes plans and specifications for treatment or mitigation system components, including specifications based on any pilot testing conducted that are sufficient to submit complete and accurate applications for any permits that may be required; b) a monitoring plan that will allow quantifiable biannual assessment of the performance of the treatment system and/or mitigation relative to its ability to achieve compliance with final limits, as well as applicable surface water and groundwater water quality standards by the specified date; c) a detailed schedule of milestones, occurring at intervals of annually or less, which include, at a minimum, start of construction, completion of construction, start-up, and initiation of operation, with adequate justification for the timeline described in the schedule meeting the shortest reasonable period of time requirement. Upon submittal, the milestone deadlines will become fully enforceable commitments of this compliance schedule, and failure to achieve these commitments will constitute a permit violation enforceable by MPCA; and d) predictions of the dates applicable water quality standards and designated uses will be met at each surface water monitoring station as a result of proposed mitigation efforts. submit final technical documents : Due by four years after permit issuance. [Minn. R. 7001]
	5.29.54	**SDS Schedule for Deep Seepage - System Implementation or Construction**. [Minn. R. 7001]
	5.29.55	The Permittee shall initiate construction or begin implementation of the chosen treatment system and/or mitigation within the shortest reasonable period of time, but no later than 54 months after permit issuance. begin construction : Due 1644 calendar days after Permit Issuance Date. [Minn. R. 7001]
	5.29.56	**NPDES Schedule - Dark River Seepage Collection and Return System (SCRS)**. [Minn. R. 7001]
	5.29.57	The Permittee shall implement a system for recapture of seepage affecting shallow groundwater and surface waters ("SCRS") on the west side of the Tailings Basin within 18 months of permit issuance. The Permittee is responsible for obtaining all necessary approvals (U.S. Army Corps of Engineers, Wetland Conservation Act) to implement the

		SCRS system by submitting timely and complete applications. The MPCA will not grant any extensions to this deadline if the Permittee fails to submit timely and complete applications for necessary approvals. The Permittee shall provide copies to the MPCA of all applications filed and correspondence submitted to other agencies, which must approve the SCRS system. complete construction and commence operation : Due 548 calendar days after Permit Issuance Date. [Minn. R. 7001]
	5.29.58	The Permittee shall submit a report on the progress made toward installation of the Dark River Seepage Collection and Return System, including any permitting, bidding, and contracting activities. submit a progress report : Due by 180 days after permit issuance. [Minn. R. 7001]
	5.29.59	**Special Requirements (Applicable to NPDES and SDS Schedules of Compliance)**. [Minn. R. 7001]
	5.29.60	To ensure timely submittal of complete and accurate plans fulfilling all specified requirements, the Permittee shall meet with MPCA three months prior to each plan submittal deadline. At the meeting, the Permittee must present a progress report and draft plan that includes all the components of the plan as described in this permit and that will attain compliance with permit limits in the shortest reasonable period of time. [Minn. R. 7001]
	5.29.61	Compliance with permit limits at groundwater monitoring stations shall be deemed to have occurred when all monitoring results at that station are less than or equal to the stated limit for one year of monitoring, and remain at less than or equal to the limit thereafter. [Minn. R. 7001]
	5.29.62	Compliance with permit limits for the basin sulfate concentration shall be deemed to have occurred when all monitoring results for that station, or other representative basin sampling location, are less than or equal to the stated limit for 6 consecutive months of monitoring, and remain at less than or equal to the limit thereafter. [Minn. R. 7001]
	5.29.63	If any of the submitted Plan(s) described herein propose actions requiring permits and/or approvals, the Permittee shall submit complete and accurate applications in the shortest reasonable period of time and comply completely and accurately with any requests for additional information in the timeframes specified in the requests. Delays in permit issuance due to incomplete or inaccurate applications will not excuse failure to meet permit deadlines. [Minn. R. 7001]
	5.29.64	As new information becomes available during the course of the Compliance Schedule that results in material changes to a plan that has been submitted under the Compliance Schedule, the Permittee shall submit revisions to the affected plan consistent with the requirements for plan contents under the terms of this permit. Upon submittal, any such revisions to milestone deadlines shall be incorporated as enforceable provisions into the respective plans, and are enforceable under this permit. [Minn. R. 7001]
		Special Requirements
	5.30.65	**Alternate Sources of Make-up Water**. [Minn. R. 7001]
	5.30.66	To enable possible further reductions in loading of sulfate and hardness to the basin, this permit authorizes USS to manage its intake water supply source(s), without modification to this permit, when the following conditions are met: a. the proposed water source is of an equivalent or better water quality, with respect to concentrations of total sulfate, hardness (ca + mg), total dissolved solids and bicarbonate, than the water source (sole or composite) being utilized at the time of the requested change, and of any Mt. Iron Pit or Sump 6 water source that may be available but is not being utilized at that time; b. the appropriation has received an applicable permit from MDNR, if required; c. the appropriation has received other applicable permits (e.g., 401/404 permits) if

		required; d. utilization of the water source complies with all applicable dam safety regulations; e. the appropriation has completed the environmental review process if required; f. the water has been analyzed in accordance with the guidelines described in Total Facility - General Requirements - Sampling subsection of the permit for the following primary parameters: alkalinity (bicarbonate as CaCO3), total sulfate, hardness (Ca+Mg as CaCO3), total dissolved solids; and secondary parameters: aluminum (total), ammonia, antimony (total), arsenic (total), barium (total), boron (total), cadmium, chloride, cobalt, (total), copper, fluoride, iron (total), lead, manganese (total), mercury, molybdenum, pH, phosphorous, salinity, selenium, silver, sodium, specific conductance, strontium MCLG, total dissolved solids, temperature, thallium, turbidity, TSS, and zinc; and, g. if concentrations of any secondary parameters, identified in subheading f above, in the proposed source water exceed that of the existing make up water, the Permittee must submit documentation (for MPCA approval) that utilization of the water source is not likely to cause or contribute to exceedance of applicable water quality standards in waters of the State downgradient and downstream of the Facility. [Minn. R. 7001]
		Mercury Minimization Plan
	5.31.67	The Permittee is required to complete and submit a Mercury Pollutant Minimization Plan (MMP) to the MPCA as detailed in this section. If the Permittee has previously submitted a MMP, it shall update its MMP and submit the updated MMP to the MPCA. The purpose of the MMP is to evaluate collection and treatment systems to determine possible sources of mercury as well as potential mercury reduction options. Guidelines for developing a MMP are detailed in this section. [Minn. R. 7001]
	5.31.68	The specific mercury monitoring requirements are detailed in the limits and monitoring section of this permit. Information gained through the MMP process can be used to reduce mercury concentrations. As part of its mercury control strategy, the Permittee should consider selecting activities based on the potential of those activities to reduce mercury loadings to the wastewater treatment facility. [Minn. R. 7001]
	5.31.69	The Permittee shall submit a mercury pollutant minimization plan : Due by 180 days after permit issuance. [Minn. R. 7001]
	5.31.70	At a minimum, the MMP shall include the following: a. A summary of mercury influent and effluent concentrations and biosolids monitoring data using the most recent five years of monitoring data, if available. b. Identification of existing and potential sources of mercury concentrations and/or loading to the facility. As appropriate for your facility, you should consider residential, institutional, municipal, and commercial sources (such as dental clinics, hospitals, medical clinics, nursing homes, schools, laundries, and industries with potential for mercury contributions). You should also consider other influent mercury sources, such as stormwater inputs, ground water (inflow & infiltration) inputs, lift station components, and waste streams or sewer tributaries to the wastewater treatment facility. c. An evaluation of past and present WWTF operations to determine those operating procedures that maximize mercury removal. d. A summary of any mercury reduction activities implemented during the last five years. e. A plan to implement mercury management and reduction measures during the next five years. [Minn. R. 7001]
		Industrial Process Wastewater

	5.32.71	Prohibited Discharges. [Minn. R. 7001]
	5.32.72	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. [Minn. R. 7001.1090, Subp. 1(A)]
	5.32.73	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. [Minn. R. 7001.1090, Subp. 1(A)]
	5.32.74	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. [Minn. R. 7049.140, Subp. 2]
	5.32.75	Toxic Substance Reporting. [Minn. R. 7001]
	5.32.76	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. [Minn. R. 7001.1090, Subp. 2]
	5.32.77	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. [Minn. R. 7001.1050, Subp. 2(J)]
	5.32.78	Polychlorinated Biphenyls (PCBs). [Minn. R. 7001]
	5.32.79	PCBs, including but not limited to those used in electrical transformers and capacitors, shall not be discharged or released to the environment. [Minn. R. 7001.150, Subp. 2]
	5.32.80	New Proposed Dewatering. [Minn. R. 7001]
	5.32.81	The Permittee shall obtain a permit modification before discharging from a new dewatering outfall. [Minn. R. 7001.170]
	5.32.82	In addition to the requirements in the Permit Modifications section of this permit, the Permittee shall submit to the MPCA 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. [Minn. R. 7001.170]
	5.32.83	Application for Permit Reissuance. [Minn. R. 7001, Minn. R. 7001]
	5.32.84	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. [Minn. R. 7001.50]
	5.32.85	The permit application shall include analytical data for at least the following parameters at monitoring station SD001 or the nearest downstream monitoring location on the Dark River, and from a sampling point representative of the recirculated tailings basin pool water. Analysis of all parameters shall comply with their specific 40 CFR Part 136 analytical methodologies or any updates to those

		methodologies. The reporting limits shall meet the minimum levels as defined by this permit and all state and federal regulations. 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, magnesium, manganese, molybdenum, nickel, potassium, selenium, silver, sodium, thallium, tin, titanium, vanadium, zinc (all in total form) 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. [Minn. R. 7001, Minn. R. 7001.50]
	5.32.86	The Permittee shall include, as part of the application for reissuance of this permit: a. a current map of the tailings basin, showing the dikes, dams, cells, and current topographic and water level elevations in the basin; b. an updated water balance for the facility; c. an updated Operating Plan for the tailings basin for the next five (5) years; and d. an updated Pollution Prevention Plan for the facility. [Minn. R. 7001, Minn. R. 7001.50]
	5.32.87	The Pollution Prevention Plan may be a revision of or an attachment to the current Pollution Prevention Plan. [40 CFR pt. 122, Minn. R. 7001.50]
		Metallic Mining
	5.33.88	Mine Tailings Basin. [Minn. R. 7001]
	5.33.89	The Permittee shall conduct a detailed field survey of seepage zones from the perimeter dikes of the tailings basin during October of each year. [Minn. R. 7001]
	5.33.90	Individual seeps or seepage zones that are discharging at greater than 5 gallons per minute during the October survey shall be monitored monthly for flow, specific conductance, pH, total iron, total sulfate, total suspended solids, and temperature and those results shall be reported in a supplement to the monthly DMR. [Minn. R. 7001]
	5.33.91	If seepage is discovered during the annual seepage survey that flows to any water not listed as a receiving water in the permit, the Permittee must take measures to prevent the seepage from entering those waters or seek modification of the permit to authorize the discharge under the permit . [Minn. R. 7001]
	5.33.92	The Permittee shall submit a Dam Seepage Survey Report on January 31 of each calendar year following permit issuance. The annual Dam Seepage Survey Report shall include a current map of the Tailings Basin area that details the dikes, berms, dams, roads, and cells; as well as the current topographic and water level elevations. submit a dike seepage survey report : Due annually, by the 31st of January. [Minn. R. 7001]
	5.33.93	The Dam Seepage Survey Report shall include the following information:

		a. a clearly labeled map indicating the locations of the visible seepage zones; b. the estimated flow rates for the seepage zones; c. the specific conductance, pH and temperature values for the seepage zones; d. a brief description of the changes in the nature of the seepage from previous observations; and e. photographs as needed to document items a. - d. [Minn. R. 7001]
		Domestic Wastewater (non-POTW)
	5.34.94	Operator Certification. [Minn. R. 7001]
	5.34.95	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. [Minn. R. 9400]
	5.34.96	If applicable, 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. [Minn. R. 7001]
	5.34.97	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. [Minn. R. 9400]
	5.34.98	The Permittee shall notify the MPCA within 30 days of a change in operator certification or contract status. [Minn. R. 9400]
	5.34.99	Bypass Structures. [Minn. R. 7001]
	5.34.100	All structures capable of bypassing the treatment system shall be manually controlled and kept locked at all times. [Minn. R. 7001]
	5.34.101	Solids Management. [Minn. R. 7001]
	5.34.102	This permit authorizes the permittee to store and/or transfer only wastewater biosolids and/or septage to another permitted treatment facility for final treatment and disposal in accordance with the provision in this chapter and Minn. R. ch. 7041. For the purpose for this permit chapter, septage is referred to as biosolids. Land application of biosolids and/or septage is not authorized by this permit. [Minn. R. 7001]
	5.34.103	The permittee shall submit a Biosolids Annual Report by December 31 of each year for biosolids storage and/or transfer activities occurring during the cropping year previous to December 31. The report must indicate whether or not biosolids were transferred and/or stored. If biosolids were transferred, the report must describe how much was transferred, where it was transferred to, the name of the facility that accepted the transfer and the contact person at that facility. "Cropping year" means a year beginning on September 1 of the year prior to the growing season and ending August 31 the year the crop is harvested. For example, the 2012 cropping year began September 1, 2011, and ended August 31, 2012. submit a biosolids annual report : Due by December 31 of each year following permit issuance. [Minn. R. 7001]
	5.34.104	The Permittee shall submit the Biosolids Annual Report to: BiosolidsCoordinator Minnesota Pollution Control Agency 520 Lafayette Road North St. Paul, Minnesota 55155-4194. [Minn. R. 7001]
	5.34.105	Unauthorized Releases. 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. [Minn. R. 7001]
	5.34.106	Sanitary Sewer Extension Permit. [Minn. R. 7001]
	5.34.107	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). [Minn. R. 7001]
		Industrial Stormwater Sector G: Metal Mining (Ore Mining and Dressing)
	5.35.108	Authorization. [Minn. R. 7001]
	5.35.109	This chapter authorizes the Permittee to discharge stormwater associated with industrial activity from industrial activity associated with SIC code(s) 1011 in accordance with the terms and conditions of this chapter. [Minn. R. 7090]
	5.35.110	This permit, unless specifically authorized by another chapter, does not authorize the discharge of sewage, wash water, scrubber water, floor drains from process areas, spills, oils, hazardous substances, or equipment/vehicle cleaning and maintenance wastewaters to ditches, wetlands, or other surface waters of the state. [Minn. R. 7090]
	5.35.111	Water Quality Standards. [Minn. R. 7001]
	5.35.112	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. [Minn. R. 7050, Minn. R. 7060]
	5.35.113	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. [Minn. R. 7060]
	5.35.114	Stormwater Pollution Prevention Plan. [Minn. R. 7001]
	5.35.115	The Permittee shall develop and implement a Stormwater Pollution Prevention Plan (SWPPP) to address the specific conditions at the facility. The goal of the SWPPP 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. Guidance for preparing the SWPPP can be found on the web at: http://www.pca.state.mn.us/r4ard68. [Minn. R. 7090]
	5.35.116	At a minimum, the SWPPP shall include: a. a description of appropriate Best Management Practices (BMPs) (including structural and non-structural) for protection of surface and groundwater quality at the facility and a schedule for implementing the practices; b. a drainage map for the entire facility; c. an inventory of exposed significant materials; d. an evaluation of the facility areas with exposure of significant materials to stormwater;

