MINNESOTA POLLUTION CONTROL AGENCY

National Pollutant Discharge Elimination System/State Disposal System

MN0047228

Permittee:	Bongards' Creameries
Facility name:	Bongards' Creameries - Perham
Receiving water:	Unnamed Wetland - Class 2D, 3, 4A, 4B, 5, 6 water
City or Township:	Perham **County:** Otter Tail
Issuance date:	TBD
Expiration date:	TBD

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

The goal of this permit is to reduce pollutant levels in point source discharges and protect water quality in accordance with 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:

This document has been electronically signed.

for the Minnesota Pollution Control Agency

Brandon Montgomery
Supervisor
Water Section
Industrial Division

Resources

Submit electronic Discharge Monitoring Reports (eDMR) via the MPCA e-Services at: https://rsp.pca.state.mn.us/TEMPO_RSP/Orchestrate.do?initiate=true

Submit documents electronically to wq.submittals.mpca@state.mn.us. **Note:** The Water quality submittals form located at https://www.pca.state.mn.us/sites/default/files/wq-wwprm7-71.docx must be attached.

For eDMR and other permit reporting issues, use the directory listed at the bottom of the Discharge Monitoring Report page: https://www.pca.state.mn.us/water/discharge-monitoring-reports

For specific permit requirements, contact your compliance staff: https://www.pca.state.mn.us/water/wastewater-compliance-and-enforcement-staff-contacts

For wastewater permit program general questions, contact the MPCA at 651-282-6143 or 800-657-3938, or reference the permit user's manual at https://www.pca.state.mn.us/sites/default/files/wq-wwtp7-09.pdf.

Additional guidance and resources are located at: https://www.pca.state.mn.us/water/wastewater.

A printable summary of sampling requirements can be found at: https://www.pca.state.mn.us/water/wastewater-permit-submittal-checklists.

A printable checklist of submittals can be found at: https://www.pca.state.mn.us/water/wastewater-permit-submittal-checklists

Table of Contents

Page

1. Permitted facility description

The Bongards' Creameries - Perham facility (facility) is located at 110 3rd Ave NE, Perham, Minnesota 56573-1831, Otter Tail County.

The principal activity at this facility is the processing of milk into cheese, and the processing of whey by-product into protein powder and deproteinized whey powder.

Wastewater from the facility consists of process wastewater, reverse osmosis reject water, and non-contact cooling water (NCCW). A portion (approximately 44%) of the process wastewater (the condensate of whey and permeate from whey concentration) is treated using a reverse osmosis membrane system polisher and discharged at average and maximum rates of 0.400 million gallons per day (MGD) and 0.700 MGD (WS 003 and WS 004). WS 003 and 004 are then mixed with NCCW prior to discharge to surface water via the city of Perham's municipal storm sewer system (SD 001). The remainder of the process wastewater (from all other processes and cleaning wastewater) and reverse osmosis reject are routed to the facility's aerated wastewater pond system for treatment, prior to land application via spray irrigation. NCCW is discharged to surface water via the city of Perham's municipal storm sewer system (SD 001). The discharge of process wastewaters other than the polished wastewater to surface waters is not authorized under this permit. Sanitary wastewater from the facility is routed to the city of Perham Wastewater Treatment Facility (WWTF).

This permit authorizes the discharge of once-through NCCW at average and maximum rates of 1.3 and 2.0 MGD, respectively. The NCCW and polished wastewater are authorized to discharge at a combined average and maximum rate of 1.75 MGD and 2.0 MGD, respectively. The water source is an onsite well or municipal source water. The municipal source water is chemically treated with chlorine. There are no other chemical additives in this discharge. NCCW and polished wastewater are discharged through SD 001 to an Unnamed Wetland (2D, 3, 4A, 4B, 5, 6 waters), via a municipal storm sewer/basin system, upstream of the Otter Tail River.

This permit also authorizes spray irrigation of process wastewater (WS 002) to seven spray irrigation sites (LA 301, LA 302, LA 305, LA 316 to 319), for a total of 304.7 acres. An average and maximum flow of 0.50 and 0.80 MGD (measured at WS 001), respectively, is treated at the facility's aerated wastewater pond system, which is located adjacent to the facility's spray irrigation sites, prior to spray irrigation. The maximum amount authorized for spray irrigation is 163.967 million gallons per year (measured at WS 002). There are eight monitoring wells adjacent to the spray irrigation sites to evaluate groundwater impacts from spray irrigation (GW 001, GW 006, GW 009 to GW 014). Groundwater intervention limits and response actions are included for several parameters. Tile line drainage is not present in the approved spray irrigation sites.

This permit also authorizes land application of the following industrial by-products: antibiotic/unusable milk (WS 302) and whey separator solids (WS 303). WS 302 is designated only for unusable milk that has entered a Bongards' production facility and is therefore an IBP. If milk is rejected prior to unloading and never enters a Bongards' facility, it should not be managed as WS 302, unless Bongards' directs it to a manure storage station authorized in this permit. WS 303 is designated for whey separator solids only.

This permit also includes three additional stations (WS 005, WS 006, and WS 007) for monitoring wastewater pond elevation with intervention limits for each pond.

In lieu of obtaining coverage under both the Industrial Stormwater General Permit and the individual NPDES permit, the MPCA has added the necessary industrial stormwater requirements language and limits and monitoring to this permit so that coverage under this NPDES permit alone will cover both permits. SD stations 002 to 006 are authorized for stormwater discharge and include intervention limits for several parameters.

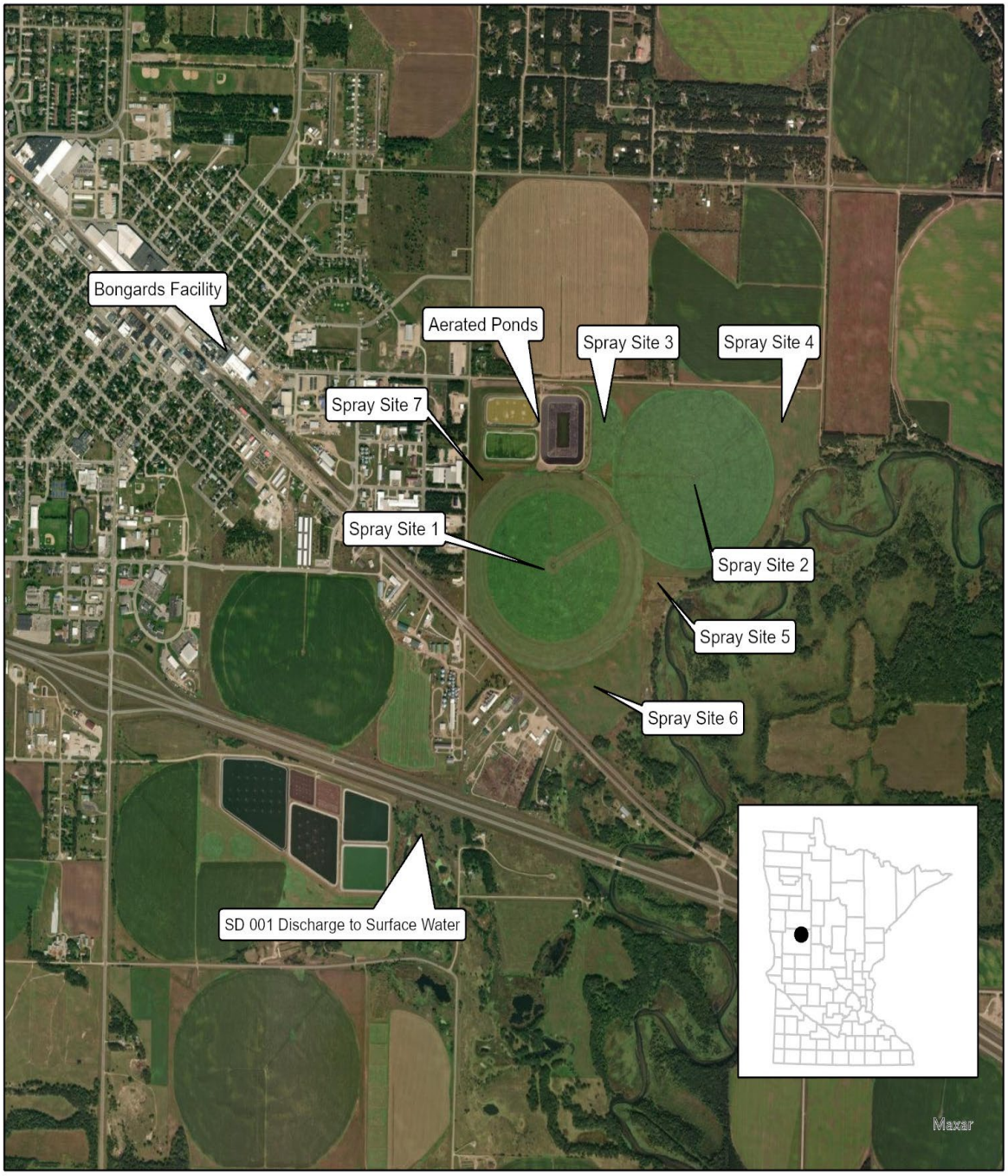
Changes to the facility may result in an increase in pollutant loading to surface waters or other causes of degradation to surface waters. If a change to the facility will result in a net increase in pollutant loading or other causes of degradation that exceed the maximum loading authorized through conditions 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 National Pollutant Discharge Elimination System (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

Facility Location Map
MN0047228: Bongards Creameries
T136N, R39W, Sections 13, 14, 23, 24
Perham, Otter Tail County, Minnesota