		e. an evaluation of all discharge conveyances from the site; a preventative maintenance program; f. a spill prevention and response procedure; g. procedures to be followed by designated staff employed by the Permittee to implement the SWPPP; and h. a description of stormwater controls. [Minn. R. 7090]
	5.35.117	In addition, the SWPPP shall include the following: a. Facility Map. Identify where any of the following may be exposed to stormwater: mining or milling site boundaries; access and haul roads; outline of drainage areas of each monitoring location within the facility with indications of the types of discharges from the drainage areas; location of all permitted discharge points, outdoor equipment storage, fueling and maintenance areas; materials handling areas; outdoor manufacturing, outdoor storage and material disposal areas; outdoor chemicals and explosives storage areas; overburden, materials, soils or waste storage areas; location of mine drainage or other process water; tailings piles and ponds; heap leach pads; off site points of discharge for mine drainage and process water; surface waters; boundary of tributary areas that are subject to effluent limits; location(s) of sites undergoing reclamation and reclaimed areas. b. Potential Pollutant Sources. For each area of the mine or mill site where stormwater discharges associated with industrial activities occur, the Permittee shall identify the types of pollutants (e.g. heavy metals, sediment) likely to be present in significant amounts. The Permittee shall consider the following factors: the mineralogy of the ore and waste rock (e.g. acid forming); toxicity and quantity of chemicals used, produced or discharged; the likelihood of contact with stormwater; vegetation of site (if any); history of significant leaks or spills of toxic or hazardous pollutants, including a summary of any existing ore or waste rock or overburden characterization data and test results for potential generation of acid rock. If any new data is acquired due to changes in ore type being mined, the Permittee shall update the SWPPP with this information. [Minn. R. 7090]
	5.35.118	The SWPPP shall be developed and implemented within 180 days after permit issuance and shall be available for inspection. [Minn. R. 7090]
	5.35.119	Employee Training Program. [Minn. R. 7001]
	5.35.120	The Permittee shall conduct training at active and temporarily inactive sites. All training regardless of site type shall be documented in the facility's SWPPP. [Minn. R. 7090]
	5.35.121	The Permittee shall develop and implement an employee training program to inform appropriate personnel of the components and goals of the SWPPP. At a minimum, training shall address: a. spill/leak prevention and response; b. good housekeeping; c. petroleum product management; d. process chemical management; e. fueling procedures; f. proper procedures for using fertilizer, herbicides, and pesticides; g. erosion and sedimentation controls; h. inspections; i. preventative maintenance; j. runoff management; and k. materials management practices. The SWPPP shall identify periodic dates for such training as well as personnel

		responsible for managing and implementing the SWPPP and those responsible for the reporting requirements of this permit. This shall include the facility contact person as indicated on the permit application. Identified personnel shall be available at reasonable times of operation. Guidance regarding employee training programs is available on the web at: http://www.pca.state.mn.us/r4ard68. [Minn. R. 7090]
	5.35.122	Inspection and Maintenance. [Minn. R. 7001]
	5.35.123	The Permittee shall develop and implement an inspection schedule that includes a minimum of one facility inspection per calendar month during non-frozen conditions. A total of two monthly inspections shall occur during runoff events, with at least one being performed during snow melt. Inspections shall be conducted by appropriately trained personnel at the facility. 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 SWPPP. Inspection results and documentation shall remain on-site whenever Permittee staff are available on the site and shall be available upon request. The inspection form is located on the MPCA's website at: http://www.pca.state.mn.us/r4ard68. [Minn. R. 7090]
	5.35.124	Inspections shall be documented. Documentation shall include the following information: a. inspection date and time; b. weather conditions; c. inspector name; d. findings; and e. a description of any necessary corrective actions and a schedule for corrective action completion. A copy of all inspection documentation shall be stored with the SWPPP. [Minn. R. 7090]
	5.35.125	If the facility is inactive and unstaffed, temporarily inactive and unstaffed, or is a site undergoing reclamation, the Permittee is waived from the requirement to conduct monthly facility inspections and shall conduct semiannual inspections. If circumstances change, and the facility becomes active, and/or staffed, this exception no longer applies and compliance with the monthly inspection requirements in accordance with requirement 5.1 shall begin immediately. [Minn. R. 7090]
	5.35.126	If conditions are observed at the site that require changes in the SWPPP, such changes shall be made to the SWPPP prior to submission of the annual report for that calendar year. [Minn. R. 7090]
	5.35.127	If the findings of a site inspection indicate that BMPs are not meeting the objectives as identified above, corrective actions shall be initiated within thirty days and the BMP restored to full operation as soon as conditions allow. [Minn. R. 7090]
	5.35.128	Sedimentation Basin Design and Construction. [Minn. R. 7001]
	5.35.129	The Permittee is authorized to use designed infiltration devices or industrial stormwater ponds/sedimentation basins for stormwater management. Stormwater ponds/sedimentation basins shall be designed by a registered professional engineer and installed under the direct supervision of a registered professional engineer. If a new stormwater pond/sedimentation basin will be constructed, the Permittee shall follow the guidance located on the website at: http://www.pca.state.mn.us/r4ard68.

		[Minn. R. 7090]
	5.35.130	Industry Specific Stormwater Controls. [Minn. R. 7001]
	5.35.131	When capping is necessary to minimize pollutant discharges in stormwater, identify the source being capped and the material used to construct the cap. [Minn. R. 7090]
	5.35.132	Benchmark Monitoring Requirements. [Minn. R. 7090]
	5.35.133	The Permittee shall comply with the benchmark monitoring procedures and sample collection methods in accordance with the Benchmark Monitoring Fact Sheet on the following website: http://www.pca.state.mn.us/r4ard68. For the purposes of this permit, Benchmark Monitoring is reflected as intervention limits in the Limits and Monitoring section of this permit. Benchmark Monitoring results shall comply with intervention limits as required. [Minn. R. 7090]
	5.35.134	The Permittee shall complete Benchmark Monitoring for the parameters and at the frequency identified in the limits and monitoring requirements specified for the Surface Discharge Stormwater, Non-Specific Runoff Station. Specified parameters shall be sampled on an annual basis. Each annual sample may be collected at any time during the calendar year, and the calendar year average shall be reported on the December electronic Discharge Monitoring Report (eDMR). [Minn. R. 7090]
	5.35.135	An exceedance of a benchmark monitoring intervention limit does not constitute a violation under this permit. However, the Permittee is required to perform any necessary corrective action(s) to address stormwater control measures, including the maintenance or implementation of BMPs, when an exceedance of an applicable benchmark value occurs. Failure to respond to any benchmark intervention limit exceedance is a violation of the permit. [Minn. R. 7090]
	5.35.136	If benchmark monitoring intervention limits are exceeded, the Permittee shall modify the SWPPP, document all corrective actions, and implement necessary non-structural BMPs within 60 days after discovery and structural BMPs within 180 days after discovery of the exceedance. [Minn. R. 7090]
	5.35.137	Reporting. [Minn. R. 7001]
	5.35.138	The Permittee shall submit a stormwater annual report : Due by February 28 of each year following permit issuance. A copy of the Stormwater Annual Report Form is located on the MPCA's website at: http://www.pca.state.mn.us/r4ard68. [Minn. R. 7090]
	5.35.139	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. [Minn. R. 7090]
	5.35.140	Records. [Minn. R. 7001]
	5.35.141	The SWPPP shall be retained for the duration of the permit. A copy of the SWPPP shall remain on the permitted site whenever Permittee staff is on the site and be available upon request. The Permittee shall maintain the following records for the period of permit coverage: a. dates and findings of inspections; b. completed corrective actions; c. documentation of all changes to the SWPPP; and d. a copy of all annual reports. [Minn. R. 7090]
	5.35.142	Notification. [Minn. R. 7001]
	5.35.143	If the Permittee discharges stormwater into a regulated Municipal Separate Storm Sewer System (MS4), the Permittee shall notify the operator of the first MS4 of the existence of this permit within 30 days of its issuance. [Minn. R. 7090]
	5.35.144	No Exposure. [Minn. R. 7001]

	5.35.145	If the Permittee meets the eligibility criteria for No Exposure and is eligible for the conditional exclusion for No Exposure, as regulated by 40 CFR 122.26(b)(14)(i) through (ix) and (xi), it may submit: a. a No Exposure certification to the MPCA in accordance with Minn. R. 7090.3060; and b. a permit application for a modification of the NPDES/SDS Permit. [Minn. R. 7090]
	5.35.146	The Permittee shall apply to the MPCA for the No Exposure certification once every five years. [Minn. R. 7090]
	5.35.147	The No Exposure exclusion is conditional. The facility shall 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 facility shall comply with the stormwater requirements of this chapter. [Minn. R. 7090]
	5.35.148	The no exposure certification is non-transferrable in accordance with Minn. R. 7090.3060, subp. 5(D). In the event that the facility operator changes, then the new operator shall submit written notification of the change to the MPCA, Attn: WQ Submittal Center, 520 Lafayette Road North, St Paul, Minnesota 55155-4194. [Minn. R. 7090]
	5.35.149	The MPCA 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 MPCA 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. [Minn. R. 7090]
	5.35.150	Definitions. [Minn. R. 7001]
	5.35.151	"Active Metal Mining Facility" means a place where work or other activity related to the extraction, removal or recovery of metal ore is being conducted. For surface mines, this definition does not include any land where grading has returned the earth to a desired contour and reclamation has begun. This definition is derived from the definition of "active mining area" found at 40 CFR pt. 440.132(a). [State Definitions]
	5.35.152	"Benchmark Monitoring Location" means the location(s) within the boundary of the facility where the Permittee will collect stormwater samples for the purpose of compliance with the benchmark monitoring requirements of this permit. The benchmark monitoring location(s) shall be in a location that: a. is below the most down-gradient BMP from the source of the industrial activity or significant materials, but prior to discharging from the Permittee's operational control; b. minimizes or eliminates sampling of stormwater from off-site sources (run-on); and c. yields a sample that best represents the contribution of pollutants the Permittee is required to monitor for in accordance with the Benchmark Monitoring Requirements section of this permit, and that receives drainage from an area of industrial activities, processes, and significant materials exposed to stormwater. [State Definitions]
	5.35.153	"Best Management Practices" or "BMPs" means practices to prevent or reduce the pollution of waters of the state, including schedules of activities, prohibitions of practices, other management practices, and also includes treatment requirements, operating procedures, and practices to control plant site runoff, spillage or leaks, sludge, waste disposal or drainage from raw material storage. [State Definitions]
	5.35.154	"Inactive metal mining facility" means a site or portion of a site where metal mining and/or milling occurred in the past but is not an active facility as defined above, and where the inactive portion is not covered by an active mining permit issued by the State. [State Definitions]
	5.35.155	"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. [State Definitions]
	5.35.156	"Non-Stormwater Discharge" means any discharge not comprised entirely of stormwater discharges authorized by a NPDES permit. [State Definitions]
	5.35.157	"Reclamation" means activities undertaken, in compliance with applicable mined land reclamation requirements, following cessation of the activities associated with extraction through production of a salable product, intended to return the land to an appropriate post-mining land use in order to meet applicable Federal and State reclamation requirements. [State Definitions]
	5.35.158	"Runoff" means any liquid that drains over land from any part of a facility. [State Definitions]
	5.35.159	"Temporary inactive metal mining facility" means a site or portion of a site where metal mining and/or milling occurred in the past but currently are not being actively undertaken, and the facility is covered by an active mining permit issued by the State or Federal agency. [State Definitions]
		Total Facility Requirements (NPDES/SDS)
	5.36.160	Definitions. Refer to the 'Permit Users Manual' found on the MPCA website (www.pca.state.mn.us) for standard definitions. [Minn. R. 7001.]
	5.36.161	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, 7052, 7053, 7060, and 7080; and Minn. Stat. ch. 115 and 116. [Minn. R. 7001]
	5.36.162	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(E)]
	5.36.163	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 7050, 7052, 7053 and any other applicable MPCA rules. [Minn. R. 7001.1090, subp. 1(A)]
	5.36.164	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]
	5.36.165	Property Rights. This permit does not convey a property right or an exclusive privilege. [Minn. R. 7001.0150, subp. 3(C)]
	5.36.166	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(O)]
	5.36.167	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(D)]
	5.36.168	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(A)]

	5.36.169	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(B)]
	5.36.170	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. [Minn. R. 7001]
	5.36.171	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. [Minn. R. 7001]
	5.36.172	Inspection and Entry. When authorized by Minn. Stat. ch. 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(I)]
	5.36.173	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. [Minn. R. 7001.0150, subp. 3(F)]
	5.36.174	Sampling. [Minn. R. 7001]
	5.36.175	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)]
	5.36.176	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(E)]
	5.36.177	Certified Laboratory. A laboratory certified by the Minnesota Department of Health and/or registered by the MPCA shall conduct analyses required by this permit. Analyses of dissolved oxygen, pH, temperature, specific conductance, 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. R. 4740.2010, Minn. R. 4740.2050 through 2120]
	5.36.178	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. [40 CFR 136, Minn. R. 7041.3200]
	5.36.179	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, 2(B and C)]
	5.36.180	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:

		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. [Minn. R. 7001.0150, 2(C)]
	5.36.181	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. Required forms may include DMR Supplemental/Sample Value Form Individual values for each sample and measurement shall be recorded on the DMR Supplemental/Sample Value Form which, if required, will be provided by the MPCA. DMR Supplemental/Sample Value Forms shall be submitted with the appropriate DMRs. You may design and use your own supplemental form; however it shall be approved by the MPCA. Note: Required summary information shall also be recorded on the DMR. Summary information that is submitted ONLY on the DMR Supplemental/Sample Value Form does not comply with the reporting requirements. [Minn. R. 7001.1090, 1(D), Minn. R. 7001.150, 2(B)]
	5.36.182	Submitting Reports. DMRs, DMR supplemental forms and related attachments must be electronically submitted via MPCA e-Services after authorization is approved. DMRs and DMR Supplemental Forms shall be electronically submitted by the 21st day of the month following the sampling period or otherwise as specified in this permit. Electronic DMR submittal shall be complete on or before 11:59 PM of 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. 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 551554194. [Minn. R. 7001.0150, 2(B), Minn. R. 7001.0150, 3(H)]
	5.36.183	Incomplete or Incorrect Reports. The Permittee shall immediately submit an electronically 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. If it is impossible to electronically amend the report or DMR, the Permittee shall immediately notify the MPCA and the MPCA will provide direction for the amendment submittals. [Minn. R. 7001.0150, 3(G)]
	5.36.184	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 shall 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, shall be certified by a registered professional engineer. [Minn. R. 7001.0540]
	5.36.185	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. 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, 2(B)]
	5.36.186	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, 3(H)]
	5.36.187	Confidential Information. Except for data determined to be confidential according to Minn. Stat. ch. 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 shall follow Minn. R. 7000.1300. [Minn. R. 7000.1300]
	5.36.188	Noncompliance and Enforcement. [Minn. R. 7001]
	5.36.189	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. ch. 115.071 and 116.072, including monetary penalties, imprisonment, or both. [Minn. R. 7001.1090, 1(B)]
	5.36.190	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, 3(G), Minn. R. 7001.1090, 1(G and H), Minn. Stat. ch. 609.671, 1]
	5.36.191	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)]
	5.36.192	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. If the permittee discovers that noncompliance with a condition of the permit has occurred which could endanger human health, public drinking water supplies, or the environment, the Permittee shall within 24 hours of the discovery of the noncompliance, orally notify the commissioner and submit a written description of the noncompliance within 5 days of the discovery. The written description shall include items a. through e., as listed below. If the Permittee discovers other non-compliance that does not explicitly endanger human health, public drinking water supplies, or the environment, the non-compliance shall be reported during the next 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. [Minn. R. 7001.150, 3(K)]
	5.36.193	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. [Minn. R. 7001.1090]
	5.36.194	Release. [Minn. R. 7001]
	5.36.195	Unauthorized Releases of Wastewater Prohibited. Except for discharges from outfalls specifically authorized by this permit, 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, Minn. Stat. ch. 115.061]
	5.36.196	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 or (651)649-5451 (metro area) immediately upon discovery of the release. You may contact the MPCA during business hours at 1(800)657-3864 or (651)296-6300 (metro area). 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. [Minn. R. 7001.1090]
	5.36.197	Sampling of a release. Upon discovery of a release, the Permittee shall: a. 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. b. Submit the sampling results on the Release Sampling Form (http://www.pca.state.mn.us/index.php/view-document.html?gid=18867). The Release Sampling Form shall be submitted to the MPCA with the next DMR or within 30 days whichever is sooner. [Minn. R. 7001.1090]
	5.36.198	Bypass. [Minn. R. 7001]
	5.36.199	Anticipated bypass. The permittee may allow any bypass to occur which does not cause effluent limitations to be exceeded, but only if the bypass is for essential maintenance to assure efficient operation of the facility. The permittee shall submit prior notice, if possible at least ten days before the date of the bypass to the MPCA. The notice of the need for an anticipated bypass shall include the following information: a. the proposed date and estimated duration of the bypass; b. the alternatives to bypassing; and c. a proposal for effluent sampling during the bypass. Any bypass wastewater shall enter waters of the state from outfalls specifically authorized by this permit. Therefore, samples shall be collected at the frequency and location identified in this permit or two times per week for as long as the bypass continues, whichever is more frequent. [40 CFR 122.41(m)(2 and 3), Minn. R. 7001.1090, 1(J)]
	5.36.200	All other bypasses are prohibited. The MPCA may take enforcement action against the Permittee for a bypass, unless the specific conditions described in Minn. R. Ch. 7001.1090 subp. 1, K and 122.41(m)(4)(i) are met. In the event of an unanticipated bypass, the permittee shall: a. Take all reasonable steps to immediately end the bypass. b. Notify the Minnesota Department of Public Safety Duty Officer at 1(800)422-0798 or (651)649-5451 (metro area) immediately upon commencement of the bypass. You may contact the MPCA during business hours at 1(800)657-3864 or (651)296-6300 (metro area). c. Immediately take 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 directed by the MPCA, the Permittee shall consult with other local, state or federal agencies for implementation of abatement, clean-up, or remediation activities. d. Only allow bypass wastewater as specified in this section to enter waters of the state from outfalls specifically authorized by this permit. Samples shall be collected at the frequency and location identified in this permit or two times per week for as long as the bypass continues, whichever is more frequent. The permittee shall also follow the reporting requirements for effluent violations as specified in this permit. [40 CFR 122.41(m)(4)(i), Minn. Stat. ch. 115.061]
	5.36.201	Operation and Maintenance. [Minn. R. 7001]
	5.36.202	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. [Minn. R. 7001.0150, 3(F)]
	5.36.203	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, 1(C)]
	5.36.204	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, Minn. R. 7041]
	5.36.205	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, 3(F), Minn. R. 7001.150, 2(B)]
	5.36.206	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, 3(F), Minn. R. 7001.150, 2(B)]
	5.36.207	Changes to the Facility or Permit. [Minn. R. 7001]
	5.36.208	Permit Modifications. Except as provided under Minnesota Statutes, section 115.07, subdivisions 1 and 3, 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. Permittees that propose to make a change to the facility or discharge that requires a permit modification shall follow Minn. R. 7001.0190. If the Permittee cannot determine whether a permit modification is needed, the Permittee shall 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. [Minn. R. 7001.0030]
	5.36.209	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. [Minn. R. 7001.0030]
	5.36.210	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. [Minn. R. 7001.0150, 3(M)]
	5.36.211	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. Safety Data Sheet (SDS) which shall include aquatic toxicity, human health, and environmental fate information for the proposed additive. The aquatic toxicity information shall include at minimum the results of: a) a 48-hour LC50 or EC50 acute study for a North American freshwater planktonic crustacean (either Ceriodaphnia or Daphnia sp.) and b) a 96-hour LC50 acute study for rainbow trout, bluegill or fathead minnow or another North American freshwater aquatic species other than a planktonic crustacean; 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 additional information be submitted for consideration. This permit may be modified to restrict the use or discharge of a chemical additive and include additional influent and effluent monitoring requirements. Approval for the use of an additive shall not justify the exceedance of any effluent limitation nor shall it be used as a defense against pollutant levels in the discharge causing or contributing to the violation of a water quality standard. [Minn. R. 7001.0170]
	5.36.212	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. [Minn. R. 7001.0170, Minn. R. 7001.0180]
	5.36.213	TMDL Impacts. Facilities that discharge to an impaired surface water, watershed or drainage basin may be required 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.l.2.i., necessary to ensure consistency with the assumptions and requirements of any applicable US EPA approved wasteload allocations resulting from Total Maximum Daily Load (TMDL) studies. [40 CFR 122.44(l)(2)(i)]
	5.36.214	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, 3(N)]
	5.36.215	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. [Minn. Stat. ch. 116.07, 4]
	5.36.216	Permit Reissuance. If the Permittee desires to continue permit coverage beyond the date of permit expiration, the Permittee shall submit an application for permit reissuance : Due by 180 days prior to 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. [Minn. R. 7001.0160]
		Facility Specific Requirements
	5.37.217	40 CFR 440 Allowable Discharge. [40 CFR 440.14(c)(2)]
	5.37.218	Allowable surface discharges from the facility may not exceed a volume of water equal to the difference between precipitation falling on the tailings basin and its contributing drainage area, minus estimated evaporation from that same area. This shall be calculated in January of each year, for the preceding year, and reported with the Discharge Monitoring Report for that month based on the following: a) To account for the hydrologic buffering ability of the basin, the net precipitation value shall be the average of the net precipitation for each of the three preceding years. b) The total discharge to surface water for the preceding year shall be calculated from the sum of the monthly reported flows at SD001, SD006, and any other locations that were under monthly observation as a result of being identified during the October seepage survey. [40 CFR 440.14]
	5.37.219	The total annual precipitation and the annual reservoir evaporation must be

		determined from either meteorological data collected by the Permittee at the Project site, or from the local precipitation values estimated from data collected at state climatologist approved measurement stations and "Mean Annual Lake Evaporation" values shown in the "Climatic Atlas of the United States" published by the U.S. Department of Commerce. The annual net precipitation must be determined as follows: Y = (Af x P) - (At x E) where: Y = annual net precipitation Af = area of the Tailings Basin, plus the drainage area contributing surface runoff to the Tailings Basin. P = total annual precipitation At = open water area of the Tailings Basin E= annual reservoir evaporation. [Minn. R. 7001]

8. Submittal action summary

GW 003	**Well, Downgradient**	
		Facility Specific Limit and Monitoring Requirements
	6.1.1	The Permittee shall submit a monthly DMR : Due by 21 days after the end of each calendar month following permit issuance. [Minn. R. 7001.0150, Subp. 2(B)]
GW 004	**Well, Downgradient**	
		Facility Specific Limit and Monitoring Requirements
	6.2.1	The Permittee shall submit a monthly DMR : Due by 21 days after the end of each calendar month following permit issuance. [Minn. R. 7001.0150, Subp. 2(B)]
GW 006	**Well, Downgradient**	
		Facility Specific Limit and Monitoring Requirements
	6.3.1	The Permittee shall submit a monthly DMR : Due by 21 days after the end of each calendar month following permit issuance. [Minn. R. 7001.0150, Subp. 2(B)]
GW 007	**Well, Downgradient**	
		Facility Specific Limit and Monitoring Requirements
	6.4.1	The Permittee shall submit a monthly DMR : Due by 21 days after the end of each calendar month following permit issuance. [Minn. R. 7001.0150, Subp. 2(B)]
GW 008	**Well, Downgradient**	
		Facility Specific Limit and Monitoring Requirements
	6.5.1	The Permittee shall submit a monthly DMR : Due by 21 days after the end of each calendar month following permit issuance. [Minn. R. 7001.0150, Subp. 2(B)]
GW 009	**Well, Downgradient**	
		Facility Specific Limit and Monitoring Requirements
	6.6.1	The Permittee shall submit a monthly DMR : Due by 21 days after the end of each calendar month following permit issuance. [Minn. R. 7001.0150, Subp. 2(B)]
GW 010	**Well, Upgradient**	
		Facility Specific Limit and Monitoring Requirements
	6.7.1	The Permittee shall submit a monthly DMR : Due by 21 days after the end of each calendar month following permit issuance. [Minn. R. 7001.0150, Subp. 2(B)]
GW 011	**Well, Downgradient**	
		Facility Specific Limit and Monitoring Requirements

	6.8.1	The Permittee shall submit a monthly DMR : Due by 21 days after the end of each calendar month following permit issuance. [Minn. R. 7001.0150, Subp. 2(B)]
		Facility Specific Requirements
	6.9.2	The Permittee shall install one downgradient monitoring well cluster (GW011-S, I, and D) near the property boundary by the Admiral Lake outlet, within the bedrock trench underlying the Sand River within 270 days of permit issuance. The cluster shall consist of shallow, intermediate and deep wells. The shallow well shall be screened just beneath the observed water table or in the uppermost mineral soil unit, whichever is deeper. The intermediate well shall be screened in a permeable unit near the middle depth of the trench, based on the observed depth to bedrock in the deep boring. The deep well shall be screened just above the bedrock surface. Well screens should be 10 feet in length. install monitoring well : Due 270 calendar days after Permit Issuance Date. [Minn. R. 7060.0800]
	6.9.3	The Permittee shall submit a ground water monitoring well installation report : Due 30 calendar days after Installation Date The Installation Report shall include at a minimum: a. detailed monitoring well log b. unique well number identifying the well c. surveyed top of casing elevations for the well d. USGS topographic map of location of well in relation to the Minntac tailings basin and property boundaries. [Minn. R. 4725]
	6.9.4	The Permittee shall submit a baseline ground water monitoring report : Due 120 calendar days after Installation Date The Baseline Groundwater Monitoring Report shall contain the results of a minimum of three samples from each depth interval at monitoring well GW011 prior to initiating quarterly DMR sampling. Samples shall be taken at a frequency of no less than 2 weeks apart, and shall be analyzed for the parameters required for GW011 in the Limits and Monitoring section of this permit. The report shall specify which of the intermediate and deep depth intervals has the greater concentration of sulfate, and this well shall be used to fulfill quarterly DMR sampling requirements. [Minn. R. 4725]
GW 012	**Well, Downgradient**	
		Facility Specific Limit and Monitoring Requirements
	6.10.1	The Permittee shall submit a monthly DMR : Due by 21 days after the end of each calendar month following permit issuance. [Minn. R. 7001.0150, Subp. 2(B)], Phases: Phase 1, Phase 2, Phase 3
GW 013	**Well, Downgradient**	
		Facility Specific Limit and Monitoring Requirements
	6.11.1	The Permittee shall submit a monthly DMR : Due by 21 days after the end of each calendar month following permit issuance. [Minn. R. 7001.0150, Subp. 2(B)], Phases: Phase 1, Phase 2, Phase 3
GW 014	**Well, Downgradient**	
		Facility Specific Limit and Monitoring Requirements

	6.12.1	The Permittee shall submit a monthly DMR : Due by 21 days after the end of each calendar month following permit issuance. [Minn. R. 7001.0150, Subp. 2(B)]
SD 001	**Effluent To Surface Water**	
		Facility Specific Limit and Monitoring Requirements
	6.13.1	The Permittee shall submit a monthly DMR : Due by 21 days after the end of each calendar month following permit issuance. [Minn. R. 7001.0150, Subp. 2(B)]
		Chronic Toxicity Requirements
	6.14.2	The Permittee shall submit annual chronic toxicity test battery results : Due annually following permit issuance. [Minn. R. 7001]
SD 005	**Stormwater, Non-specific Runoff**	
		Surface Discharge: Industrial Stormwater Sector G Requirements
	6.15.1	The Permittee shall submit an annual DMR : Due by 21 days after the end of each calendar year following permit issuance. [Minn. R. 7001.0150, Subp. 2(B)]
SD 006	**Effluent To Surface Water**	
		Facility Specific Limit and Monitoring Requirements
	6.16.1	The Permittee shall submit a monthly DMR : Due by 21 days after the end of each calendar month following permit issuance. [Minn. R. 7001.0150, Subp. 2(B)]
SW 001	**Stream/River/Ditch, Other**	
		Facility Specific Limit and Monitoring Requirements
	6.17.1	The Permittee shall submit a monthly DMR : Due by 21 days after the end of each calendar month following permit issuance. [Minn. R. 7001.0150, Subp. 2(B)]
SW 003	**Stream/River/Ditch, Downstream**	
		Facility Specific Limit and Monitoring Requirements
	6.18.1	The Permittee shall submit a monthly DMR : Due by 21 days after the end of each calendar month following permit issuance. [Minn. R. 7001.0150, Subp. 2(B)]
SW 004	**Stream/River/Ditch, Downstream**	
		Facility Specific Limit and Monitoring Requirements
	6.19.1	The Permittee shall submit a monthly DMR : Due by 21 days after the end of each calendar month following permit issuance. [Minn. R. 7001.0150, Subp. 2(B)]
SW 005	**Lake/Reservoir**	
		Facility Specific Limit and Monitoring Requirements

	6.20.1	The Permittee shall submit a monthly DMR : Due by 21 days after the end of each calendar month following permit issuance. [Minn. R. 7001.0150, Subp. 2(B)]
SW 006	**Stream/River/Ditch, Downstream**	
		Facility Specific Limit and Monitoring Requirements
	6.21.1	The Permittee shall submit a monthly DMR : Due by 21 days after the end of each calendar month following permit issuance. [Minn. R. 7001.0150, Subp. 2(B)]
SW 007	**Lake/Reservoir**	
		Facility Specific Limit and Monitoring Requirements
	6.22.1	The Permittee shall submit a monthly DMR : Due by 21 days after the end of each calendar month following permit issuance. [Minn. R. 7001.0150, Subp. 2(B)]
SW 008	**Stream/River/Ditch, Downstream**	
		Facility Specific Limit and Monitoring Requirements
	6.23.1	The Permittee shall submit a monthly DMR : Due by 21 days after the end of each calendar month following permit issuance. [Minn. R. 7001.0150, Subp. 2(B)]
WS 008	**Internal Waste Stream**	
		Facility Specific Limit and Monitoring Requirements
	6.24.1	The Permittee shall submit a monthly DMR : Due by 21 days after the end of each calendar month following permit issuance. [Minn. R. 7001.0150, Subp. 2(B)]
WS 009	**Internal Waste Stream**	
		Facility Specific Limit and Monitoring Requirements
	6.25.1	The Permittee shall submit a monthly DMR : Due by 21 days after the end of each calendar month following permit issuance. [Minn. R. 7001.0150, Subp. 2(B)], Phases: Phase 4, Phase 1, Phase 2, Phase 3
MN0057207	**US Steel Corp - Minntac Tailings Basin Area**	
		Compliance Schedule
	6.26.1	Within 180 days after permit issuance, the Permittee must submit a Hydrological Investigation Work Plan that describes how the Permittee proposes to investigate and evaluate site conditions critical to the selection and implementation of treatment, mitigation efforts and/or other activities that could be taken to meet all applicable water quality standards and support designated uses in waters of the state that are impacted by pollutants from the Basin. submit a plan : Due by 180 days after permit issuance. [Minn. R. 7001]
	6.26.2	The Permittee must also comply with the following interim requirements before submitting its final plan. Within 90 days after permit issuance, the Permittee must submit to the MPCA a status report identifying:

		a) All waters of the state that are believed to be impacted by pollutants from the Basin; b) All waters of the state within a 2 mile radius of the Basin perimeter that the Permittee contends are not impacted by pollutants from the Basin and detailing the reasons the Permittee contends those waters are not impacted by pollutants from the Basin; and c) A preliminary list of locations where field investigation monitoring activities are planned. submit a report : Due by 90 days after permit issuance. [Minn. R. 7001]
	6.26.3	A final report documenting the findings of the fully implemented Hydrological Investigation Work Plan shall be submitted within 18 months of permit issuance. The report shall include all of the information and analyses described in Parts 5.29.32 and the site conceptual flow and transport model described in 5.29.33. submit a report : Due 548 calendar days after Permit Issuance Date. [Minn. R. 7001]
	6.26.4	Within 20 months of permit issuance, the Permittee shall submit a Basin Treatment Methods Study Plan that identifies feasible technologies (including at a minimum, nano-filtration, reverse osmosis, ion exchange, and dry emissions controls), for non-mechanical or mechanical treatment/mitigation to reduce the concentration of sulfate as required under part 5.29.28 above. submit a report : Due 610 calendar days after Permit Issuance Date. [Minn. R. 7001]
	6.26.5	Within 30 months of permit issuance the Permittee shall submit a Final Compliance Plan. submit a compliance plan : Due by 2.5 years after permit issuance. [Minn. R. 7001]
	6.26.6	Within 48 months of permit issuance, the Permittee shall submit to MPCA: a) a final design package, which includes plans and specifications for treatment or mitigation system components, including specifications based on any pilot testing conducted that are sufficient to submit complete and accurate applications for any permits that may be required; b) a monitoring plan that will allow quantifiable biannual assessment of the performance of the treatment system and/or mitigation relative to its ability to achieve compliance with final limits, as well as applicable surface water and groundwater water quality standards by the specified date; c) a detailed schedule of milestones, occurring at intervals of annually or less, which include, at a minimum, start of construction, completion of construction, start-up, and initiation of operation, with adequate justification for the timeline described in the schedule meeting the shortest reasonable period of time requirement. Upon submittal, the milestone deadlines will become fully enforceable commitments of this compliance schedule, and failure to achieve these commitments will constitute a permit violation enforceable by MPCA; and d) predictions of the dates applicable water quality standards and designated uses will be met at each surface water monitoring station as a result of proposed mitigation efforts. submit final technical documents : Due by four years after permit issuance. [Minn. R. 7001]
	6.26.7	The Permittee shall initiate construction or begin implementation of the chosen treatment system and/or mitigation within the shortest reasonable period of time, but no later than 54 months after permit issuance. begin construction : Due 1644 calendar days after Permit Issuance Date. [Minn. R. 7001]
	6.26.8	The Permittee shall implement a system for recapture of seepage affecting shallow groundwater and surface waters ("SCRS") on the west side of the Tailings Basin within 18 months of permit issuance. The Permittee is responsible for obtaining all necessary approvals (U.S. Army Corps of Engineers, Wetland Conservation Act) to implement the SCRS system by submitting timely and complete applications. The MPCA will not grant any extensions to this deadline if the Permittee fails to submit

		timely and complete applications for necessary approvals. The Permittee shall provide copies to the MPCA of all applications filed and correspondence submitted to other agencies, which must approve the SCRS system. complete construction and commence operation : Due 548 calendar days after Permit Issuance Date. [Minn. R. 7001]
	6.26.9	The Permittee shall submit a report on the progress made toward installation of the Dark River Seepage Collection and Return System, including any permitting, bidding, and contracting activities. submit a progress report : Due by 180 days after permit issuance. [Minn. R. 7001]
		Mercury Minimization Plan
	6.27.10	The Permittee shall submit a mercury pollutant minimization plan : Due by 180 days after permit issuance. [Minn. R. 7001]
		Metallic Mining
	6.28.11	The Permittee shall submit a Dam Seepage Survey Report on January 31 of each calendar year following permit issuance. The annual Dam Seepage Survey Report shall include a current map of the Tailings Basin area that details the dikes, berms, dams, roads, and cells; as well as the current topographic and water level elevations. submit a dike seepage survey report : Due annually, by the 31st of January. [Minn. R. 7001]
		Domestic Wastewater (non-POTW)
	6.29.12	The permittee shall submit a Biosolids Annual Report by December 31 of each year for biosolids storage and/or transfer activities occurring during the cropping year previous to December 31. The report must indicate whether or not biosolids were transferred and/or stored. If biosolids were transferred, the report must describe how much was transferred, where it was transferred to, the name of the facility that accepted the transfer and the contact person at that facility. "Cropping year" means a year beginning on September 1 of the year prior to the growing season and ending August 31 the year the crop is harvested. For example, the 2012 cropping year began September 1, 2011, and ended August 31, 2012. submit a biosolids annual report : Due by December 31 of each year following permit issuance. [Minn. R. 7001]
		Industrial Stormwater Sector G: Metal Mining (Ore Mining and Dressing)
	6.30.13	The Permittee shall submit a stormwater annual report : Due by February 28 of each year following permit issuance. A copy of the Stormwater Annual Report Form is located on the MPCA's website at: http://www.pca.state.mn.us/r4ard68. [Minn. R. 7090]
		Total Facility Requirements (NPDES/SDS)
	6.31.14	Permit Reissuance. If the Permittee desires to continue permit coverage beyond the date of permit expiration, the Permittee shall submit an application for permit reissuance : Due by 180 days prior to 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. [Minn. R. 7001.0160]

9. Limits and monitoring

		Discharge limitations							Monitoring requirements			
Subject item	**Parameter**	**Quantity /Loading avg.**	**Quantity /Loading max.**	**Quantity /Loading units**	**Quality /Conc. min.**	**Quality /Conc. avg.**	**Quality /Conc. max.**	**Quality/ Conc. units**	**Frequency**	**Sample type**	**Effective period**	**Notes**
GW 003 Monitoring Well 3	Bicarbonates (HCO3)						Monitor only. calendar month maximum	milligrams per liter	once per month	Grab	Apr, Jul, Oct	
GW 003 Monitoring Well 3	Chloride, Total						Monitor only. calendar month maximum	milligrams per liter	once per month	Grab	Apr, Jul, Oct	
GW 003 Monitoring Well 3	Elevation, Water		Monitor only. calendar month maximum	feet					once per month	Measurement, Instantaneous	Apr, Jul, Oct	
GW 003 Monitoring Well 3	Hardness, Calcium & Magnesium, Calculated (as CaCO3)						Monitor only. calendar month maximum	milligrams per liter	once per month	Grab	Apr, Jul, Oct	
GW 003 Monitoring Well 3	Iron, Dissolved (as Fe)						Monitor only. calendar month maximum	milligrams per liter	once per month	Grab	Apr, Jul, Oct	
GW 003 Monitoring Well 3	Manganese, Dissolved (as Mn)						Monitor only. calendar	micrograms per liter	once per month	Grab	Apr, Jul, Oct	

		Discharge limitations							Monitoring requirements			
Subject item	**Parameter**	**Quantity /Loading avg.**	**Quantity /Loading max.**	**Quantity /Loading units**	**Quality /Conc. min.**	**Quality /Conc. avg.**	**Quality /Conc. max.**	**Quality/ Conc. units**	**Frequency**	**Sample type**	**Effective period**	**Notes**
							month maximum					
GW 003 Monitoring Well 3	pH				Monitor only. calendar month minimum		Monitor only. calendar month maximum	standard units	once per month	Grab	Apr, Jul, Oct	
GW 003 Monitoring Well 3	Solids, Total Dissolved (TDS)						Monitor only. calendar month maximum	milligrams per liter	once per month	Grab	Apr, Jul, Oct	
GW 003 Monitoring Well 3	Specific Conductance						Monitor only. calendar month maximum	micromhos per cm	once per month	Grab	Apr, Jul, Oct	
GW 003 Monitoring Well 3	Sulfate, Total (as SO4)						Monitor only. calendar month maximum	milligrams per liter	once per month	Grab	Apr, Jul, Oct	
GW 003 Monitoring Well 3	Temperature, Water (C)						Monitor only. calendar month maximum	degrees Celsius	once per month	Grab	Apr, Jul, Oct	
GW 004 Monitoring	Bicarbonates (HCO3)						Monitor only.	milligrams per liter	once per month	Grab	Apr, Jul, Oct	

		Discharge limitations							Monitoring requirements			
Subject item	**Parameter**	**Quantity /Loading avg.**	**Quantity /Loading max.**	**Quantity /Loading units**	**Quality /Conc. min.**	**Quality /Conc. avg.**	**Quality /Conc. max.**	**Quality/ Conc. units**	**Frequency**	**Sample type**	**Effective period**	**Notes**
Well 4							calendar month maximum					
GW 004 Monitoring Well 4	Chloride, Total						Monitor only. calendar month maximum	milligrams per liter	once per month	Grab	Apr, Jul, Oct	
GW 004 Monitoring Well 4	Elevation, Water		Monitor only. calendar month maximum	feet					once per month	Measurement, Instantaneous	Apr, Jul, Oct	
GW 004 Monitoring Well 4	Hardness, Calcium & Magnesium, Calculated (as CaCO3)						Monitor only. calendar month maximum	milligrams per liter	once per month	Grab	Apr, Jul, Oct	
GW 004 Monitoring Well 4	Iron, Dissolved (as Fe)						Monitor only. calendar month maximum	milligrams per liter	once per month	Grab	Apr, Jul, Oct	
GW 004 Monitoring Well 4	Manganese, Dissolved (as Mn)						Monitor only. calendar month maximum	micrograms per liter	once per month	Grab	Apr, Jul, Oct	
GW 004 Monitoring	pH				Monitor only.		Monitor only.	standard units	once per month	Grab	Apr, Jul, Oct	

		Discharge limitations							Monitoring requirements			
Subject item	**Parameter**	**Quantity /Loading avg.**	**Quantity /Loading max.**	**Quantity /Loading units**	**Quality /Conc. min.**	**Quality /Conc. avg.**	**Quality /Conc. max.**	**Quality/ Conc. units**	**Frequency**	**Sample type**	**Effective period**	**Notes**
Well 4					calendar month minimum		calendar month maximum					
GW 004 Monitoring Well 4	Solids, Total Dissolved (TDS)						Monitor only. calendar month maximum	milligrams per liter	once per month	Grab	Apr, Jul, Oct	
GW 004 Monitoring Well 4	Specific Conductance						Monitor only. calendar month maximum	micromhos per cm	once per month	Grab	Apr, Jul, Oct	
GW 004 Monitoring Well 4	Sulfate, Total (as SO4)						Monitor only. calendar month maximum	milligrams per liter	once per month	Grab	Apr, Jul, Oct	
GW 004 Monitoring Well 4	Temperature, Water (C)						Monitor only. calendar month maximum	degrees Celsius	once per month	Grab	Apr, Jul, Oct	
GW 006 Monitoring Well 6	Bicarbonates (HCO3)						Monitor only. calendar month maximum	milligrams per liter	once per month	Grab	Apr, Jul, Oct	
GW 006	Chloride, Total						Monitor	milligrams	once per	Grab	Apr, Jul, Oct	

		Discharge limitations							Monitoring requirements			
Subject item	**Parameter**	**Quantity /Loading avg.**	**Quantity /Loading max.**	**Quantity /Loading units**	**Quality /Conc. min.**	**Quality /Conc. avg.**	**Quality /Conc. max.**	**Quality/ Conc. units**	**Frequency**	**Sample type**	**Effective period**	**Notes**
Monitoring Well 6							only. calendar month maximum	per liter	month			
GW 006 Monitoring Well 6	Elevation, Water		Monitor only. calendar month maximum	feet					once per month	Measurement, Instantaneous	Apr, Jul, Oct	
GW 006 Monitoring Well 6	Hardness, Calcium & Magnesium, Calculated (as CaCO3)						Monitor only. calendar month maximum	milligrams per liter	once per month	Grab	Apr, Jul, Oct	
GW 006 Monitoring Well 6	Iron, Dissolved (as Fe)						Monitor only. calendar month maximum	milligrams per liter	once per month	Grab	Apr, Jul, Oct	
GW 006 Monitoring Well 6	Manganese, Dissolved (as Mn)						Monitor only. calendar month maximum	micrograms per liter	once per month	Grab	Apr, Jul, Oct	
GW 006 Monitoring Well 6	pH				Monitor only. calendar month minimum		Monitor only. calendar month maximum	standard units	once per month	Grab	Apr, Jul, Oct	
GW 006	Solids, Total Dissolved						Monitor	milligrams	once per	Grab	Apr, Jul, Oct	

		Discharge limitations							Monitoring requirements			
Subject item	**Parameter**	**Quantity /Loading avg.**	**Quantity /Loading max.**	**Quantity /Loading units**	**Quality /Conc. min.**	**Quality /Conc. avg.**	**Quality /Conc. max.**	**Quality/ Conc. units**	**Frequency**	**Sample type**	**Effective period**	**Notes**
Monitoring Well 6	(TDS)						only. calendar month maximum	per liter	month			
GW 006 Monitoring Well 6	Specific Conductance						Monitor only. calendar month maximum	micromhos per cm	once per month	Grab	Apr, Jul, Oct	
GW 006 Monitoring Well 6	Sulfate, Total (as SO4)						Monitor only. calendar month maximum	milligrams per liter	once per month	Grab	Apr, Jul, Oct	
GW 006 Monitoring Well 6	Temperature, Water (C)						Monitor only. calendar month maximum	degrees Celsius	once per month	Grab	Apr, Jul, Oct	
GW 007 Monitoring Well 7	Bicarbonates (HCO3)						Monitor only. calendar month maximum	milligrams per liter	once per month	Grab	Apr, Jul, Oct	
GW 007 Monitoring Well 7	Chloride, Total						Monitor only. calendar month maximum	milligrams per liter	once per month	Grab	Apr, Jul, Oct	