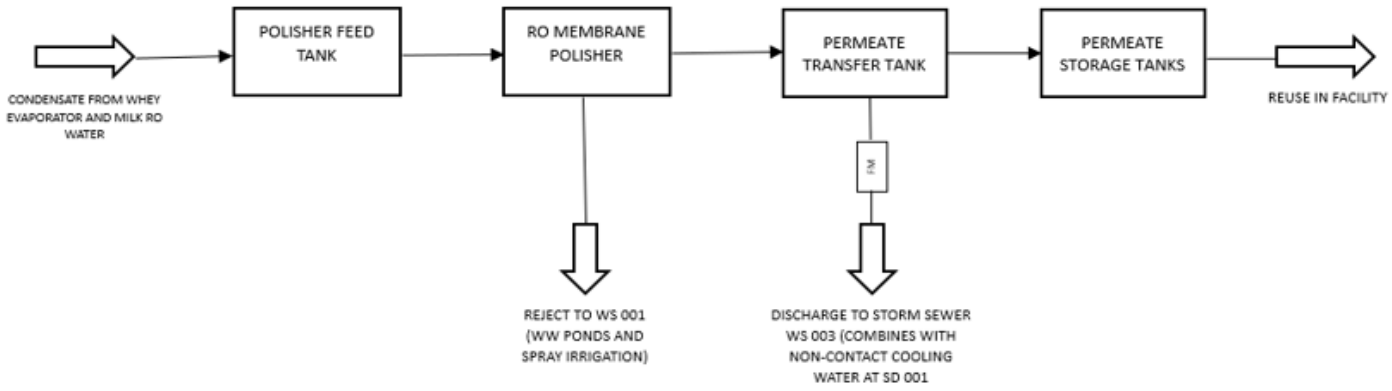


Map produced by: MPCA Staff, 8/4/2025
Scale: 1:24,000

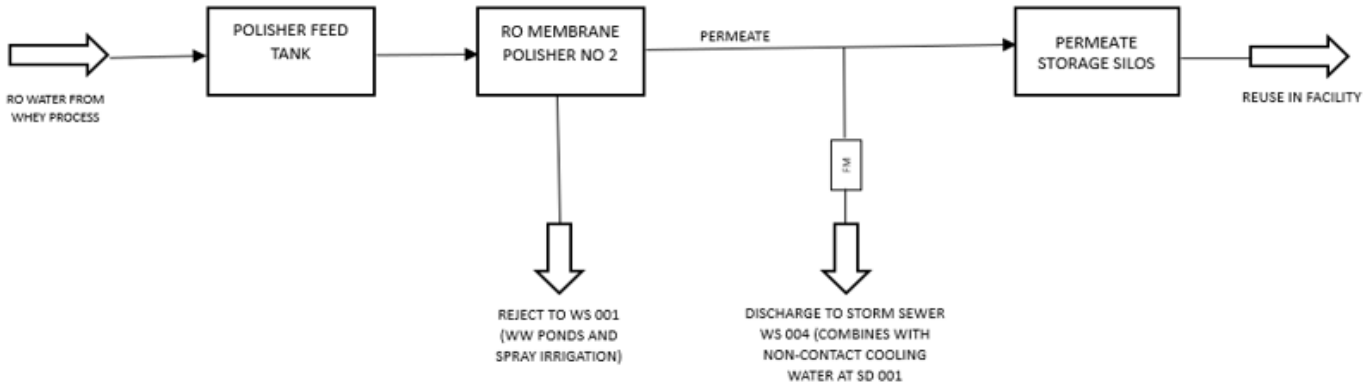
0 0.25 0.5 1 Miles

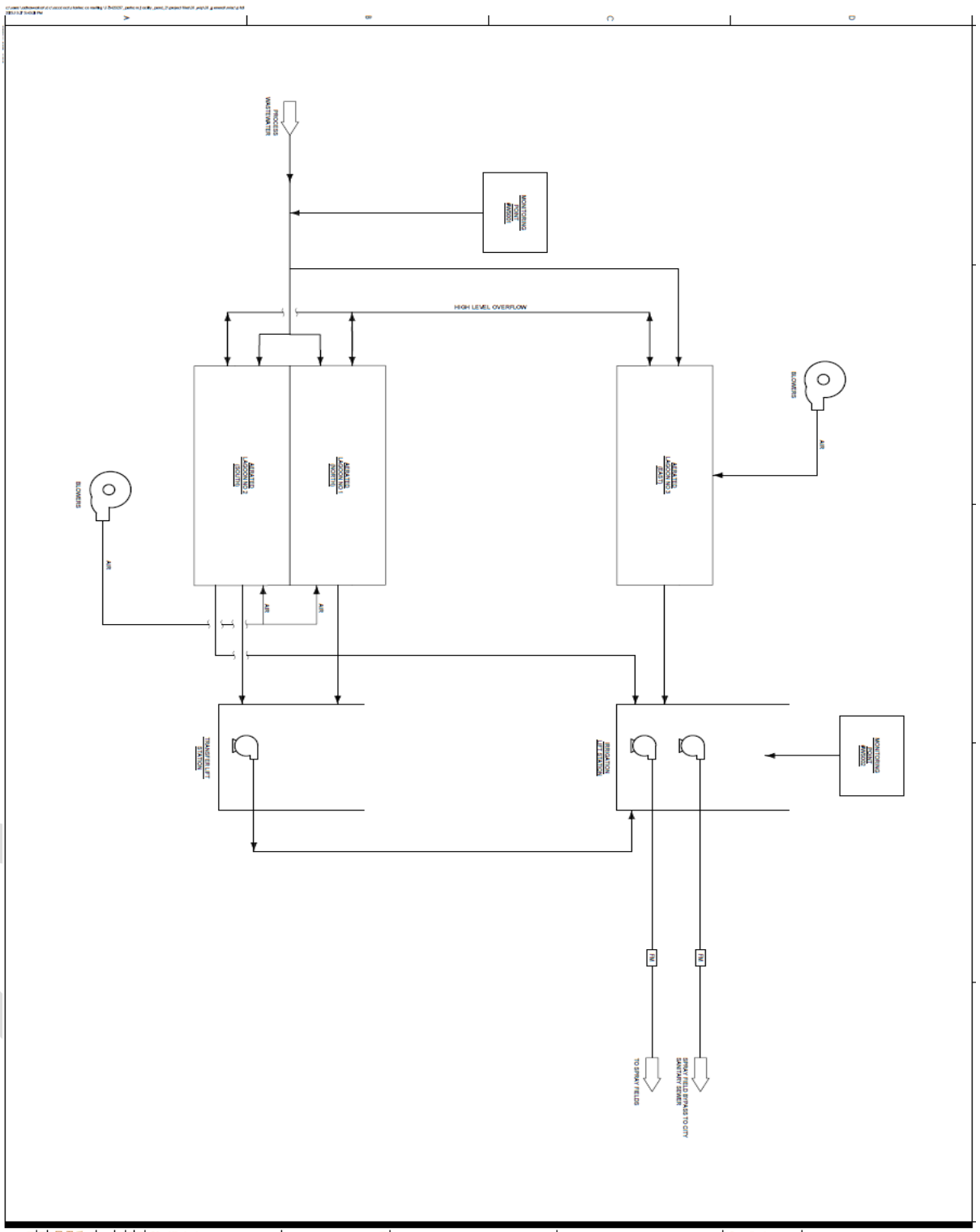
3. Flow diagram

Existing Polished Process Wastewater Discharge (WS 003)



Proposed Polished Process Wastewater Discharge (WS 004)




PROCESS WASTEWATER
MONITORING POINT #M0003
HIGH LEVEL OVERFLOW
AERATED LAGOON NO. 2 (EAST)
AERATED LAGOON NO. 2 (WEST)
AERATED LAGOON NO. 1
BLOWERS
AIR
BLOWERS
AIR
AIR
AIR
TRANSFER LIFT STATION
IRRIGATION LIFT STATION
MONITORING POINT #M0002
FM
FM
TO SPRAY FIELDS
SPRAY FIELD BYPASS TO CITY SANITARY SEWER
Client/Project
Bongards' Creameries Inc.
Perham NPDES/SDS Permit Renewal
Perham, Minnesota, USA
Title
WWTP PROCESS FLOW DIAGRAM
Drawing No.
Revision: 0
Permit/Seal
Issued
Consultant
Stantec
Stantec
733 Marquette Avenue, Suite 1000
Minneapolis, MN 55402
Tel: (651) 636-4600

4. Summary of stations and station locations

Station	Type of station	Local name	PLS location
GW 001	Well, Upgradient	Groundwater Monitoring Well #1 (All Sites)	T136N, R39W, S13, NW Quarter of the SW Quarter
GW 006	Well, Downgradient	Groundwater Monitoring Well #6 (Site 2)	T136N, R39W, S13, SW Quarter of the SE Quarter
GW 009	Well, Downgradient	Groundwater Monitoring Well #9 (Sites 1 and 6)	T136N, R39W, S24, NW Quarter of the NE Quarter
GW 010	Well, Downgradient	Groundwater Monitoring Well #10 (Site 2)	T136N, R39W, S13, SW Quarter of the SE Quarter
GW 011	Well, Downgradient	Groundwater Monitoring Well #11 (Site 3)	T136N, R39W, S13, NE Quarter of the SW Quarter
GW 012	Well, Downgradient	Groundwater Monitoring Well #12 (Sites 1 and 6)	T136N, R39W, S24, SW Quarter of the NW Quarter
GW 013	Well, Downgradient	Groundwater Monitoring Well #13 (Site 4)	T136N, R39W, S13, NE Quarter of the SE Quarter
GW 014	Well, Downgradient	Groundwater Monitoring Well #14 (Site 6)	T136N, R39W, S24, SE Quarter of the NW Quarter
LA 301	Application Site, Spray with Soils Tests	Spray Irrigation Site 1	T136N, R39W, S24, NW Quarter of the NW Quarter
LA 302	Application Site, Spray with Soils Tests	Spray Irrigation Site 2	T136N, R39W, S13, SE Quarter
LA 305	Application Site, Spray with Soils Tests	Spray Irrigation Site 3	T136N, R39W, S13, NE Quarter of the SW Quarter
LA 307	Non-biosolids WWT/Sludge Appl Site	IBP to Manure Storage - Gorentz Dairy	T136N, R41W, S11, SE Quarter
LA 308	Non-biosolids WWT/Sludge Appl Site	IBP to Manure Storage - Twin Creek Dairy	T137N, R39W, S22, SE Quarter
LA 309	Non-biosolids WWT/Sludge Appl Site	IBP to Manure Storage - Ebersville Dairy	T137N, R41W, S09, NE Quarter
LA 310	Non-biosolids WWT/Sludge Appl Site	Seedorf-1 (Seedorf, P)	T136N, R39W, S08, SW Quarter
LA 311	Non-biosolids WWT/Sludge Appl Site	Seedorf-2 (Seedorf, P)	T136N, R39W, S17, NW Quarter
LA 312	Non-biosolids WWT/Sludge Appl Site	Seedorf-3 (Seedorf, P)	T136N, R39W, S17, NW Quarter
LA 313	Non-biosolids WWT/Sludge Appl Site	Rusche-1 (Rusche Farms)	T136N, R39W, S08, NE Quarter
LA 314	Non-biosolids WWT/Sludge Appl Site	Rusche-2 (Rusche Farms)	T136N, R39W, S09, NW Quarter
LA 315	Non-biosolids WWT/Sludge Appl Site	Transfer to Manure Storage - Dombeck	T137N, R38W, S19
LA 316	Application Site, Spray with Soils Tests	Spray Irrigation Site 4	T136N, R39W, S13, NE Quarter of the SE Quarter
LA 317	Application Site, Spray with Soils Tests	Spray Irrigation Site 5	T136N, R39W, S24, NW Quarter of the NE Quarter

LA 318	Application Site, Spray with Soils Tests	Spray Irrigation Site 6	T136N, R39W, S24, NW Quarter of the NE Quarter
LA 319	Application Site, Spray with Soils Tests	Spray Irrigation Site 7	T136N, R39W, S13, SW Quarter of the SW Quarter
SD 001	Effluent To Surface Water	Non-Contact Cooling Water and Polished Process Wastewater to Storm Sewer	T136N, R39W, S23, NE Quarter of the SE Quarter
SD 002	Stormwater, Non-specific Runoff	Roof drain south side of intake building	T136N, R39W, S14
SD 003	Stormwater, Non-specific Runoff	Roof drain east side of warehouse	T136N, R39W, S14
SD 004	Stormwater, Non-specific Runoff	Roof Drain South Side of New Cheese Cooler	T136N, R39W, S14, NE Quarter of the SW Quarter
SD 005	Stormwater, Non-specific Runoff	Roof Drain New Cheese Dryer	T136N, R39W, S14, NE Quarter of the SW Quarter
SD 006	Stormwater, Non-specific Runoff	Roof Drain New Intake Building	T136N, R39W, S14, SE Quarter of the NW Quarter
WS 001	Influent Waste	Process Wastewater Influent to WWTF	T136N, R39W, S14, SW Quarter of the NW Quarter
WS 002	Intermediate: WW to Land	Process Wastewater to Spray Irrigation	T136N, R39W, S13, NW Quarter of the SW Quarter
WS 003	Internal Waste Stream	Polished Process Wastewater	T136N, R39W, S14, SE Quarter of the NW Quarter
WS 004	Internal Waste Stream	Polished Process Wastewater	T136N, R39W, S14, SE Quarter of the NW Quarter
WS 005	Internal Waste Stream	Pond 1 Monitoring	T136N, R39W, S13, NW Quarter of the SW Quarter
WS 006	Internal Waste Stream	Pond 2 Monitoring	T136N, R39W, S13, NW Quarter of the SW Quarter
WS 007	Internal Waste Stream	Pond 3 Monitoring	T136N, R39W, S13, NW Quarter of the SW Quarter
WS 302	Solids to Land Treatment/Application	Antibiotic Milk/Milk to Land Application	T136N, R39W, S14, SE Quarter of the NW Quarter
WS 303	Solids to Land Treatment/Application	Separator Solids to Land Application	T136N, R39W, S14, SE Quarter of the NW Quarter

5. Permit requirements

GW 001	Well, Upgradient	
		Groundwater Well: Industrial Land Application 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]
	5.1.2	**Sampling Location**. [Minn. R. 7001.0150, subp. 2(B)]
	5.1.3	Samples for Station GW 001 shall be taken at a point upgradient of the spray irrigation sites. [Minn. R. 7001.0150, subp. 2(B)]
GW 006	Well, Downgradient	
		Groundwater Well: Industrial Land Application 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]
	5.2.2	**Sampling Location**. [Minn. R. 7001.0150, subp. 2(B)]
	5.2.3	Samples for Station GW 006 shall be taken at a point representative of the groundwater impact from Spray Irrigation Site 2. [Minn. R. 7001.0150, subp. 2(B)]
GW 009	Well, Downgradient	
		Groundwater Well: Industrial Land Application 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]
	5.3.2	**Sampling Location**. [Minn. R. 7001.0150, subp. 2(B)]
	5.3.3	Samples for Station GW 009 shall be taken at a point representative of the groundwater impact from Spray Irrigation Sites 1 and 6. [Minn. R. 7001.0150, subp. 2(B)]
GW 010	Well, Downgradient	
		Groundwater Well: Industrial Land Application 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]
	5.4.2	**Sampling Location**. [Minn. R. 7001.0150, subp. 2(B)]
	5.4.3	Samples for Station GW 010 shall be taken at a point representative of the groundwater impact from Spray Irrigation Site 2. [Minn. R. 7001.0150, subp. 2(B)]
GW 011	Well, Downgradient	
		Groundwater Well: Industrial Land Application 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]
	5.5.2	**Sampling Location**. [Minn. R. 7001.0150, subp. 2(B)]
	5.5.3	Samples for Station GW 011 shall be taken at a point representative of the groundwater impact from Spray Irrigation Site 3. [Minn. R. 7001.0150, subp. 2(B)]
GW 012	Well, Downgradient	

		Groundwater Well: Industrial Land Application 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]
	5.6.2	**Sampling Location**. [Minn. R. 7001.0150, subp. 2(B)]
	5.6.3	Samples for Station GW 012 shall be taken at a point representative of the groundwater impact from Spray Irrigation Sites 1 and 6. [Minn. R. 7001.0150, subp. 2(B)]
GW 013	Well, Downgradient	
		Groundwater Well: Industrial Land Application 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]
	5.7.2	**Sampling Location**. [Minn. R. 7001.0150, subp. 2(B)]
	5.7.3	Samples for Station GW 013 shall be taken at a point representative of the groundwater impact from Spray Irrigation Site 4. [Minn. R. 7001.0150, subp. 2(B)]
GW 014	Well, Downgradient	
		Groundwater Well: Industrial Land Application 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]
	5.8.2	**Sampling Location**. [Minn. R. 7001.0150, subp. 2(B)]
	5.8.3	Samples for Station GW 014 shall be taken at a point representative of the groundwater impact from Spray Irrigation Site 6. [Minn. R. 7001.0150, subp. 2(B)]
SD 001	Effluent To Surface Water	
		Surface Discharge: Effluent to Surface Water/Storm Sewer Requirements
	5.9.1	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)]
	5.9.2	**Sampling Location**. [Minn. R. 7001.0150, subp. 2(B)]
	5.9.3	Samples for Station SD 001 shall be taken prior to the discharge to the municipal storm sewer. [Minn. R. 7001.0150, subp. 2(B)]
	5.9.4	Parameters that have a monitoring frequency of once per quarter and an effective period of Mar, June, Sept, Dec may be collected any time during that quarter. The sample data must be reported on the March, June, September, and December sample value spreadsheets and DMRs. [Minn. R. 7001.0150, Subp. 2(B)]
	5.9.5	Parameters that have a monitoring frequency of once per year and an effective period of Dec may be collected any time during the calendar year, but the sample data must be reported on the designated month's sample value spreadsheet and DMR. [Minn. R. 7001.0150, Subp. 2(B)]
SD 002	Stormwater, Non-specific Runoff	
		Surface Discharge: Industrial Stormwater Sector U Requirements
	5.10.1	**Sampling Requirements**. [Minn. R. 7090]
	5.10.2	**Sampling Location**. [Minn. R. 7001.0150, subp. 2(B)]
	5.10.3	Samples for Station SD 002 shall be taken at a point representative of the stormwater discharge from the roof drain on the south side of the intake building. [Minn. R. 7001.0150, subp. 2(B)]