		Discharge limitations							Monitoring requirements			
Subject item	**Parameter**	**Quantity /Loading avg.**	**Quantity /Loading max.**	**Quantity /Loading units**	**Quality /Conc. min.**	**Quality /Conc. avg.**	**Quality /Conc. max.**	**Quality/ Conc. units**	**Frequency**	**Sample type**	**Effective period**	**Notes**
GW 007 Monitoring Well 7	Elevation, Water		Monitor only. calendar month maximum	feet					once per month	Measurement, Instantaneous	Apr, Jul, Oct	
GW 007 Monitoring Well 7	Hardness, Calcium & Magnesium, Calculated (as CaCO3)						Monitor only. calendar month maximum	milligrams per liter	once per month	Grab	Apr, Jul, Oct	
GW 007 Monitoring Well 7	Iron, Dissolved (as Fe)						Monitor only. calendar month maximum	milligrams per liter	once per month	Grab	Apr, Jul, Oct	
GW 007 Monitoring Well 7	Manganese, Dissolved (as Mn)						Monitor only. calendar month maximum	micrograms per liter	once per month	Grab	Apr, Jul, Oct	
GW 007 Monitoring Well 7	pH				Monitor only. calendar month minimum		Monitor only. calendar month maximum	standard units	once per month	Grab	Apr, Jul, Oct	
GW 007 Monitoring Well 7	Solids, Total Dissolved (TDS)						Monitor only. calendar month maximum	milligrams per liter	once per month	Grab	Apr, Jul, Oct	

		Discharge limitations							Monitoring requirements			
Subject item	**Parameter**	**Quantity /Loading avg.**	**Quantity /Loading max.**	**Quantity /Loading units**	**Quality /Conc. min.**	**Quality /Conc. avg.**	**Quality /Conc. max.**	**Quality/ Conc. units**	**Frequency**	**Sample type**	**Effective period**	**Notes**
GW 007 Monitoring Well 7	Specific Conductance						Monitor only. calendar month maximum	micromhos per cm	once per month	Grab	Apr, Jul, Oct	
GW 007 Monitoring Well 7	Sulfate, Total (as SO4)						Monitor only. calendar month maximum	milligrams per liter	once per month	Grab	Apr, Jul, Oct	
GW 007 Monitoring Well 7	Temperature, Water (C)						Monitor only. calendar month maximum	degrees Celsius	once per month	Grab	Apr, Jul, Oct	
GW 008 Monitoring Well 8	Bicarbonates (HCO3)						Monitor only. calendar month maximum	milligrams per liter	once per month	Grab	Apr, Jul, Oct	
GW 008 Monitoring Well 8	Chloride, Total						Monitor only. calendar month maximum	milligrams per liter	once per month	Grab	Apr, Jul, Oct	
GW 008 Monitoring Well 8	Elevation, Water		Monitor only. calendar month maximum	feet					once per month	Measurement, Instantaneous	Apr, Jul, Oct	

		Discharge limitations							Monitoring requirements			
Subject item	**Parameter**	**Quantity /Loading avg.**	**Quantity /Loading max.**	**Quantity /Loading units**	**Quality /Conc. min.**	**Quality /Conc. avg.**	**Quality /Conc. max.**	**Quality/ Conc. units**	**Frequency**	**Sample type**	**Effective period**	**Notes**
GW 008 Monitoring Well 8	Hardness, Calcium & Magnesium, Calculated (as CaCO3)						Monitor only. calendar month maximum	milligrams per liter	once per month	Grab	Apr, Jul, Oct	
GW 008 Monitoring Well 8	Iron, Dissolved (as Fe)						Monitor only. calendar month maximum	milligrams per liter	once per month	Grab	Apr, Jul, Oct	
GW 008 Monitoring Well 8	Manganese, Dissolved (as Mn)						Monitor only. calendar month maximum	micrograms per liter	once per month	Grab	Apr, Jul, Oct	
GW 008 Monitoring Well 8	pH				Monitor only. calendar month minimum		Monitor only. calendar month maximum	standard units	once per month	Grab	Apr, Jul, Oct	
GW 008 Monitoring Well 8	Solids, Total Dissolved (TDS)						Monitor only. calendar month maximum	milligrams per liter	once per month	Grab	Apr, Jul, Oct	
GW 008 Monitoring Well 8	Specific Conductance						Monitor only. calendar month maximu	micromhos per cm	once per month	Grab	Apr, Jul, Oct	

		Discharge limitations							Monitoring requirements			
Subject item	**Parameter**	**Quantity /Loading avg.**	**Quantity /Loading max.**	**Quantity /Loading units**	**Quality /Conc. min.**	**Quality /Conc. avg.**	**Quality /Conc. max.**	**Quality/ Conc. units**	**Frequency**	**Sample type**	**Effective period**	**Notes**
							m					
GW 008 Monitoring Well 8	Sulfate, Total (as SO4)						Monitor only. calendar month maximum	milligrams per liter	once per month	Grab	Apr, Jul, Oct	
GW 008 Monitoring Well 8	Temperature, Water (C)						Monitor only. calendar month maximum	degrees Celsius	once per month	Grab	Apr, Jul, Oct	
GW 009 Monitoring Well 9	Bicarbonates (HCO3)						Monitor only. calendar month maximum	milligrams per liter	once per year	Grab	Oct	
GW 009 Monitoring Well 9	Chloride, Total						Monitor only. calendar month maximum	milligrams per liter	once per year	Grab	Oct	
GW 009 Monitoring Well 9	Elevation, Water		Monitor only. calendar month maximum	feet					once per year	Measurement, Instantaneous	Oct	
GW 009 Monitoring Well 9	Hardness, Calcium & Magnesium, Calculated (as CaCO3)						Monitor only. calendar month maximu	milligrams per liter	once per year	Grab	Oct	

		Discharge limitations							Monitoring requirements			
Subject item	**Parameter**	**Quantity /Loading avg.**	**Quantity /Loading max.**	**Quantity /Loading units**	**Quality /Conc. min.**	**Quality /Conc. avg.**	**Quality /Conc. max.**	**Quality/ Conc. units**	**Frequency**	**Sample type**	**Effective period**	**Notes**
							m					
GW 009 Monitoring Well 9	Iron, Dissolved (as Fe)						Monitor only. calendar month maximum	milligrams per liter	once per year	Grab	Oct	
GW 009 Monitoring Well 9	Manganese, Dissolved (as Mn)						Monitor only. calendar month maximum	micrograms per liter	once per year	Grab	Oct	
GW 009 Monitoring Well 9	pH				Monitor only. calendar month minimum		Monitor only. calendar month maximum	standard units	once per year	Grab	Oct	
GW 009 Monitoring Well 9	Solids, Total Dissolved (TDS)						Monitor only. calendar month maximum	milligrams per liter	once per year	Grab	Oct	
GW 009 Monitoring Well 9	Specific Conductance						Monitor only. calendar month maximum	micromhos per cm	once per year	Grab	Oct	
GW 009 Monitoring Well 9	Sulfate, Total (as SO4)						Monitor only. calendar month	milligrams per liter	once per year	Grab	Oct	

		Discharge limitations							Monitoring requirements			
Subject item	**Parameter**	**Quantity /Loading avg.**	**Quantity /Loading max.**	**Quantity /Loading units**	**Quality /Conc. min.**	**Quality /Conc. avg.**	**Quality /Conc. max.**	**Quality/ Conc. units**	**Frequency**	**Sample type**	**Effective period**	**Notes**
							maximum					
GW 009 Monitoring Well 9	Temperature, Water (C)						Monitor only. calendar month maximum	degrees Celsius	once per year	Grab	Oct	
GW 010 Monitoring Well 10	Bicarbonates (HCO3)						Monitor only. calendar month maximum	milligrams per liter	once per year	Grab	Oct	
GW 010 Monitoring Well 10	Chloride, Total						Monitor only. calendar month maximum	milligrams per liter	once per year	Grab	Oct	
GW 010 Monitoring Well 10	Elevation, Water		Monitor only. calendar month maximum	feet					once per year	Measurement, Instantaneous	Oct	
GW 010 Monitoring Well 10	Hardness, Calcium & Magnesium, Calculated (as CaCO3)						Monitor only. calendar month maximum	milligrams per liter	once per year	Grab	Oct	
GW 010 Monitoring Well 10	Iron, Dissolved (as Fe)						Monitor only. calendar month	milligrams per liter	once per year	Grab	Oct	

		Discharge limitations							Monitoring requirements			
Subject item	**Parameter**	**Quantity /Loading avg.**	**Quantity /Loading max.**	**Quantity /Loading units**	**Quality /Conc. min.**	**Quality /Conc. avg.**	**Quality /Conc. max.**	**Quality/ Conc. units**	**Frequency**	**Sample type**	**Effective period**	**Notes**
							maximum					
GW 010 Monitoring Well 10	Manganese, Dissolved (as Mn)						Monitor only. calendar month maximum	micrograms per liter	once per year	Grab	Oct	
GW 010 Monitoring Well 10	pH				Monitor only. calendar month minimum		Monitor only. calendar month maximum	standard units	once per year	Grab	Oct	
GW 010 Monitoring Well 10	Solids, Total Dissolved (TDS)						Monitor only. calendar month maximum	milligrams per liter	once per year	Grab	Oct	
GW 010 Monitoring Well 10	Specific Conductance						Monitor only. calendar month maximum	micromhos per cm	once per year	Grab	Oct	
GW 010 Monitoring Well 10	Sulfate, Total (as SO4)						Monitor only. calendar month maximum	milligrams per liter	once per year	Grab	Oct	
GW 010 Monitoring Well 10	Temperature, Water (C)						Monitor only. calendar	degrees Celsius	once per year	Grab	Oct	

		Discharge limitations							Monitoring requirements			
Subject item	**Parameter**	**Quantity /Loading avg.**	**Quantity /Loading max.**	**Quantity /Loading units**	**Quality /Conc. min.**	**Quality /Conc. avg.**	**Quality /Conc. max.**	**Quality/ Conc. units**	**Frequency**	**Sample type**	**Effective period**	**Notes**
							month maximum					
GW 011 Monitoring Well 11	Bicarbonates (HCO3)						Monitor only. calendar month maximum	milligrams per liter	once per month	Grab	Apr, Jul, Oct	
GW 011 Monitoring Well 11	Chloride, Total						Monitor only. calendar month maximum	milligrams per liter	once per month	Grab	Apr, Jul, Oct	
GW 011 Monitoring Well 11	Elevation, Water		Monitor only. calendar month maximum	feet					once per month	Measurement, Instantaneous	Apr, Jul, Oct	
GW 011 Monitoring Well 11	Hardness, Calcium & Magnesium, Calculated (as CaCO3)						Monitor only. calendar month maximum	milligrams per liter	once per month	Grab	Apr, Jul, Oct	
GW 011 Monitoring Well 11	Iron, Dissolved (as Fe)						Monitor only. calendar month maximum	milligrams per liter	once per month	Grab	Apr, Jul, Oct	
GW 011 Monitoring Well 11	Manganese, Dissolved (as Mn)						Monitor only. calendar	micrograms per liter	once per month	Grab	Apr, Jul, Oct	

		Discharge limitations							Monitoring requirements			
Subject item	**Parameter**	**Quantity /Loading avg.**	**Quantity /Loading max.**	**Quantity /Loading units**	**Quality /Conc. min.**	**Quality /Conc. avg.**	**Quality /Conc. max.**	**Quality/ Conc. units**	**Frequency**	**Sample type**	**Effective period**	**Notes**
							month maximum					
GW 011 Monitoring Well 11	pH				Monitor only. calendar month minimum		Monitor only. calendar month maximum	standard units	once per month	Grab	Apr, Jul, Oct	
GW 011 Monitoring Well 11	Solids, Total Dissolved (TDS)						Monitor only. calendar month maximum	milligrams per liter	once per month	Grab	Apr, Jul, Oct	
GW 011 Monitoring Well 11	Specific Conductance						Monitor only. calendar month maximum	micromhos per cm	once per month	Grab	Apr, Jul, Oct	
GW 011 Monitoring Well 11	Sulfate, Total (as SO4)						Monitor only. calendar month maximum	milligrams per liter	once per month	Grab	Apr, Jul, Oct	
GW 011 Monitoring Well 11	Temperature, Water (C)						Monitor only. calendar month maximum	degrees Celsius	once per month	Grab	Apr, Jul, Oct	
GW 012 Monitoring	Bicarbonates (HCO3)						Monitor only.	milligrams per liter	once per month	Grab	Apr, Jul, Oct	

		Discharge limitations							Monitoring requirements			
Subject item	**Parameter**	**Quantity /Loading avg.**	**Quantity /Loading max.**	**Quantity /Loading units**	**Quality /Conc. min.**	**Quality /Conc. avg.**	**Quality /Conc. max.**	**Quality/ Conc. units**	**Frequency**	**Sample type**	**Effective period**	**Notes**
Well 12							calendar month maximum					
GW 012 Monitoring Well 12	Chloride, Total						250 calendar month maximum	milligrams per liter	once per month	Grab	Apr, Jul, Oct	
GW 012 Monitoring Well 12	Elevation, Water		Monitor only. calendar month maximum	feet					once per month	Measurement, Instantaneous	Apr, Jul, Oct	
GW 012 Monitoring Well 12	Hardness, Calcium & Magnesium, Calculated (as CaCO3)						Monitor only. calendar month maximum	milligrams per liter	once per month	Grab	Apr, Jul, Oct	
GW 012 Monitoring Well 12	Iron, Dissolved (as Fe)						Monitor only. calendar month maximum	milligrams per liter	once per month	Grab	Apr, Jul, Oct	
GW 012 Monitoring Well 12	Manganese, Dissolved (as Mn)						Monitor only. calendar month maximum	micrograms per liter	once per month	Grab	Apr, Jul, Oct	
GW 012 Monitoring Well 12	pH				Monitor only. calendar		Monitor only. calendar	standard units	once per month	Grab	Apr, Jul, Oct	

		Discharge limitations							Monitoring requirements			
Subject item	**Parameter**	**Quantity /Loading avg.**	**Quantity /Loading max.**	**Quantity /Loading units**	**Quality /Conc. min.**	**Quality /Conc. avg.**	**Quality /Conc. max.**	**Quality/ Conc. units**	**Frequency**	**Sample type**	**Effective period**	**Notes**
					month minimum		month maximum					
GW 012 Monitoring Well 12 Phase 1	Solids, Total Dissolved (TDS)						Monitor only. calendar month maximum	milligrams per liter	once per month	Grab	Apr, Jul, Oct	
GW 012 Monitoring Well 12 Phase 2	Solids, Total Dissolved (TDS)						Monitor only. calendar month maximum	milligrams per liter	once per month	Grab	Apr, Jul, Oct	
GW 012 Monitoring Well 12 Phase 3	Solids, Total Dissolved (TDS)						500 calendar month maximum	milligrams per liter	once per month	Grab	Apr, Jul, Oct	
GW 012 Monitoring Well 12 Phase 4	Solids, Total Dissolved (TDS)						500 calendar month maximum	milligrams per liter	once per month	Grab	Apr, Jul, Oct	
GW 012 Monitoring Well 12	Specific Conductance						Monitor only. calendar month maximum	micromhos per cm	once per month	Grab	Apr, Jul, Oct	
GW 012 Monitoring Well 12 Phase 1	Sulfate, Total (as SO4)						Monitor only. calendar month	milligrams per liter	once per month	Grab	Apr, Jul, Oct	

		Discharge limitations							Monitoring requirements			
Subject item	**Parameter**	**Quantity /Loading avg.**	**Quantity /Loading max.**	**Quantity /Loading units**	**Quality /Conc. min.**	**Quality /Conc. avg.**	**Quality /Conc. max.**	**Quality/ Conc. units**	**Frequency**	**Sample type**	**Effective period**	**Notes**
							maximum					
GW 012 Monitoring Well 12 Phase 2	Sulfate, Total (as SO4)						Monitor only. calendar month maximum	milligrams per liter	once per month	Grab	Apr, Jul, Oct	
GW 012 Monitoring Well 12 Phase 3	Sulfate, Total (as SO4)						250 calendar month maximum	milligrams per liter	once per month	Grab	Apr, Jul, Oct	
GW 012 Monitoring Well 12 Phase 4	Sulfate, Total (as SO4)						250 calendar month maximum	milligrams per liter	once per month	Grab	Apr, Jul, Oct	
GW 012 Monitoring Well 12	Temperature, Water (C)						Monitor only. calendar month maximum	degrees Celsius	once per month	Grab	Apr, Jul, Oct	
GW 013 Monitoring Well 13	Bicarbonates (HCO3)						Monitor only. calendar month maximum	milligrams per liter	once per month	Grab	Apr, Jul, Oct	
GW 013 Monitoring Well 13	Chloride, Total						250 calendar month maximum	milligrams per liter	once per month	Grab	Apr, Jul, Oct	

		Discharge limitations							Monitoring requirements			
Subject item	**Parameter**	**Quantity /Loading avg.**	**Quantity /Loading max.**	**Quantity /Loading units**	**Quality /Conc. min.**	**Quality /Conc. avg.**	**Quality /Conc. max.**	**Quality/ Conc. units**	**Frequency**	**Sample type**	**Effective period**	**Notes**
GW 013 Monitoring Well 13	Elevation, Water		Monitor only. calendar month maximum	feet					once per month	Measurement, Instantaneous	Apr, Jul, Oct	
GW 013 Monitoring Well 13	Hardness, Calcium & Magnesium, Calculated (as CaCO3)						Monitor only. calendar month maximum	milligrams per liter	once per month	Grab	Apr, Jul, Oct	
GW 013 Monitoring Well 13	Iron, Dissolved (as Fe)						Monitor only. calendar month maximum	milligrams per liter	once per month	Grab	Apr, Jul, Oct	
GW 013 Monitoring Well 13	Manganese, Dissolved (as Mn)						Monitor only. calendar month maximum	micrograms per liter	once per month	Grab	Apr, Jul, Oct	
GW 013 Monitoring Well 13	pH				Monitor only. calendar month minimum		Monitor only. calendar month maximum	standard units	once per month	Grab	Apr, Jul, Oct	
GW 013 Monitoring Well 13 Phase 1	Solids, Total Dissolved (TDS)						Monitor only. calendar month maximum	milligrams per liter	once per month	Grab	Apr, Jul, Oct	

		Discharge limitations							Monitoring requirements			
Subject item	**Parameter**	**Quantity /Loading avg.**	**Quantity /Loading max.**	**Quantity /Loading units**	**Quality /Conc. min.**	**Quality /Conc. avg.**	**Quality /Conc. max.**	**Quality/ Conc. units**	**Frequency**	**Sample type**	**Effective period**	**Notes**
GW 013 Monitoring Well 13 Phase 2	Solids, Total Dissolved (TDS)						Monitor only. calendar month maximum	milligrams per liter	once per month	Grab	Apr, Jul, Oct	
GW 013 Monitoring Well 13 Phase 3	Solids, Total Dissolved (TDS)						500 calendar month maximum	milligrams per liter	once per month	Grab	Apr, Jul, Oct	
GW 013 Monitoring Well 13 Phase 4	Solids, Total Dissolved (TDS)						500 calendar month maximum	milligrams per liter	once per month	Grab	Apr, Jul, Oct	
GW 013 Monitoring Well 13	Specific Conductance						Monitor only. calendar month maximum	micromhos per cm	once per month	Grab	Apr, Jul, Oct	
GW 013 Monitoring Well 13 Phase 1	Sulfate, Total (as SO4)						Monitor only. calendar month maximum	milligrams per liter	once per month	Grab	Apr, Jul, Oct	
GW 013 Monitoring Well 13 Phase 2	Sulfate, Total (as SO4)						Monitor only. calendar month maximum	milligrams per liter	once per month	Grab	Apr, Jul, Oct	

		Discharge limitations							Monitoring requirements			
Subject item	**Parameter**	**Quantity /Loading avg.**	**Quantity /Loading max.**	**Quantity /Loading units**	**Quality /Conc. min.**	**Quality /Conc. avg.**	**Quality /Conc. max.**	**Quality/ Conc. units**	**Frequency**	**Sample type**	**Effective period**	**Notes**
GW 013 Monitoring Well 13 Phase 3	Sulfate, Total (as SO4)						250 calendar month maximum	milligrams per liter	once per month	Grab	Apr, Jul, Oct	
GW 013 Monitoring Well 13 Phase 4	Sulfate, Total (as SO4)						250 calendar month maximum	milligrams per liter	once per month	Grab	Apr, Jul, Oct	
GW 013 Monitoring Well 13	Temperature, Water (C)						Monitor only. calendar month maximum	degrees Celsius	once per month	Grab	Apr, Jul, Oct	
GW 014 Monitoring Well 14	Bicarbonates (HCO3)						Monitor only. calendar month maximum	milligrams per liter	once per month	Grab	Apr, Jul, Oct	
GW 014 Monitoring Well 14	Chloride, Total						250 calendar month maximum	milligrams per liter	once per month	Grab	Apr, Jul, Oct	
GW 014 Monitoring Well 14	Elevation, Water		Monitor only. calendar month maximum	feet					once per month	Measurement, Instantaneous	Apr, Jul, Oct	
GW 014 Monitoring	Hardness, Calcium & Magnesium, Calculated						Monitor only.	milligrams per liter	once per month	Grab	Apr, Jul, Oct	

		Discharge limitations							Monitoring requirements			
Subject item	**Parameter**	**Quantity /Loading avg.**	**Quantity /Loading max.**	**Quantity /Loading units**	**Quality /Conc. min.**	**Quality /Conc. avg.**	**Quality /Conc. max.**	**Quality/ Conc. units**	**Frequency**	**Sample type**	**Effective period**	**Notes**
Well 14	(as CaCO3)						calendar month maximum					
GW 014 Monitoring Well 14	Iron, Dissolved (as Fe)						Monitor only. calendar month maximum	milligrams per liter	once per month	Grab	Apr, Jul, Oct	
GW 014 Monitoring Well 14	Manganese, Dissolved (as Mn)						Monitor only. calendar month maximum	micrograms per liter	once per month	Grab	Apr, Jul, Oct	
GW 014 Monitoring Well 14	pH				Monitor only. calendar month minimum		Monitor only. calendar month maximum	standard units	once per month	Grab	Apr, Jul, Oct	
GW 014 Monitoring Well 14	Solids, Total Dissolved (TDS)						500 calendar month maximum	milligrams per liter	once per month	Grab	Apr, Jul, Oct	
GW 014 Monitoring Well 14	Specific Conductance						Monitor only. calendar month maximum	micromhos per cm	once per month	Grab	Apr, Jul, Oct	
GW 014 Monitoring	Sulfate, Total (as SO4)						250 calendar	milligrams per liter	once per month	Grab	Apr, Jul, Oct	

		Discharge limitations							Monitoring requirements			
Subject item	**Parameter**	**Quantity /Loading avg.**	**Quantity /Loading max.**	**Quantity /Loading units**	**Quality /Conc. min.**	**Quality /Conc. avg.**	**Quality /Conc. max.**	**Quality/ Conc. units**	**Frequency**	**Sample type**	**Effective period**	**Notes**
Well 14							month maximum					
GW 014 Monitoring Well 14	Temperature, Water (C)						Monitor only. calendar month maximum	degrees Celsius	once per month	Grab	Apr, Jul, Oct	
SD 001 Seepage outfall 020	Bicarbonates (HCO3)					Monitor only. calendar month average		milligrams per liter	once per month	Grab	Jan-Dec	
SD 001 Seepage outfall 020	Chloride, Total					Monitor only. calendar month average		milligrams per liter	once per month	Grab	Jan-Dec	
SD 001 Seepage outfall 020	Flow		Monitor only. calendar month total	million gallons		Monitor only. calendar month average	Monitor only. daily maximum	million gallons per day	twice per month	Measurement	Jan-Dec	
SD 001 Seepage outfall 020	Hardness, Calcium & Magnesium, Calculated (as CaCO3)					Monitor only. calendar month average		milligrams per liter	once per month	Grab	Jan-Dec	
SD 001 Seepage outfall 020	Iron, Dissolved (as Fe)					1.0 calendar month average	2.0 calendar month maximum	milligrams per liter	once per month	Grab	Jan-Dec	

		Discharge limitations							Monitoring requirements			
Subject item	**Parameter**	**Quantity /Loading avg.**	**Quantity /Loading max.**	**Quantity /Loading units**	**Quality /Conc. min.**	**Quality /Conc. avg.**	**Quality /Conc. max.**	**Quality/ Conc. units**	**Frequency**	**Sample type**	**Effective period**	**Notes**
SD 001 Seepage outfall 020	Manganese, Dissolved (as Mn)					Monitor only. calendar month average		micrograms per liter	once per month	Grab	Jan-Dec	
SD 001 Seepage outfall 020	Mercury, Dissolved (as Hg)						Monitor only. calendar quarter maximum	nanograms per liter	once per quarter	Grab	Mar, Jun, Sep, Dec	
SD 001 Seepage outfall 020	Mercury, Total (as Hg)						Monitor only. calendar quarter maximum	nanograms per liter	once per quarter	Grab	Mar, Jun, Sep, Dec	
SD 001 Seepage outfall 020	pH				6.0 instantaneous minimum		9.0 instantaneous maximum	standard units	once per month	Grab	Jan-Dec	
SD 001 Seepage outfall 020	Solids, Total Dissolved (TDS)					Monitor only. calendar month average		milligrams per liter	once per month	Grab	Jan-Dec	
SD 001 Seepage outfall 020	Solids, Total Suspended (TSS)	36.4 calendar month average		kilograms per day		20 calendar month average	30 daily maximum	milligrams per liter	twice per month	Grab	Jan-Dec	
SD 001 Seepage outfall 020	Solids, Total Suspended (TSS), grab (Mercury)						Monitor only. calendar	milligrams per liter	once per quarter	Grab	Mar, Jun, Sep, Dec	

		Discharge limitations							Monitoring requirements			
Subject item	**Parameter**	**Quantity /Loading avg.**	**Quantity /Loading max.**	**Quantity /Loading units**	**Quality /Conc. min.**	**Quality /Conc. avg.**	**Quality /Conc. max.**	**Quality/ Conc. units**	**Frequency**	**Sample type**	**Effective period**	**Notes**
							quarter maximum					
SD 001 Seepage outfall 020	Specific Conductance					Monitor only. calendar month average		micromhos per cm	once per month	Measurement, Instantaneous	Jan-Dec	
SD 001 Seepage outfall 020	Sulfate, Total (as SO4)					Monitor only. calendar month average		milligrams per liter	once per month	Grab	Jan-Dec	
SD 001 Seepage outfall 020	Temperature, Water (C)						Monitor only. calendar month maximum	degrees Celsius	once per month	Grab	Jan-Dec	
SD 005 Stormwater, Non-specific Runoff	Antimony, Total (as Sb)					Monitor only. calendar year average intervention-qtr		milligrams per liter	once per year	Grab	Jan-Dec	The intervention limit is 0.18 mg/L. If this limit is exceeded, the Permittee shall refer to the Industrial Stormwater Sector G: Metal Mining (Ore Mining and Dressing) section of this permit.
SD 005 Stormwater, Non-specific Runoff	Arsenic, Total (as As)					Monitor only. calendar year average intervention-qtr		milligrams per liter	once per year	Grab	Jan-Dec	The intervention limit is 0.68 mg/L. If this limit is exceeded, the Permittee shall refer to the Industrial Stormwater Sector G: Metal Mining (Ore Mining and Dressing) section of this permit.
SD 005 Stormwater,	Cadmium, Total (as Cd)					Monitor only.		milligrams per liter	once per year	Grab	Jan-Dec	The intervention limit is 0.0078 mg/L. If this limit is exceeded,

		Discharge limitations							Monitoring requirements			
Subject item	**Parameter**	**Quantity /Loading avg.**	**Quantity /Loading max.**	**Quantity /Loading units**	**Quality /Conc. min.**	**Quality /Conc. avg.**	**Quality /Conc. max.**	**Quality/ Conc. units**	**Frequency**	**Sample type**	**Effective period**	**Notes**
Non-specific Runoff						calendar year average interven tion-qtr						the Permittee shall refer to the Industrial Stormwater Sector G: Metal Mining (Ore Mining and Dressing) section of this permit.
SD 005 Stormwater, Non-specific Runoff	COD (Chemical Oxygen Demand)					Monitor only. calendar year average interven tion-qtr		milligrams per liter	once per year	Grab	Jan-Dec	The intervention limit is 120 mg/L. If this limit is exceeded, the Permittee shall refer to the Industrial Stormwater Sector G: Metal Mining (Ore Mining and Dressing) section of this permit.
SD 005 Stormwater, Non-specific Runoff	Copper, Total (as Cu)					Monitor only. calendar year average interven tion-qtr		milligrams per liter	once per year	Grab	Jan-Dec	The intervention limit is 0.028 mg/L. If this limit is exceeded, the Permittee shall refer to the Industrial Stormwater Sector G: Metal Mining (Ore Mining and Dressing) section of this permit.
SD 005 Stormwater, Non-specific Runoff	Hardness, Calcium & Magnesium, Calculated (as CaCO3)					Monitor only. calendar year average interven tion-qtr		milligrams per liter	once per year	Grab	Jan-Dec	The intervention limit is 100 mg/L. If this limit is exceeded, the Permittee shall refer to the Industrial Stormwater Sector G: Metal Mining (Ore Mining and Dressing) section of this permit.
SD 005 Stormwater, Non-specific Runoff	Iron, Total (as Fe)					Monitor only. calendar year average interven tion-qtr		milligrams per liter	once per year	Grab	Jan-Dec	The intervention limit is 1.0 mg/L. If this limit is exceeded, the Permittee shall refer to the Industrial Stormwater Sector G: Metal Mining (Ore Mining and Dressing) section of this permit.
SD 005 Stormwater,	Lead, Total (as Pb)					Monitor only.		milligrams per liter	once per year	Grab	Jan-Dec	The intervention limit is 0.164 mg/L. If this limit is exceeded,