	5.10.4	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 003	Stormwater, Non-specific Runoff	
		Surface Discharge: Industrial Stormwater Sector U Requirements
	5.11.1	**Sampling Requirements**. [Minn. R. 7090]
	5.11.2	**Sampling Location**. [Minn. R. 7001.0150, subp. 2(B)]
	5.11.3	Samples for Station SD 003 shall be taken at a point representative of the stormwater discharge from the roof drain on the east side of the warehouse. [Minn. R. 7001.0150, subp. 2(B)]
	5.11.4	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 004	Stormwater, Non-specific Runoff	
		Surface Discharge: Industrial Stormwater Sector U Requirements
	5.12.1	**Sampling Requirements**. [Minn. R. 7090]
	5.12.2	**Sampling Location**. [Minn. R. 7001.0150, subp. 2(B)]
	5.12.3	Samples for Station SD 004 shall be taken at a point representative of the stormwater discharge from the roof drain on the south side of new cheese cooler. [Minn. R. 7001.0150, subp. 2(B)]
	5.12.4	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 005	Stormwater, Non-specific Runoff	
		Surface Discharge: Industrial Stormwater Sector U Requirements
	5.13.1	**Sampling Requirements**. [Minn. R. 7090]
	5.13.2	**Sampling Location**. [Minn. R. 7001.0150, subp. 2(B)]
	5.13.3	Samples for Station SD 005 shall be taken at a point representative of the stormwater discharge from the new cheese dryer roof drain. [Minn. R. 7001.0150, subp. 2(B)]
	5.13.4	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	Stormwater, Non-specific Runoff	
		Surface Discharge: Industrial Stormwater Sector U Requirements
	5.14.1	**Sampling Requirements**. [Minn. R. 7090]
	5.14.2	**Sampling Location**. [Minn. R. 7001.0150, subp. 2(B)]
	5.14.3	Samples for Station SD 006 shall be taken at a point representative of the stormwater discharge from the new intake building roof drain. [Minn. R. 7001.0150, subp. 2(B)]
	5.14.4	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)]
WS 001	Influent Waste	

		Facility Specific Limit and Monitoring Requirements
	5.15.1	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)]
	5.15.2	**Sampling Location**. [Minn. R. 7001.0150, subp. 2(B)]
	5.15.3	Samples for Station WS 001 shall be taken at a point representative of the total influent into the pond system. [Minn. R. 7001.0150, subp. 2(B)]
WS 002	Intermediate: WW to Land	
		Waste Stream: Effluent to Land Treatment 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]
	5.16.2	**Sampling Location**. [Minn. R. 7001.0150, subp. 2(B)]
	5.16.3	Samples for Station WS 002 shall be taken at a point representative of the total discharge to the spray irrigation sites. [Minn. R. 7001.0150, subp. 2(B)]
WS 003	Internal Waste Stream	
		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 WS 003 shall be taken at a location prior to mixing with NCCW. [Minn. R. 7001.0150, subp. 2(B)]
WS 004	Internal Waste Stream	
		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]
	5.18.2	**Sampling Location**. [Minn. R. 7001.0150, subp. 2(B)]
	5.18.3	Samples for Station WS 004 shall be taken at a location prior to mixing with NCCW. [Minn. R. 7001.0150, subp. 2(B)]
WS 005	Internal Waste Stream	
		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 WS 005 shall be taken at a point representative of the storage pond. [Minn. R. 7001.0150, subp. 2(B)]
WS 006	Internal Waste Stream	
		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 WS 006 shall be taken at a point representative of the storage pond. [Minn. R. 7001.0150, subp. 2(B)]
WS 007	Internal Waste Stream	
		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 WS 007 shall be taken at a point representative of the storage pond. [Minn. R. 7001.0150, subp. 2(B)]
MN0047228	Bongards' Creameries - Perham	
		Groundwater Station General Requirements
	5.22.1	**Monitoring Wells**. [Minn. R. 7001]
	5.22.2	Install, maintain, and seal groundwater monitoring wells according to the Minnesota Rules, ch. 4725. Repair or properly seal and replace damaged or improperly constructed monitoring wells. Information on licensed water well contractors is available from the Minnesota Department of Health. [Minn. R. 4725]
	5.22.3	Submit a detailed well log and a detailed U.S. Geological Survey topographical map identifying the location for each monitoring well at the facility within 30 days after well installation. [Minn. R. 7001]
	5.22.4	Clearly number each monitoring well on the outside of the well with either indelible paint or an inscribed number with either the local name or MPCA station ID. [Minn. R. 7001]
	5.22.5	Sample monitoring wells according to the MPCA publication, "Sampling Procedures for Ground Water Monitoring Wells, July 1997, Reviewed and re-approved September 2006" (wq-gw1-01, 9/06) 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]
	5.22.6	Collect grab samples at all groundwater monitoring points (lysimeters or wells) after well stabilization field measurements are conducted. [Minn. R. 7001]
	5.22.7	Prior to well purging and sampling, measure the depth to groundwater to the nearest 0.01 foot below the top of the well casing. Report groundwater elevations to the nearest 0.01 foot above mean sea level. [Minn. R. 7001]
	5.22.8	Temperature, pH, and specific conductance shall be reported as the final field measurements from well stabilization. [Minn. R. 7001]
	5.22.9	**Analysis Requirements**. [Minn. R. 7001]
	5.22.10	Temperature, pH, and specific conductance analyses shall be conducted within 15 minutes of sample collection. [Minn. R. 7001]
	5.22.11	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 the electronic Discharge Monitoring Report (eDMR) and shall add a Comments attachment to the eDMR detailing why the sample was not collected. [Minn. R. 7001.0150, subp. 2(B)]
		Land Application Station General Requirements
	5.23.12	**Soil Samples**. [Minn. R. 7001]
	5.23.13	Collect soil samples in the spring before irrigating and before applying commercial or other

		supplemental fertilizer for that year. [Minn. R. 7001]
	5.23.14	Collect composite soil samples from a mixture of 15 to 20 equally proportioned subsamples taken from the soil surface to a depth of six to nine inches. Collect at least one composite sample per 40 acres for each permitted land application site. [Minn. R. 7001]
	5.23.15	**Application Rates**. [Minn. R. 7001]
	5.23.16	Nitrogen land application rate limits apply to the sum of all sources of nitrogen applied to a permitted land application site. [Minn. R. 7001]
	5.23.17	If nitrogen is applied to a permitted land application site from other sources, including commercial fertilizer, manure, silage, sewage or wastewater treatment solids and sludges, include the other nitrogen sources in the sum of nitrogen applied to determine compliance with application rate limits at that site. [Minn. R. 7001]
	5.23.18	Calculate the nitrogen application rate as the flow-weighted sum of total annual mass Kjeldahl nitrogen and nitrate plus nitrite (as nitrogen) applied to the site from industrial spray irrigation, plus any nitrogen applied from other sources, divided by the acreage of the site. [Minn. R. 7001]
		Surface Discharge Station General Requirements
	5.24.19	**Sampling Location**. [Minn. R. 7001]
	5.24.20	Samples for Station SD 001 shall be taken prior to the discharge to the municipal storm sewer. [Minn. R. 7001]
	5.24.21	**Representative Samples**. [Minn. R. 7001]
	5.24.22	Samples and measurements required by this permit shall be representative of the monitored activity. [Minn. R. 7001]
	5.24.23	**Surface Discharge Prohibitions**. [Minn. R. 7001]
	5.24.24	Floating solids or visible foam shall not be discharged in other than trace amounts. [Minn. R. 7001]
	5.24.25	Do not discharge oil or other substances in amounts that create a visible color film. [Minn. R. 7001]
	5.24.26	Install and maintain outlet protection measures at the discharge stations to prevent erosion. [Minn. R. 7001]
	5.24.27	**Winter Sampling Conditions**. [Minn. R. 7001]
	5.24.28	Sample flows at the designated monitoring stations, including when ice removal is required to sample the water. If there is a frozen station throughout a designated sampling month, check the "No Discharge" box on the electronic Discharge Monitoring Report (eDMR) and note the ice conditions in the comments section on the eDMR. [Minn. R. 7001]
	5.24.29	**Nitrogen Limits and Monitoring Requirements**. [Minn. R. 7001]
	5.24.30	Report total nitrogen as the summation of the total Kjeldahl nitrogen and total nitrite plus nitrate nitrogen values. [Minn. R. 7001]
	5.24.31	**Nitrogen Reduction Strategy Optimization Incentive (Voluntary)**. [Minn. R. 7001]
	5.24.32	A 10 mg/L total nitrogen State Discharge Restriction (SDR) is being proposed for all major municipal WWTFs, high concentration minor municipal WWTFs, and high concentration industrial dischargers in a MPCA nitrate rulemaking effort. To encourage WWTFs to start making achievable nitrogen reductions as soon as possible, the MPCA is proposing in the rulemaking to defer applicability of the SDR limit for one permit cycle for Permittees that have optimized their existing wastewater treatment operations and are able to meet a 15 mg/L total nitrogen based on a 12-month moving average for at least 12 months prior to adoption of a SDR. [Minn. R. 7001]
	5.24.33	Note the following: A. The proposed SDR limit is applicable for all major municipal, high concentration minor municipal WWTFs, and high concentration industrial dischargers. If you are not currently a major facility but may be prior to SDR adoption, you may still have the opportunity to participate in this optimization incentive. B. This optimization incentive is dependent on successful rulemaking efforts. If the entire