		Discharge limitations							Monitoring requirements			
Subject item	**Parameter**	**Quantity /Loading avg.**	**Quantity /Loading max.**	**Quantity /Loading units**	**Quality /Conc. min.**	**Quality /Conc. avg.**	**Quality /Conc. max.**	**Quality/ Conc. units**	**Frequency**	**Sample type**	**Effective period**	**Notes**
Non-specific Runoff						calendar year average interven tion-qtr						the Permittee shall refer to the Industrial Stormwater Sector G: Metal Mining (Ore Mining and Dressing) section of this permit.
SD 005 Stormwater, Non-specific Runoff	Nickel, Total (as Ni)					Monitor only. calendar year average interven tion-qtr		milligrams per liter	once per year	Grab	Jan-Dec	The intervention limit is 0.938 mg/L. If this limit is exceeded, the Permittee shall refer to the Industrial Stormwater Sector G: Metal Mining (Ore Mining and Dressing) section of this permit.
SD 005 Stormwater, Non-specific Runoff	Nitrite Plus Nitrate, Total (as N)					Monitor only. calendar year average interven tion-qtr		milligrams per liter	once per year	Grab	Jan-Dec	The intervention limit is 0.68 mg/L. If this limit is exceeded, the Permittee shall refer to the Industrial Stormwater Sector G: Metal Mining (Ore Mining and Dressing) section of this permit.
SD 005 Stormwater, Non-specific Runoff	pH				Monitor only. calendar year minimu m interven tion-qtr		Monitor only. calendar year maximu m interven tion-qtr	standard units	once per year	Grab	Jan-Dec	The upper intervention limit is 9.0 mg/L. If this limit is exceeded, the Permittee shall refer to the Industrial Stormwater Sector G: Metal Mining (Ore Mining and Dressing) section of this permit.The lower intervention limit is 6.0 mg/L. If pH is less than the limit, the Permittee shall refer to the Industrial Stormwater Sector G: Metal Mining (Ore Mining and Dressing) section of this permit.
SD 005 Stormwater,	Selenium, Total (as Se)					Monitor only.		milligrams per liter	once per year	Grab	Jan-Dec	The intervention limit is 0.04 mg/L. If this limit is exceeded,

		Discharge limitations							Monitoring requirements			
Subject item	**Parameter**	**Quantity /Loading avg.**	**Quantity /Loading max.**	**Quantity /Loading units**	**Quality /Conc. min.**	**Quality /Conc. avg.**	**Quality /Conc. max.**	**Quality/ Conc. units**	**Frequency**	**Sample type**	**Effective period**	**Notes**
Non-specific Runoff						calendar year average interven tion-qtr						the Permittee shall refer to the Industrial Stormwater Sector G: Metal Mining (Ore Mining and Dressing) section of this permit.
SD 005 Stormwater, Non-specific Runoff	Silver, Total (as Ag)					Monitor only. calendar year average interven tion-qtr		milligrams per liter	once per year	Grab	Jan-Dec	The intervention limit is 0.0041 mg/L. If this limit is exceeded, the Permittee shall refer to the Industrial Stormwater Sector G: Metal Mining (Ore Mining and Dressing) section of this permit.
SD 005 Stormwater, Non-specific Runoff	Solids, Total Suspended (TSS)					Monitor only. calendar year average interven tion-qtr		milligrams per liter	once per year	Grab	Jan-Dec	The intervention limit is 100 mg/L. If this limit is exceeded, the Permittee shall refer to the Industrial Stormwater Sector G: Metal Mining (Ore Mining and Dressing) section of this permit.
SD 005 Stormwater, Non-specific Runoff	Sulfate, Total (as SO4)					Monitor only. calendar year average interven tion-qtr		milligrams per liter	once per year	Grab	Jan-Dec	The intervention limit is 1000 mg/L. If this limit is exceeded, the Permittee shall refer to the Industrial Stormwater Sector G: Metal Mining (Ore Mining and Dressing) section of this permit.
SD 005 Stormwater, Non-specific Runoff	Zinc, Total (as Zn)					Monitor only. calendar year average interven tion-qtr		milligrams per liter	once per year	Grab	Jan-Dec	The intervention limit is 0.234 mg/L. If this limit is exceeded, the Permittee shall refer to the Industrial Stormwater Sector G: Metal Mining (Ore Mining and Dressing) section of this permit.
SD 006 Seep Discharge to	Bicarbonates (HCO3)					Monitor only.		milligrams per liter	once per month	Grab	Jan-Dec	

		Discharge limitations							Monitoring requirements			
Subject item	**Parameter**	**Quantity /Loading avg.**	**Quantity /Loading max.**	**Quantity /Loading units**	**Quality /Conc. min.**	**Quality /Conc. avg.**	**Quality /Conc. max.**	**Quality/ Conc. units**	**Frequency**	**Sample type**	**Effective period**	**Notes**
north wetlands						calendar month average						
SD 006 Seep Discharge to north wetlands	Chloride, Total					Monitor only. calendar month average		milligrams per liter	once per month	Grab	Jan-Dec	
SD 006 Seep Discharge to north wetlands	Flow		Monitor only. calendar month total	million gallons		Monitor only. calendar month average	Monitor only. daily maximum	million gallons per day	twice per month	Measurement	Jan-Dec	
SD 006 Seep Discharge to north wetlands	Hardness, Calcium & Magnesium, Calculated (as CaCO3)					Monitor only. calendar month average		milligrams per liter	once per month	Grab	Jan-Dec	
SD 006 Seep Discharge to north wetlands	Iron, Dissolved (as Fe)					1.0 calendar month average	2.0 calendar month maximum	milligrams per liter	once per month	Grab	Jan-Dec	
SD 006 Seep Discharge to north wetlands	Manganese, Dissolved (as Mn)					Monitor only. calendar month average		micrograms per liter	once per month	Grab	Jan-Dec	
SD 006 Seep Discharge to north wetlands	pH				6.0 instantaneous minimum		9.0 instantaneous maximum	standard units	once per month	Grab	Jan-Dec	
SD 006 Seep	Solids, Total Dissolved					Monitor		milligrams	once per	Grab	Jan-Dec	

		Discharge limitations							Monitoring requirements			
Subject item	**Parameter**	**Quantity /Loading avg.**	**Quantity /Loading max.**	**Quantity /Loading units**	**Quality /Conc. min.**	**Quality /Conc. avg.**	**Quality /Conc. max.**	**Quality/ Conc. units**	**Frequency**	**Sample type**	**Effective period**	**Notes**
Discharge to north wetlands	(TDS)					only. calendar month average		per liter	month			
SD 006 Seep Discharge to north wetlands	Solids, Total Suspended (TSS)					20 calendar month average	30 calendar month maximum	milligrams per liter	twice per month	Grab	Jan-Dec	
SD 006 Seep Discharge to north wetlands	Specific Conductance					Monitor only. calendar month average		micromhos per cm	once per month	Grab	Jan-Dec	
SD 006 Seep Discharge to north wetlands	Sulfate, Total (as SO4)					Monitor only. calendar month average		degrees Celsius	once per month	Grab	Jan-Dec	
SD 006 Seep Discharge to north wetlands	Temperature, Water (C)						Monitor only. calendar month maximum	degrees Celsius	once per month	Grab	Jan-Dec	
SW 001 Sandy River Station 701	Bicarbonates (HCO3)						Monitor only. calendar month maximum	milligrams per liter	once per month	Grab	Jan-Dec	
SW 001 Sandy River Station 701	Chloride, Total						Monitor only. calendar month	milligrams per liter	once per month	Grab	Jan-Dec	

		Discharge limitations							Monitoring requirements			
Subject item	**Parameter**	**Quantity /Loading avg.**	**Quantity /Loading max.**	**Quantity /Loading units**	**Quality /Conc. min.**	**Quality /Conc. avg.**	**Quality /Conc. max.**	**Quality/ Conc. units**	**Frequency**	**Sample type**	**Effective period**	**Notes**
							maximum					
SW 001 Sandy River Station 701	Flow, Stream, Instantaneous						Monitor only. daily maximum	cubic feet per second	once per month	Measurement, Instantaneous	Jan-Dec	
SW 001 Sandy River Station 701	Hardness, Calcium & Magnesium, Calculated (as CaCO3)						Monitor only. calendar month maximum	milligrams per liter	once per month	Grab	Jan-Dec	
SW 001 Sandy River Station 701	pH				Monitor only. calendar month minimum		Monitor only. calendar month maximum	standard units	once per month	Grab	Jan-Dec	
SW 001 Sandy River Station 701	Solids, Total Dissolved (TDS)						Monitor only. calendar month maximum	milliliters per liter	once per month	Grab	Jan-Dec	
SW 001 Sandy River Station 701	Specific Conductance						Monitor only. calendar month maximum	micromhos per cm	once per month	Measurement, Instantaneous	Jan-Dec	
SW 001 Sandy River Station 701	Sulfate, Total (as SO4)						Monitor only. calendar month	milligrams per liter	once per month	Grab	Jan-Dec	

		Discharge limitations							Monitoring requirements			
Subject item	**Parameter**	**Quantity /Loading avg.**	**Quantity /Loading max.**	**Quantity /Loading units**	**Quality /Conc. min.**	**Quality /Conc. avg.**	**Quality /Conc. max.**	**Quality/ Conc. units**	**Frequency**	**Sample type**	**Effective period**	**Notes**
							maximum					
SW 001 Sandy River Station 701	Temperature, Water (C)						Monitor only. calendar month maximum	milligrams per liter	once per month	Measurement, Instantaneous	Jan-Dec	
SW 003 Dark River at CR668	Bicarbonates (HCO3)						Monitor only. calendar month maximum	milligrams per liter	once per month	Grab	Jan-Dec	
SW 003 Dark River at CR668	Chloride, Total						Monitor only. calendar month maximum	milligrams per liter	once per month	Grab	Jan-Dec	
SW 003 Dark River at CR668	Flow, Stream, Instantaneous						Monitor only. daily maximum	cubic feet per second	once per month	Measurement, Instantaneous	Jan-Dec	
SW 003 Dark River at CR668	Hardness, Calcium & Magnesium, Calculated (as CaCO3)						Monitor only. calendar month maximum	milligrams per liter	once per month	Grab	Jan-Dec	
SW 003 Dark River at CR668	pH				Monitor only. calendar month		Monitor only. calendar month	standard units	once per month	Grab	Jan-Dec	

		Discharge limitations							Monitoring requirements			
Subject item	**Parameter**	**Quantity /Loading avg.**	**Quantity /Loading max.**	**Quantity /Loading units**	**Quality /Conc. min.**	**Quality /Conc. avg.**	**Quality /Conc. max.**	**Quality/ Conc. units**	**Frequency**	**Sample type**	**Effective period**	**Notes**
					minimum		maximum					
SW 003 Dark River at CR668	Solids, Total Dissolved (TDS)						Monitor only. calendar month maximum	milligrams per liter	once per month	Grab	Jan-Dec	
SW 003 Dark River at CR668	Specific Conductance						Monitor only. calendar month maximum	micromhos per cm	once per month	Measurement, Instantaneous	Jan-Dec	
SW 003 Dark River at CR668	Sulfate, Total (as SO4)						Monitor only. calendar month maximum	milligrams per liter	once per month	Grab	Jan-Dec	
SW 003 Dark River at CR668	Temperature, Water (C)						Monitor only. calendar month maximum	milligrams per liter	once per month	Measurement, Instantaneous	Jan-Dec	
SW 004 Dark River at CH65	Bicarbonates (HCO3)						Monitor only. calendar month maximum	milligrams per liter	once per month	Grab	Jan-Dec	
SW 004 Dark River at CH65	Chloride, Total						Monitor only. calendar	milligrams per liter	once per month	Grab	Jan-Dec	

		Discharge limitations							Monitoring requirements			
Subject item	**Parameter**	**Quantity /Loading avg.**	**Quantity /Loading max.**	**Quantity /Loading units**	**Quality /Conc. min.**	**Quality /Conc. avg.**	**Quality /Conc. max.**	**Quality/ Conc. units**	**Frequency**	**Sample type**	**Effective period**	**Notes**
							month maximum					
SW 004 Dark River at CH65	Hardness, Calcium & Magnesium, Calculated (as CaCO3)						Monitor only. calendar month maximum	milligrams per liter	once per month	Grab	Jan-Dec	
SW 004 Dark River at CH65	pH				Monitor only. calendar month minimum		Monitor only. calendar month maximum	standard units	once per month	Grab	Jan-Dec	
SW 004 Dark River at CH65	Solids, Total Dissolved (TDS)						Monitor only. calendar month maximum	milligrams per liter	once per month	Grab	Jan-Dec	
SW 004 Dark River at CH65	Specific Conductance						Monitor only. calendar month maximum	micromhos per cm	once per month	Measurement, Instantaneous	Jan-Dec	
SW 004 Dark River at CH65	Sulfate, Total (as SO4)						Monitor only. calendar month maximum	milligrams per liter	once per month	Grab	Jan-Dec	
SW 004 Dark River at CH65	Temperature, Water (C)						Monitor only.	milligrams per liter	once per month	Measurement, Instantaneous	Jan-Dec	

		Discharge limitations							Monitoring requirements			
Subject item	**Parameter**	**Quantity /Loading avg.**	**Quantity /Loading max.**	**Quantity /Loading units**	**Quality /Conc. min.**	**Quality /Conc. avg.**	**Quality /Conc. max.**	**Quality/ Conc. units**	**Frequency**	**Sample type**	**Effective period**	**Notes**
							calendar month maximum					
SW 005 Little Sandy Lake Inlet	Bicarbonates (HCO3)						Monitor only. calendar month maximum	milligrams per liter	once per month	Grab	Jan-Dec	
SW 005 Little Sandy Lake Inlet	Chloride, Total						Monitor only. calendar month maximum	milligrams per liter	once per month	Grab	Jan-Dec	
SW 005 Little Sandy Lake Inlet	Hardness, Calcium & Magnesium, Calculated (as CaCO3)						Monitor only. calendar month maximum	milligrams per liter	once per month	Grab	Jan-Dec	
SW 005 Little Sandy Lake Inlet	pH				Monitor only. calendar month minimum		Monitor only. calendar month maximum	standard units	once per month	Grab	Jan-Dec	
SW 005 Little Sandy Lake Inlet	Solids, Total Dissolved (TDS)						Monitor only. calendar month maximum	milligrams per liter	once per month	Grab	Jan-Dec	
SW 005 Little	Specific Conductance						Monitor	micromhos	once per	Measurement,	Jan-Dec	

		Discharge limitations							Monitoring requirements			
Subject item	**Parameter**	**Quantity /Loading avg.**	**Quantity /Loading max.**	**Quantity /Loading units**	**Quality /Conc. min.**	**Quality /Conc. avg.**	**Quality /Conc. max.**	**Quality/ Conc. units**	**Frequency**	**Sample type**	**Effective period**	**Notes**
Sandy Lake Inlet							only. calendar month maximum	per cm	month	Instantaneous		
SW 005 Little Sandy Lake Inlet	Sulfate, Total (as SO4)						Monitor only. calendar month maximum	milligrams per liter	once per month	Grab	Jan-Dec	
SW 005 Little Sandy Lake Inlet	Temperature, Water (C)						Monitor only. calendar month maximum	milligrams per liter	once per month	Measurement, Instantaneous	Jan-Dec	
SW 006 Timber Creek	Bicarbonates (HCO3)						Monitor only. calendar month maximum	milligrams per liter	once per month	Grab	Jan-Dec	
SW 006 Timber Creek	Chloride, Total						Monitor only. calendar month maximum	milligrams per liter	once per month	Grab	Jan-Dec	
SW 006 Timber Creek	Hardness, Calcium & Magnesium, Calculated (as CaCO3)						Monitor only. calendar month maximum	milligrams per liter	once per month	Grab	Jan-Dec	

		Discharge limitations							Monitoring requirements			
Subject item	**Parameter**	**Quantity /Loading avg.**	**Quantity /Loading max.**	**Quantity /Loading units**	**Quality /Conc. min.**	**Quality /Conc. avg.**	**Quality /Conc. max.**	**Quality/ Conc. units**	**Frequency**	**Sample type**	**Effective period**	**Notes**
SW 006 Timber Creek	pH				Monitor only. calendar month minimum		Monitor only. calendar month maximum	standard units	once per month	Grab	Jan-Dec	
SW 006 Timber Creek	Solids, Total Dissolved (TDS)						Monitor only. calendar month maximum	milligrams per liter	once per month	Grab	Jan-Dec	
SW 006 Timber Creek	Specific Conductance						Monitor only. calendar month maximum	micromhos per cm	once per month	Measurement, Instantaneous	Jan-Dec	
SW 006 Timber Creek	Sulfate, Total (as SO4)						Monitor only. calendar month maximum	milligrams per liter	once per month	Grab	Jan-Dec	
SW 006 Timber Creek	Temperature, Water (C)						Monitor only. calendar month maximum	milligrams per liter	once per month	Measurement, Instantaneous	Jan-Dec	
SW 007 Admiral Lake	Bicarbonates (HCO3)						Monitor only. calendar month maximu	milligrams per liter	once per month	Grab	Jan-Dec	

		Discharge limitations							Monitoring requirements			
Subject item	**Parameter**	**Quantity /Loading avg.**	**Quantity /Loading max.**	**Quantity /Loading units**	**Quality /Conc. min.**	**Quality /Conc. avg.**	**Quality /Conc. max.**	**Quality/ Conc. units**	**Frequency**	**Sample type**	**Effective period**	**Notes**
							m					
SW 007 Admiral Lake	Chloride, Total						Monitor only. calendar month maximum	milligrams per liter	once per month	Grab	Jan-Dec	
SW 007 Admiral Lake	Hardness, Calcium & Magnesium, Calculated (as CaCO3)						Monitor only. calendar month maximum	milligrams per liter	once per month	Grab	Jan-Dec	
SW 007 Admiral Lake	pH				Monitor only. calendar month minimum		Monitor only. calendar month maximum	standard units	once per month	Grab	Jan-Dec	
SW 007 Admiral Lake	Solids, Total Dissolved (TDS)						Monitor only. calendar month maximum	milligrams per liter	once per month	Grab	Jan-Dec	
SW 007 Admiral Lake	Specific Conductance						Monitor only. calendar month maximum	micromhos per cm	once per month	Measurement, Instantaneous	Jan-Dec	
SW 007 Admiral Lake	Sulfate, Total (as SO4)						Monitor only. calendar month	milligrams per liter	once per month	Grab	Jan-Dec	

		Discharge limitations							Monitoring requirements			
Subject item	**Parameter**	**Quantity /Loading avg.**	**Quantity /Loading max.**	**Quantity /Loading units**	**Quality /Conc. min.**	**Quality /Conc. avg.**	**Quality /Conc. max.**	**Quality/ Conc. units**	**Frequency**	**Sample type**	**Effective period**	**Notes**
							maximum					
SW 007 Admiral Lake	Temperature, Water (C)						Monitor only. calendar month maximum	milligrams per liter	once per month	Measurement, Instantaneous	Jan-Dec	
SW 008 Dark River near Basin	Bicarbonates (HCO3)						Monitor only. calendar month maximum	milligrams per liter	once per month	Grab	Jan-Dec	
SW 008 Dark River near Basin	Chloride, Total						Monitor only. calendar month maximum	milligrams per liter	once per month	Grab	Jan-Dec	
SW 008 Dark River near Basin	Hardness, Calcium & Magnesium, Calculated (as CaCO3)						Monitor only. calendar month maximum	milligrams per liter	once per month	Grab	Jan-Dec	
SW 008 Dark River near Basin	pH				Monitor only. calendar month minimum		Monitor only. calendar month maximum	standard units	once per month	Grab	Jan-Dec	
SW 008 Dark River near Basin	Solids, Total Dissolved (TDS)						Monitor only. calendar	milligrams per liter	once per month	Grab	Jan-Dec	

		Discharge limitations							Monitoring requirements			
Subject item	**Parameter**	**Quantity /Loading avg.**	**Quantity /Loading max.**	**Quantity /Loading units**	**Quality /Conc. min.**	**Quality /Conc. avg.**	**Quality /Conc. max.**	**Quality/ Conc. units**	**Frequency**	**Sample type**	**Effective period**	**Notes**
							month maximum					
SW 008 Dark River near Basin	Specific Conductance						Monitor only. calendar month maximum	micromhos per cm	once per month	Measurement, Instantaneous	Jan-Dec	
SW 008 Dark River near Basin	Sulfate, Total (as SO4)						Monitor only. calendar month maximum	milligrams per liter	once per month	Grab	Jan-Dec	
SW 008 Dark River near Basin	Temperature, Water (C)						Monitor only. calendar month maximum	milligrams per liter	once per month	Measurement, Instantaneous	Jan-Dec	
WS 008 Domestic plant effluent to basin	BOD, Carbonaceous 05 Day (20 Deg C)					25 calendar month average	40 calendar month maximum	milligrams per liter	twice per month	Grab	Jan-Dec	
WS 008 Domestic plant effluent to basin	Chlorine, Total Residual					Monitor only. calendar month average	Monitor only. calendar month maximum	milligrams per liter	twice per month	Grab	Apr-Oct	
WS 008 Domestic plant effluent to	Fecal Coliform, MPN or Membrane Filter 44.5C					200 calendar month	400 daily maximum	organisms per 100 milliliter	twice per month	Grab	Apr-Oct	

		Discharge limitations							Monitoring requirements			
Subject item	**Parameter**	**Quantity /Loading avg.**	**Quantity /Loading max.**	**Quantity /Loading units**	**Quality /Conc. min.**	**Quality /Conc. avg.**	**Quality /Conc. max.**	**Quality/ Conc. units**	**Frequency**	**Sample type**	**Effective period**	**Notes**
basin						geometric mean						
WS 008 Domestic plant effluent to basin	Flow		Monitor only. calendar month total	million gallons		Monitor only. calendar month average	Monitor only. calendar month maximum	million gallons per day	once per day	Measurement, Continuous	Jan-Dec	
WS 008 Domestic plant effluent to basin	pH				6.0 instantaneous minimum		9.0 instantaneous maximum	standard units	twice per month	Measurement, Instantaneous	Jan-Dec	
WS 008 Domestic plant effluent to basin	Solids, Total Suspended (TSS)					30 calendar month average	45 calendar month maximum	milligrams per liter	twice per month	Grab	Jan-Dec	
WS 009 Basin Water	Bicarbonates (HCO3)						Monitor only. calendar month maximum	milligrams per liter	once per month	Grab	Jan-Dec	
WS 009 Basin Water	Chloride, Total						Monitor only. calendar month maximum	milligrams per liter	once per month	Grab	Jan-Dec	
WS 009 Basin Water	Evaporation, Accumulated		Monitor only. calendar month total	inches					once per month	Calculation	Jan-Dec	

		Discharge limitations							Monitoring requirements			
Subject item	**Parameter**	**Quantity /Loading avg.**	**Quantity /Loading max.**	**Quantity /Loading units**	**Quality /Conc. min.**	**Quality /Conc. avg.**	**Quality /Conc. max.**	**Quality/ Conc. units**	**Frequency**	**Sample type**	**Effective period**	**Notes**
WS 009 Basin Water	Hardness, Calcium & Magnesium, Calculated (as CaCO3)						Monitor only. calendar month maximum	milligrams per liter	once per month	Grab	Jan-Dec	
WS 009 Basin Water	pH				Monitor only. calendar month minimum		Monitor only. calendar month maximum	standard units	once per month	Grab	Jan-Dec	
WS 009 Basin Water	Precipitation		Monitor only. calendar month total	inches					once per month	Measurement, Continuous	Jan-Dec	
WS 009 Basin Water	Solids, Total Dissolved (TDS)						Monitor only. calendar month maximum	milligrams per liter	once per month	Grab	Jan-Dec	
WS 009 Basin Water	Specific Conductance						Monitor only. calendar month maximum	micromhos per cm	once per month	Grab	Jan-Dec	
WS 009 Basin Water Phase 1	Sulfate, Total (as SO4)						Monitor only. calendar month maximum	milligrams per liter	once per month	Grab	Jan-Dec	

		Discharge limitations							Monitoring requirements			
Subject item	**Parameter**	**Quantity /Loading avg.**	**Quantity /Loading max.**	**Quantity /Loading units**	**Quality /Conc. min.**	**Quality /Conc. avg.**	**Quality /Conc. max.**	**Quality/ Conc. units**	**Frequency**	**Sample type**	**Effective period**	**Notes**
WS 009 Basin Water Phase 2	Sulfate, Total (as SO4)						Monitor only. calendar month maximum	milligrams per liter	once per month	Grab	Jan-Dec	
WS 009 Basin Water Phase 3	Sulfate, Total (as SO4)						Monitor only. calendar month maximum	milligrams per liter	once per month	Grab	Jan-Dec	
WS 009 Basin Water Phase 4	Sulfate, Total (as SO4)						357 calendar month maximum	milligrams per liter	once per month	Grab	Jan-Dec	

10. Appendix A – Chemical Additives

Manufacturer	Product Name	Plant Area Used	Approved Usage	Remarks
Amines/Collectors				
Air Products Performance Mfg., Inc.	M30-3, M50-3, or M100-7	Concentrator	425 lbs/hr	Usage rate includes total for the three products. Dosed at 2 ppm
Frothers				
Nalflote	9837 or equivalent	Concentrator	101 lbs/hr	Mixed C_4-C_{16} alcohols, aldehydes, esters
Antifoams				
NeoSolutions/Nalco	NS9548/8638	Concentrator	1200 gal/day	Usage rate includes both products. Calculated on a monthly average basis.
ChemTreat/Nalco	FO922/8638 Plus	Agglomerator	60 gal/day	
Flocculants				
NeoSolutions	NS6800 and NS3455	Concentrator	300 lbs/hr	Usage rate is for both combined
Anderson	WE-A3P	Crusher	2 ppm	Crushing plant dust collector slurry
ChemTreat	P-817E	Agglomerator	2,200 gal/yr	6 gal/day for scrubber blowdown treatment system
ChemTreat	P-817E	Agglomerator	15,330 gal/yr	6 gal/day per thickener (7 thickeners)
Line 3 Scrubber Blowdown Treatment				
ChemTreat (Anti-Scalant)	CL-1355	Agglomerator	8,000 lb/yr	
ChemTreat (Caustic Blend)	BL-1305	Agglomerator	109,500 gal/yr	
Various Vendors	Lime ($Ca(OH)_2$)	Agglomerator	1,300 tons/yr	Est for sulfate removal in Line 3 Scrubber
Descalers				
ChemTreat	CL-1469	Agglomerator	730 gal/yr	Permitted for 1.5 gal/day in Aggl III cooling tower
ChemTreat	CL-1469	Agglomerator	548 gal/yr	Permitted for 2 gal/day in Aggl I/II cooling tower
Anderson	PC-982	Agglomerator	25,000 gal/yr	Perm. for 37 gal/day in each of 2 Aggl III process water
ChemTreat	CL-4074	Agglomerator	1,460 gal/yr	Perm. For 2 gal/day in 2 vac pumps in Aggl facility
ChemTreat	CL-1355 or CL-1360	Agglomerator	4,380 gal/yr	Perm. For 6 gal/day for 2 process water systems
ChemTreat	CL-5695	Agglomerator	110 gal/yr	Perm. For 55 gal/yr for 2 compressor systems
ChemTreat	CL-1355	Utilities	660 gal/yr	Perm. 1.8 gal/day to air compressor cooling water sys.
Dust Suppressants				
ChemTreat	CT-9070	Agglomerator	30,000 gal/yr	
AKJ	DC-104	Agglomerator	60,000 gal/yr	ChemTreat CT-9070 proposed as full-scale replacement

Manufacturer	Product Name	Plant Area Used	Approved Usage	Remarks
Freeze Conditioners				
DustCoating, Inc.	30% MgCl	Agglomerator	175,000 gal/yr	Approved for application on concentrate reclaim
DustCoating, Inc.	30% MgCl	Pellet Trains	200,000 gal/yr	Anti-freeze on rail pellet shipments
AKJ	FC-506SR, FC-503SR, FC-285SR	Pellet Trains	120,000 gal/yr	Rail car side release agent
Slag Inhibitors				
GE Betz	FS-3954	Agglomerator	548 tons/yr	Permitted for 1500 lb/day in each of Aggl lines 4 and 6
ChemTreat	F-10	Agglomerator		Approved for testing only
ChemTreat	F-39	Agglomerator		Approved for testing only
ChemTreat	F-31	Agglomerator		Approved for testing only
Microbiocides				
ChemTreat	CL2150	Agglomerator		5.26 gal/day
ChemTreat	C-2189	Agglomerator	730 lb/yr	Permitted for 2 lb/day in Aggl III cooling tower
ChemTreat	CT-202	Agglomerator	365 gal/yr	Permitted for 1 gal/day in Aggl III cooling tower
ChemTreat	CT-202	Agglomerator	365 gal/yr	Permitted for 1 gal/day in Aggl I/II cooling tower
ChemTreat	C-2189	Agglomerator	1,100 lb/yr	Permitted for 3 lb/day in Aggl I/II cooling tower
Wetting Agents				
ChemTreat	CT-9080	Agglomerator	13,000 gal/yr	35 gal/day Step 3 Aggl Waste Gas Scrubbers
Cleaners	CL-5695			
ChemTreat	CL-5695	Agglomerator	550 gal/yr	Est. two cleaning cycles/yr per process water strainer
ChemTreat	CL-5695	Agglomerator	330 gal/yr	Est. one cleaning cycle/yr per heat exchanger
Miscellaneous				
ChemTreat	BL-122	Utilities	12,000 lb/yr	
ChemTreat	CL-6030	Utilities	12,000 lb/yr	
ChemTreat	CT-62	Utilities	900 lb/yr	
ChemTreat	CT-775	Utilities	900 lb/yr	
ChemTreat	CT-788	Utilities	3,100 lb/yr	
ChemTreat	P-829L	Utilities	900 gal/yr	Water treatment plant filtration aid
ChemTreat	Delta 888 Descaler	Utilities	170 gal/yr	Periodic cleaning of heat exchange equip.
Various Vendors	5.25% Sodium hypochl.	Concentrator	25 gal/yr	1 gal per cleaning cycle for aspirators
ChemTreat	BL-1557	Utility Plant	30 gal/yr	5 gal/yr in each of 6 boilers during layover
ChemTreat	CL-16	Utility Plant	6 gal/yr	Scale control in potable water treatment
Benetech	BT-108F	Crusher	30,000 gal/yr	
Various Vendors	Diethylene Glycol	Crusher	250,000 gal/yr	
Various Vendors	50% Hydrofluoric Acid	Quality Assurance Lab	15 lb/yr	
Various Vendors	37% Hyrochloric Acid	Quality Assurance Lab	100 gal/yr	
Various Vendors	69% Nitric Acid	Quality Assurance Lab	200 gal/yr	