		rulemaking or the optimization incentive-portion of the rulemaking are not successful, the SDR limit deferral will not be applicable. C. Once facilities have optimized to reduce their nitrogen concentrations, they must continue operating the facilities in accordance with the optimization efforts. [Minn. R. 7001]
	5.24.34	Permittees should refer to the accompanying permit documents for additional information regarding the optimization incentive. [Minn. R. 7001]
	5.24.35	**Temperature Limits and Monitoring Requirements**. [Minn. R. 7001]
	5.24.36	The thermal load of the discharge shall not increase the temperature of the receiving water more than five degrees Fahrenheit above the ambient temperature, based on the calendar month average of the maximum daily temperature. [Minn. R. 7001]
	5.24.37	**Analysis Requirements**. [Minn. R. 7001]
	5.24.38	Temperature, pH, specific conductance, and total residual chlorine analyses shall be conducted within 15 minutes of sample collection. [Minn. R. 7001]
	5.24.39	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 electronic Discharge Monitoring Report (eDMR) and shall add a comments attachment to the eDMR detailing why the sample was not collected. [Minn. R. 7001.0150, Subp 2(B)]
		Waste Stream Station General Requirements
	5.25.40	**Representative Samples**. [Minn. R. 7001]
	5.25.41	Collect grab and composite samples at a point representative of total influent flow to the system. [Minn. R. 7001]
	5.25.42	**Analysis Requirements**. [Minn. R. 7001]
	5.25.43	Specific conductance and pH analyses shall be conducted within 15 minutes of sample collection. [Minn. R. 7001]
	5.25.44	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 the electronic Discharge Monitoring Report (eDMR) and shall add a Comments attachment to the eDMR detailing why the sample was not collected. [Minn. R. 7001.0150, subp. 2(B)]
		Construction Schedule
	5.26.45	**Special Requirements: Monitoring Well Installation** [Minn. R. 7001]
	5.26.46	A monitoring well installation plan shall be submitted within 90 days prior to use of LA 316 through LA 319 (Spray Irrigation Sites 4 through 7). The plan shall include the following elements, at a minimum: A. A discussion that supports the proposed location(s) and depth(s) of the monitoring well(s) based on monitoring objectives, local geology, and compliance criteria. B. A description of well drilling and construction methods, including the following: i. Soil sampling methods; ii. Well construction materials and specifications; and iii. Well development and surveying method(s). C. A description of well stabilization and groundwater sampling methods to be used for baseline sampling. D. A scaled map with the proposed location(s) of the well(s). [Minn. R. 7001]
	5.26.47	The monitoring well(s) shall be installed no later than 30 days prior to use of LA 316 through LA 319 (Spray Irrigation Sites 4 through 7). [Minn. R. 7001]
	5.26.48	A monitoring well installation report shall be submitted within 30 days after well installation. The report shall include the following elements, at a minimum:

		A. A discussion of well installation, development, baseline sampling, and surveying, including whether any changes from the approved well installation plan were made; B. A copy of the laboratory analytical report for baseline sampling; C. A copy of the Minnesota Department of Health well and boring record for each new well, if applicable; D. A geotechnical soil boring log for each new well; E. A well construction diagram for each new well showing all dimensions and surveyed elevations of the top of casing and ground surface; F. A scaled map showing the location of all wells in the monitoring network; and G. A table listing all wells in the monitoring network with the following information: i. Unique well ID, if applicable; ii. Top of casing elevation; iii. Ground surface elevation; iv. Well screen top and bottom elevations; and v. Universal Transverse Mercator (UTM) coordinates based on UTM Zone 15 and the North American Datum of 1983 (NAD83). [Minn. R. 7001]
		Industrial Wastewater General Requirements
	5.27.49	**Prohibited Discharges. [Minn. R. 7001]**
	5.27.50	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)]
	5.27.51	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)]
	5.27.52	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]
	5.27.53	**Toxic Substance Reporting. [Minn. R. 7001]**
	5.27.54	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, 1 mg/L; D. For any other toxic pollutant listed in Minnesota rules, pt. 7001.1060, subp. 4 to 10,000 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]
	5.27.55	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)]
	5.27.56	**Mobile and Rail Equipment Service Areas. [Minn. R. 7001]**
	5.27.57	Locomotive traction sand, degreasing wastes, motor oil, oil filters, oil sorbent pads and booms, transmission fluids, power steering fluids, brake fluids, coolant/antifreeze, radiator flush wastewater and spent solvents shall be collected and disposed of in accordance with applicable solids and hazardous waste management rules. These materials shall not be discharged to surface or groundwaters of the state. [Minn. R. 7001.0150, subp. 2]
	5.27.58	The steam-cleaning of mobile equipment and rail equipment, except for limited outdoor cleaning of large drills and shovels, shall be conducted in wash bays that drain to wastewater treatment

		systems that include the removal of suspended solids and flammable liquids. The only washing of mobile equipment done in outside areas shall be to remove mud and dirt that has accumulated during outside work. [Minn. R. 7001.0150, subp. 2]
	5.27.59	Mobile and rail equipment washing shall not use solvent-based cleaners such as those available for brake cleaning and degreasing unless the cleaning fluids are completely contained and not allowed to flow to surface or groundwaters of the state. Soaps and detergents used in washing shall be biodegradable. [Minn. R. 7001.0150, subp. 2]
	5.27.60	Mobile and rail equipment maintenance and repairs shall not be conducted in wash bays. [Minn. R. 7001.0150, subp. 2]
	5.27.61	Hazardous materials shall not be stored or handled in wash bays. [Minn. R. 7001.0150, subp. 2]
	5.27.62	Wastewater containment systems, including pipes shall be inspected regularly. Leaks that are detected shall be repaired immediately. [Minn. R. 7001.0150, subp. 2]
	5.7.63	If the Permittee discovers that recoverable amounts of petroleum products have entered wastewater containment systems, they shall be recovered immediately, and reported to the MPCA. [Minn. R. 7001.0150, subp. 2]
	5.27.64	Spill cleanup procedures shall be posted in mobile and rail equipment maintenance and repair areas. [Minn. R. 7001.0150, subp. 2]
	5.27.65	**Polychlorinated Biphenyls (PCBs). [Minn. R. 7001]**
	5.27.66	PCBs, including but not limited to those used in electrical transformers and capacitors, shall not be discharged or released to the environment. [Minn. R. 7001.0150, subp. 2]
	5.27.67	**Application for Permit Reissuance. [Minn. R. 7001]**
	5.27.68	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]
	5.27.69	The permit application shall include analytical data for monitoring station WS 003 and WS 004. Analysis of all parameters shall comply with their specific 40 CFR Part 136 analytical methodologies or updates to those methodologies. The reporting limits shall meet the minimum levels as defined by this permit and all state and federal regulations. The following parameters shall be included with the permit application: BOD5, pH, total suspended solids. [Minn. R. 7001]
	5.27.70	The Permittee shall include, as part of the application for reissuance of this permit: A. A current map of any basins or ponds, showing the cells, and current topographic and water level elevations in the basin; and B. An updated water balance for the facility. [Minn. R. 7001.50]
	5.27.71	**Piping. [Minn. R. 7001]**
	5.27.72	The Permittee shall implement the necessary preventative measure to minimize the potential for releases of wastewater from pipelines. Any such releases shall be contained and shall be reported as described in the release section of this permit. [Minn. R. 7001]
	5.27.73	The Permittee shall visually inspect the routes of pipelines that transport wastewater as needed to detect any pipeline spills or leaks. Records of these inspections and measurements shall be made available upon request. [Minn. R. 7001]
	5.27.74	**Piping Integrity Plan. [Minn. R. 7001]**
	5.27.75	The Permittee shall submit a Piping Integrity Plan: Due by 90 days after permit issuance. The plan shall include the following: A. Maps, drawings, and diagrams along with methods for both pipe assessment and restoration of integrity; B. Timeline (maximum of three years for high priority/high risk pipes and maximum of ten years for all other pipes) for assessing condition of all piping conveying wastewater at the facility; and C. Timeline (maximum of one year) for restoring integrity of any piping found to have defects allowing either infiltration or exfiltration of water. [Minn. R. 7001]
	5.27.76	**Annual Piping Report. [Minn. R. 7001]**
	5.27.77	The Permittee shall submit a Piping Report: Due annually, by the 31st of March. The report shall include findings and summaries of actions taken responsive to the Piping Integrity Plan.

		[Minn. R. 7001]
		Industrial Pond System
	5.28.78	**Authorization**. [Minn. R. 7001]
	5.28.79	This chapter authorizes the Permittee to manage wastewater in a pond system as described in the Facility Description section of this permit. This activity is limited by the Limits and Monitoring section of this permit, as well as the other terms and conditions of this permit. [Minn. R. 7001]
	5.28.80	The requirements of this chapter apply to all components of the permitted pond system, including but not limited to all impoundments at the facility used for collection, containment, storage, and/or treatment; and all related structures, conveyances, and/or appurtenances. [Minn. R. 7001]
	5.28.81	**Pond Performance Evaluation**. [Minn. R. 7001]
	5.28.82	The Permittee shall submit a Pond Performance Evaluation Plan: Due by 180 days after permit issuance. [Minn. R. 7001]
	5.28.83	The Pond Performance Evaluation Plan must contain: A. Influent data, effluent data, and pond level measurements for analysis of a desktop water balance. B. If there are any known deficiencies (e.g.; inadequate/inappropriate vegetation, inadequate riprap/erosion protection, evidence of damage due to rodent activity, sloughing of slopes, visible liner damage, etc.) in the pond, the Pond Performance Evaluation Plan should require the permittee to investigate and/or correct the deficiencies and include a schedule for completing the work. [Minn. R. 7001]
	5.28.84	The Permittee shall submit a Pond Performance Evaluation Report: Due by 180 days prior to permit expiration. [Minn. R. 7001]
	5.28.85	The Pond Performance Evaluation Report shall be signed by a registered professional engineer and include (at a minimum) the following items for each pond: A. The results of the desktop water balance analysis, including: influent data and effluent data for at least three years of pond operation; and initial and final pond water elevations (water balance information for desktop water balance); B. Capacity/volume use comparisons; C. A determination of seepage rate. Ponds constructed post-1975 are required to meet a 500 gal/acre/day seepage rate; ponds constructed pre-1975 are required to meet a 3500 gal/acre/day seepage rate. D. An inspection of the pond system that addresses: i. Presence of animal burrows, deep-rooted vegetation, erosion, or visible liner damage; ii. Structural stability of pond dikes, including evaluation of erosion or shifting; iii. Indication of any potential breaches of the pond structure; iv. Condition of visible appurtenances such as manhole structures and above-ground piping/conveyances; and, v. Identification of any areas where additional maintenance or repair may be necessary. E. Completed "Municipal and Industrial Pond Attachment" form, which is available at https://www.pca.state.mn.us/sites/default/files/wq-wwprm7-11.doc. If the Pond Performance Evaluation report indicates that the pond system does not meet the seepage criteria or other performance and operation criteria in this chapter, the Permittee shall submit a Pond Restoration Plan to address the identified pond deficiency(ies) to the MPCA for review and approval. A registered professional engineer must sign this plan. This plan shall include, at a minimum, a proposal and implementation timeline of corrective actions for any ponds not meeting the technical criteria. [Minn. R. 7001]
	5.28.86	**Operation and Maintenance of Wastewater Ponds**. [Minn. R. 7001]
	5.28.87	Freeboard. Minimum pond freeboard shall be three feet unless an alternative has been approved in writing by the MPCA. [Minn. R. 7001]
	5.28.88	Operating Depth. All of the following apply to impoundments at the facility:

		A. Except for impoundments lined with synthetic material, such as HDPE or PVC, impoundments that do not continuously discharge shall maintain a minimum depth of 2 feet of water at all times, except for maintenance. B. For ponds operating with floating/surface aeration systems: Floating/surface aeration systems shall only be operated at depths sufficient to prevent damage to the liners of the pond - such as by scour - by the aerators. The minimum operating depth shall be consistent with manufacturer recommendations. Based on specific facility conditions and upon demonstration of an acceptable alternative, an alternate performance standard may be approved by the MPCA. Specific written authorization by the MPCA shall be obtained prior to implementing an approved alternate performance standard in lieu of item A and/or B of this part. [Minn. R. 7001]
	5.28.89	The Permittee shall not allow growth of willows, poplars, cottonwoods, shrubs, and cattails in the pond or on the dikes, regardless of water depth in the pond. The Permittee shall control and remove such plants and harmful vegetative growth from the pond and pond structure. The Permittee must not allow deep-rooted vegetation such as alfalfa and reed canary grass in the inner pond dikes. Alfalfa and reed canary grass may be grown in the outer pond dikes. The Permittee shall control alfalfa and reed canary grass along with other vegetation at a height to allow for dike integrity and burrowing animal detection. [Minn. R. 7001]
	5.28.90	The Permittee shall use approved methods to prevent muskrats and other burrowing animals from tunneling and causing damage to the pond liner or dikes. [Minn. R. 7001]
	5.28.91	In addition to the requirements of this permit, the Permittee shall operate and maintain the pond system in accordance with applicable sections of Chapter 8, Maintenance of MPCA's "Stabilization Pond Systems: Operations, Maintenance, Management" (2013) or most recent version: https://www.pca.state.mn.us/sites/default/files/wq-wwtp8-22.pdf. [Minn. R. 7001]
	5.28.92	If the ponds include Riprap, it shall be maintained in accordance with "Riprap Criteria for Stabilization Ponds" (2023) or most recent version: https://www.pca.state.mn.us/sites/default/files/wq-wwtp5-95.pdf. [Minn. R. 7001]
	5.28.93	**Solids Removal**. [Minn. R. 7001]
	5.28.94	Prior to the excavation or removal of solids from any wastewater pond at the facility, the Permittee shall implement measures to maintain the integrity of the pond liner during the removal process. [Minn. R. 7001]
	5.28.95	The Permittee shall complete a water balance (barrel test) on the pond within seven months of each removal action. The MPCA may review the results at the facility or upon request. The water balance evaluation procedure is described in the MPCA document "Prefill and Water Balance Criteria" (10/21) or the most recent version: https://www.pca.state.mn.us/sites/default/files/wq-wwtp5-61b.pdf. [Minn. R. 7001]
	5.28.96	If there are existing groundwater monitoring wells or tile lines that can be used to evaluate groundwater quality, monitoring shall be conducted prior to and after the removal of solids to assess the potential groundwater impacts. The Permittee shall report any changes to the MPCA with the next scheduled electronic Discharge Monitoring Report (eDMR). [Minn. R. 7001]
	5.28.97	No impact demonstration. The requirements of a water balance barrel test or groundwater monitoring requirements listed above can be waived if the Permittee can successfully demonstrate that the removal action will not impact the liner of the wastewater pond, or the integrity thereof. To make this demonstration, submit a Pond Solids Removal Plan for MPCA review and approval at least 90 days prior to the anticipated removal date. The Removal Plan should include, at a minimum: A. A description of the proposed methodology(ies) to be used for the excavation or removal or solids; B. Any proposed deviations from the water balance procedure cited in subpart A, above; and, C. Justification that the removal action does not impact the liner of the wastewater pond. The Permittee requirements will only be waived after the Permittee receives written approval of

		the plan by the MPCA. [Minn. R. 7001]
	5.28.98	**Inspection of Wastewater Ponds**. [Minn. R. 7001]
	5.28.99	The Permittee shall inspect the pond system weekly. An inspection shall include the following for each pond, at a minimum: A. Measuring pond water elevation; B. Estimating the coverage of aquatic plants, floating mats, and ice cover on the surface of the ponds; and C. Noting odors, the condition of the dikes, and the presence of muskrats. The Permittee shall maintain records of these weekly inspections for the last three (3) years. The Permittee shall submit the weekly observations on the eDMR supplemental form. [Minn. R. 7001]
	5.28.100	**Application for Permit Reissuance**. [Minn. R. 7001]
	5.28.101	The Permittee shall submit a Pond Inspection and Certification Report: Due by the end of each calendar five years following permit issuance. Wastewater impoundments; related conveyances; and appurtenances to the impoundment system at the permitted facility shall be inspected and certified for structural integrity, complete containment, and compliance with performance standards. The inspection report and certification shall be prepared by a registered professional engineer with expertise in wastewater containment structures. The inspection report and certification shall be submitted with the application for permit reissuance and/or every five years, whichever comes first. [Minn. R. 7001]
	5.28.102	The inspection shall address the following, at a minimum: A. Presence of animal burrows, deep-rooted vegetation, erosion, or visible liner damage; B. Structural stability of pond dikes, including evaluation of erosion or shifting; C. Indication of any potential breaches of or seepage from the pond structure; D. Condition of visible appurtenances such as manhole structures and above-ground piping/conveyances; and E. Identification of any areas where additional maintenance or repair may be necessary. [Minn. R. 7001]
	5.28.103	If significant repairs are necessary as a result of the professional engineer's inspection, a Pond Restoration Plan shall be submitted to the MPCA for review within 180 days of discovery and at least 60 days prior to initiation of restoration work. [Minn. R. 7001]
	5.28.104	**Intervention Limit Requirements - Industrial Pond Water Elevations**. [Minn. R. 7001]
	5.28.105	An exceedance of an applicable intervention limit does not constitute a violation under this permit. However, the Permittee is required to perform any necessary corrective action(s) to address the pond water elevation when an exceedance of an applicable intervention limit occurs. Failure to respond to intervention limit exceedances is a violation of the permit. [Minn. R. 7001]
	5.28.106	The Permittee shall complete the following steps if intervention limits are exceeded: A. Notify the MPCA within 72 hours. B. Implement actions to decrease the water elevation below the permitted maximum(s). C. Increase pond inspections to daily (until water elevation returns to compliance) from weekly frequency. D. Identify and report on the factors and causes that contributed to the water elevation exceedance. E. Review the facility's current pond storage capacity relative to storage capacity needs and determine whether additional ponds are needed. F. Other actions as necessary to evaluate the problem and determine appropriate corrective actions to be taken. G. Include all documentation of actions taken responsive to the water elevation exceedance and the duration of the exceedance with the next DMR submittal. [Minn. R. 7001]
		Land Application of Industrial By-Products

	5.29.107	**Authorization. [Minn. R. 7001]**
	5.29.108	This chapter authorizes the Permittee to land apply industrial by-products generated during the production and wastewater treatment process, as described in the Facility Description section of this permit. This activity is limited by the Limits and Monitoring section of this permit as well as the other terms and conditions of this permit. [Minn. R. 7001]
	5.29.109	**General Requirements. [Minn. R. 7001]**
	5.29.110	The Permittee shall characterize the industrial by-product in the permit application to show the following eligibility requirements are met: A. The industrial by-product cannot be a hazardous waste. B. The Permittee shall meet the concentrations below prior to the first land application of industrial by-product and shall evaluate industrial by-product if there are changes to its industrial process and/or chemical additives. Before making a concentration determination, Permittees cannot dilute industrial by-products or mix with other materials. Concentration limits for industrial by-products on a dry weight basis: Total Arsenic: 41 mg/kg Total Cadmium: 39 mg/kg Total Copper: 1500 mg/kg Total Lead: 300 mg/kg Total Mercury: 5 mg/kg Total Molybdenum: 75 mg/kg Total Nickel: 420 mg/kg Total Selenium: 100 mg/kg Total Zinc: 2800 mg/kg Total Dioxin equivalents: 10 parts per trillion Total Polychlorinated biphenyls: 6 mg/kg. [Minn. R. 7001]
	5.29.111	**Sampling, Analysis and Field Equipment Calibration Plan. [Minn. R. 7001]**
	5.29.112	The Permittee shall submit a Sampling, Analysis and Field Equipment Calibration Plan to address storage, management, and land application schedules by 60 days after permit issuance. The MPCA requires all permitted facilities to submit this plan. The Permittee may submit an updated version of a plan submitted as part of a previous permit term. The Permittee shall submit a Sampling, Analysis and Field Equipment Calibration Plan: Due by 60 days after permit issuance. [Minn. R. 7001]
	5.29.113	The Sampling, Analysis and Field Equipment Calibration Plan must include, but is not limited to the following: A. A description of sample collection methods to ensure representative samples of the industrial by-product land applied, including sampling location identification and a description of a sampling schedule; B. A list of all analyzed parameters, the analysis frequency, maximum holding times, and preservation methods; C. The laboratory methods used for analysis and reporting limits; D. A field equipment calibration schedule and detailed procedures to determine actual application rates of industrial by-product with an accuracy of plus or minus ten percent; E. An example of record keeping forms for sampling, analysis, and equipment calibration; F. The position of the person(s) responsible for sampling and calibration of field equipment; and G. A description of measures and practices to provide reasonable assurance that land application, staging, and/or storage of industrial by-product will not cause nuisance conditions. [Minn. R. 7001]
	5.29.114	**Sampling Requirements. [Minn. R. 7001]**
	5.29.115	The Permittee shall measure flows to ensure accuracy within plus or minus ten percent of the true flow values. Flow meters shall be calibrated in accordance with the Total Facility Requirements chapter of this permit. The Permittee shall maintain written records of all calibrations and maintenance. [Minn. R. 7001]

	5.29.116	**Limits and Monitoring Requirements. [Minn. R. 7001]**
	5.29.117	Parameters. The Permittee shall analyze industrial by-product samples for the parameters listed for industrial by-product waste stream stations in the Limits and Monitoring section of this permit for each industrial by-product. The Permittee shall analyze each industrial by-product individually if they produce more than one type of industrial by-product, unless approval for mixing the industrial by-product for storage or land application is approved by the MPCA. Analysis is not required for sweet corn silage if the Best Management Practices in Appendix A are followed. Analysis of total recoverable oil and grease is not required at facilities where oil and grease are not present in the waste stream. [Minn. R. 7001]
	5.29.118	Analysis Frequency. The Permittee shall refer to the Limits and Monitoring section of this permit to determine the minimum frequency of parameter analysis. The Permittee shall determine the minimum analytical frequency for each type of industrial by-product land applied. In some cases, the minimum frequencies of analysis will not be adequate to obtain representative samples and additional analysis may be required. [Minn. R. 7001]
	5.29.119	**Site Suitability Criteria. [Minn. R. 7001]**
	5.29.120	The MPCA requires an industrial by-product land application site to meet all the criteria in this part. [Minn. R. 7001]
	5.29.121	The Permittee shall determine the suitability of the site for industrial by-product application, including a determination that the soils at the site meet the soil sample limitations identified for Land Application Stations in the Limits and Monitoring section of this permit and the Site Suitability Criteria of this part. The Permittee shall submit this information to the MPCA prior to land application and according to the procedures in the Notification to MPCA part of this chapter. [Minn. R. 7001]
	5.29.122	Slope Restrictions. All industrial by-product land application sites shall meet the slope restrictions in Table 1 of Appendix A. [Minn. R. 7001]
	5.29.123	Separation Distances. All industrial by-product land application sites shall meet the minimum separation distances in Table 2 of the Appendix A. [Minn. R. 7001]
	5.29.124	**Soil Sampling Requirements and Limits. [Minn. R. 7001]**
	5.29.125	The Permittee shall submit an Industrial By-Products Site Notification Form as outlined in the Notification Procedures part of this chapter, including soils and waste analysis collected within six (6) months of form submission. After submittal, the Permittee shall collect and analyze soil samples within the three-year period prior to industrial by-product application for the parameters listed for industrial by-product land application stations in the Limits and Monitoring section of this permit. The Permittee shall receive sample results and determine soil suitability before using a site for land application. Sample results shall meet limits before the Permittee uses a site for land application. [Minn. R. 7001]
	5.29.126	The Permittee shall collect a composite soil sample consisting of a mixture of 15-20 sub-samples taken in the plow layer. A minimum of one composite sample per site is required. Sites greater than 40 acres in size require a minimum of one composite sample per 40 acres of area. If using an alternative soil sampling method, the Permittee shall describe how the alternative protocol meets the minimum sampling frequency requirements for characterizing soils through representative sampling in the Sampling, Analysis and Field Equipment Calibration Plan. In no case shall the proposed sampling frequency be less than the requirements of this permit. [Minn. R. 7001]
	5.29.127	**Soil Suitability Requirements. [Minn. R. 7001]**
	5.29.128	The site used for land application of industrial by-product shall have a growing crop, which is harvested and removed during the cropping year that the industrial by-product is land applied. If the site does not meet this condition or the application site is set aside land (CRP), pasture land, non-agricultural land, or the industrial by-product contain pathogens, all the soil suitability criteria in A through C, below, shall be met: A. The soil texture at the zone of industrial by-product application shall be fine sand, loamy sand, sandy loam, loam, silt, silt loam, sandy clay loam, clay loam, sandy clay, silty clay loam, silty clay, or clay;

		B. The depth to bedrock shall be at least 3 feet, unless the soil is classified as a highly permeable soil, in which case the minimum depth increases to 5 feet; and C. The depth to the seasonal high water table shall be at least 3 feet, unless the soil is classified as a highly permeable soil, in which case the minimum depth increases to 5 feet. [Minn. R. 7001]
	5.29.129	Tile Lines. On sites installed with tile drainage, the depth to tile lines is the depth to the seasonal high water table. The MPCA requires sites maintain a three-foot separation distance to saturated soils for tiled sites. The Permittee shall provide maps of the tiling system indicating their depth and placement in the field. Water tables classified as perched or episaturated by the Natural Resources Conservation Service are not considered to be the seasonal high water table. [Minn. R. 7001]
	5.29.130	The Permittee shall obtain information to determine soil suitability from the Web Soil Survey published by the Natural Resources Conservation Service or by characterization of the site by a state of Minnesota licensed soil scientist or another qualified person. [Minn. R. 7001]
	5.29.131	**Site Management, Limitations, and Restrictions. [Minn. R. 7001]**
	5.29.132	Annual Application Limits. Annual application rates of the industrial by-product shall not exceed a sodium application rate limitation of 170 lb/acre/year. [Minn. R. 7001]
	5.29.133	Hydraulic Loading Limits. The MPCA sets hydraulic loading limits to prevent ponding and runoff from land application sites. The limitations specified in this section shall not cause any exceedances of other application limits of this permit. Limits for daily surface application rates for industrial by-products include: A. 10,000 gallons/acre/day for fine-textured surface soils with United States Department of Agriculture (USDA) textural classifications of clay loam, silty clay loam, sandy clay, silty clay, and clay; B. 15,000 gallons/acre/day for medium-textured surface soils with USDA textural classifications of loam, silt loam, silt, and sandy clay loam; and C. 25,000 gallons/acre/day for coarse-textured surface soils with USDA textural classifications of sand, loamy sand, and sandy loam. [Minn. R. 7001]
	5.29.134	Winter Application. The Permittee shall meet the following requirements for frozen or snow-covered soils when incorporation or injection is not possible: A. The Permittee shall not exceed a maximum hydraulic loading rate of 15,000 gallons/acre/winter for liquid industrial by-product; B. Applications are restricted to areas with 0 to 2% slopes; and C. The Permittee shall maintain all separation distances identified in Table 2 of Appendix A. The MPCA assumes industrial by-product incorporation or injection cannot occur during the months of December, January, February, and March unless the Permittee observes specific field or climatic conditions and documents them appropriately in the daily hauling record in accordance with the Records part of this chapter. [Minn. R. 7001]
	5.29.135	The Permittee may be required to take additional measures to prevent runoff of the industrial by-product from the site during the spring thaw, such as the installation of silt fences and berms and planting of grass buffer strips. [Minn. R. 7001]
	5.29.136	Miscellaneous Management Practices/Restrictions. The Permittee shall meet the following requirements for land application of industrial by-products: A. The Permittee shall not allow runoff of the industrial by-product from the application site. This may require management tools such as the installation of silt fences and berms and planting of grass buffer strips; B. The Permittee shall not allow ponding of liquid industrial by-products after 6 hours of application; C. All of the industrial by-product land applied shall be uniformly distributed over the area of the site used during application; D. The application area shall be clearly identified with GPS mapping used in the application equipment, flags, stakes, or other easily seen markers at the time of application to identify the site boundaries, separation distances, and unsuitable application areas within the site. Site boundaries identified by field roads, fences, and so forth do not require identification;

		E. The industrial by-product shall be immediately incorporated or injected on sites subject to flooding; F. Application of the industrial by-product is not allowed on areas of a site ponded with water or industrial by-product; G. Application of the industrial by-product is not allowed on areas that remain fallow for the entire cropping year; H. The Permittee shall inject or immediately incorporate liquid industrial by-products when applied on soil with a surface horizon permeability rate of less than 0.2 inches/hour; and I. The Permittee shall not apply the industrial by-product by spraying from a public road or across a road right-of-way without prior written MPCA approval. [Minn. R. 7001]
	5.29.137	Multiple Permittees may use a land application site; however, both Permittee's annual report shall include application and additional source(s) of nitrogen. [Minn. R. 7001]
	5.29.138	Nuisance conditions. The Permittee shall perform land application, staging, and/or storage of industrial by-product to minimize odors, noise, and vector attraction. The Permittee shall provide reasonable assurance that the land application, staging, and/or storage of industrial by-product will not cause nuisance conditions. The Permittee shall consider all aspects of land application of the industrial by-product when providing reasonable assurance including loading, unloading, transportation, storage, and land application of the industrial by-product, and shall specify this information in the Sampling, Analysis, and Field Equipment Calibration Plan. [Minn. R. 7001]
	5.29.139	**Additional Requirements - Industrial By-Product Supplying Nitrogen. [Minn. R. 7001]**
	5.29.140	**Total Available Nitrogen. [Minn. R. 7001]**
	5.29.141	The total quantity of nitrogen available for crop uptake for all industrial by-product during the cropping year is the sum of available organic nitrogen and ammonia nitrogen. [Minn. R. 7001]
	5.29.142	Available organic nitrogen. The Permittee shall use one of the following methods to determine the available organic nitrogen for industrial by-products: i. The total quantity of organic nitrogen present in the industrial by-product is considered 50% available during the cropping year it is applied and 25% the following cropping year (carryover nitrogen). ii. A mineralization study shall determine the quantity of organic nitrogen available in the industrial by-product during the cropping year it is applied and subsequent years (carryover). The mineralization study determines the rate and quantity of organic nitrogen mineralized during the applied cropping year it is applied and the rate and quantity of nitrogen mineralized during the second cropping year after application. The MPCA shall approve the mineralization study, including study protocol, prior to initiation of the study. [Minn. R. 7001]
	5.29.143	Ammonia nitrogen. The quantity of ammonia nitrogen used for calculating total available nitrogen is equal to 100% of the ammonia nitrogen contained in the industrial by-product when it is injected or immediately incorporated or 50% of the ammonia nitrogen when it is surface applied without immediate incorporation. [Minn. R. 7001]
	5.29.144	**Maximum Allowable Nitrogen Application Rates. [Minn. R. 7001]**
	5.29.145	The Permittee shall not apply industrial by-products at rates that cause exceedances of the annual maximum allowable nitrogen application rate. Maximum allowable nitrogen application rates shall take into account all available nitrogen applied on the site, including fertilizers; industrial and municipal by-products such as manure, biosolids, compost, and septage; and other industrial by-products. [Minn. R. 7001]
	5.29.146	Total available nitrogen loading limit cannot exceed the maximum allowable nitrogen application rate for the cropping year. [Minn. R. 7001]
	5.29.147	Maximum allowable nitrogen application rates shall be based on recommendations from the University of Minnesota Extension Service. These recommendations are based on soil analyses, realistic crop yield goals, and previously grown crops. This information is available from the MPCA upon request. The MPCA requires written approval for a proposed nitrogen application rate when information on recommended nitrogen application rates is not readily available or agreed upon. [Minn. R. 7001]

	5.29.148	Table 4 of Appendix A lists maximum allowable nitrogen application rates for selected crops that do not have University of Minnesota Extension Service recommendations. [Minn. R. 7001]
	5.29.149	**Application Management. [Minn. R. 7001]**
	5.29.150	The Permittee shall comply with the following requirements when no crop is grown on the application site during the time period between July 1 through August 31: A. Applications are limited to rates which supply no more than 50 pounds per acre of available nitrogen; and B. Available nitrogen for the following cropping year shall be the sum of the total amount of nitrogen applied between July 1 and August 31 plus applicable carry over from earlier industrial by-product application. [Minn. R. 7001]
	5.29.151	The maximum application rate of an industrial by-product allowed after the second cutting of a hay crop shall not provide more than 50 percent of the maximum allowable nitrogen based on the recommendations from the University of Minnesota Extension Service or Table 4 of Appendix A. [Minn. R. 7001]
	5.29.152	**Additional Requirements - Industrial By-Product Containing Pathogens. [Minn. R. 7001]**
	5.29.153	Applicability. Permittees with industrial by-products containing pathogens shall meet additional separation distances and site restrictions (Table 3 of Appendix A). The MPCA assumes an industrial by-product contains pathogens when it contains waste streams known or likely to contain pathogens, including, but not limited to, wastes containing blood, animal feces, and raw meats. All requirements of this part shall be met for industrial by-products containing pathogens. [Minn. R. 7001]
	5.29.154	Site Restrictions. Permittees with industrial by-products containing pathogens shall meet the following restrictions on crop harvest and access restriction. If necessary, the Permittee shall post signs at the area to meet restrictions. The minimum duration between time of application of an industrial by-product containing pathogens and harvest, grazing, and public access to the site is as follows: A. For food crops whose harvested part may touch the soil/industrial by-product mixture, such as melons, squash, and tomatoes, the waiting period is 14 months. B. For food crops whose harvested parts grow in the soil, such as potatoes and carrots, the waiting period is 38 months. This waiting period reduces to a 20-month duration between application and harvest when the industrial by-product is surface applied and stays on the soil surface four months or longer prior to incorporation into the soil. C. For feed, other food crops, such as field corn or sweet corn, hay, or fiber crop, the waiting period is 30 days. D. For the grazing of animals, the waiting period is 30 days. E. For public access to land with a high potential for exposure, including public contact sites, reclamation sites located in populated areas, turf farms, or plant nurseries, the waiting period is one year. F. For public access to land with a low potential for exposure, including lands with infrequent public use such as agricultural land, forests, or reclamation sites located in an unpopulated area, the waiting period is 30 days. [Minn. R. 7001]
	5.2297.155	**Notification Procedures. [Minn. R. 7001]**
	5.29.156	**Notification to MPCA. [Minn. R. 7001]**
	5.29.157	The Permittee shall submit a completed Industrial By-Products Site Notification Form at least 30 days prior to application of industrial by-product at a site used for land application of an industrial by-product for the first time. The Permittee shall collect the soil test results submitted with this form no more than six (6) months prior to submittal of the form. The Permittee shall repeat this notification if any of the properties or conditions of the site changes, including a change in site name, site ownership, acreage used, soil types, slope, and/or drainage capacity (tile lines). A copy of the form is available electronically at https://www.pca.state.mn.us/business-with-us/land-application-of-industrial-by-products. [Minn. R. 7001]
	5.29.158	The Permittee shall provide the appropriate and respective certifications required by the

		Industrial By-Product Storage part of this chapter to the MPCA prior to the use of an area or structure for the storage of an industrial by-product. [Minn. R. 7001]
	5.29.159	**Local Notification. [Minn. R. 7001]**
	5.29.160	The Permittee shall provide written notification to local officials at least 30 days before initiating land application activities within a county, city, or township for the first time. The Permittee shall: A. Notify the county's Planning and Zoning or Solid Waste Officer (whichever is appropriate for the county) in writing 30 days before the industrial by-product is land applied within the county; and B. Notify the township clerk in writing 30 days before the industrial by-product is land applied within the township; or C. Notify the mayor or another appropriate official of the city in writing 30 days before the industrial by-product is land applied within the city limits. [Minn. R. 7001]
	5.29.161	The Permittee shall date the notifications and include a description with the following elements: A. Description of the industrial by-product to be land applied, including how the industrial by-product is produced, what nutrients/pollutants are present in the industrial by-product, and the limiting nutrient/pollutant in the industrial by-product application; B. Description of any staging and/or short-term storage of the industrial by-product conducted prior to land application; C. Description of the applicable slope and setback requirements followed during land application; and D. A response section to notify the local officials there is an opportunity to request additional information regarding copies of records, testing information, individual site information, listing of all sites, etc.; and/or a section to provide information to the generator of the waste, applicator(s), and land owner(s) of any local requirements. [Minn. R. 7001]
	5.29.162	The Permittee shall repeat the notification process if any significant changes in the management of the industrial by-product described in the notification occur, including changes affecting the staging and/or storage of the industrial by-product. [Minn. R. 7001]
	5.29.163	**End User Notification. [Minn. R. 7001]**
	5.29.164	The end user shall receive, at a minimum, the information necessary to meet the requirements of this permit for each site used for land application of the industrial by-product. This includes information such as actual nutrient application rates, any restrictions on the by-product use, crop restrictions, and so forth. The application rates provided to the end user shall be the same nutrient loading rates submitted in the annual report. [Minn. R. 7001]
	5.29.165	The Permittee shall provide the end user with this information in writing as soon as possible and in no case more than 6 weeks after completion of application at the land application site. The Permittee shall maintain records demonstrating compliance with end user notification in accordance with the Records part of this chapter. [Minn. R. 7001]
	5.29.167	The Permittee shall inform end users that they should take appropriate credits for all plant nutrients supplied by industrial and municipal by-products, manures, septage, and fertilizers so that maximum allowable application rates are not exceeded. [Minn. R. 7001]
	5.29.168	**Operator Certification. [Minn. R. 7001]**
	5.29.169	A Type IV certified operator, or someone under the supervision of a Type IV certified operator, shall complete all land application activities. [Minn. R. 7001]
	5.29.170	The number of certified operators required for land application activities is subject to the requirements of Minn. R. 7048.0500. [Minn. R. 7001]
	5.29.171	**Records. [Minn. R. 7001]**
	5.29.172	Record Retention. The Permittee shall maintain the following records at the facility for as long as that site is considered active, and shall be available at the facility for review at any time by MPCA staff: A. Copy of the submitted Industrial By-Products Site Notification Form for each land application site, including the site map identifying the exact site location of the site, soil types on the site, tile maps, and areas that are required to be excluded from use;

		B. Documentation of site suitability of each site, including a copy of any lab results and other analytical information related to the industrial by-product or site used for application; C. Documentation of loading calculations for each site, including the maximum allowable industrial by-product application rate for each site used during the current cropping year; D. Documentation of acres used for application; E. Daily hauling records which indicate quantities of industrial by-product transferred to storage or land applied with the storage or site location identified for each land application site or storage area/structure; F. Sampling and calibration records as required by the Sampling, Analysis, and Field Equipment Calibration Plan as well as a copy of the submitted Sampling, Analysis, and Field Equipment Calibration Plan; G. Copy of the submitted Industrial By-Products Annual Report form and any other reported information necessary to prepare the Annual Report; H. Copy of notification letter(s) and other information submitted to each city, county, and township; I. Copy of written information provided to each end user of the industrial by-product; [Minn. R. 7001]
	5.29.173	Record Retention continued: J. Any approved plans or special approvals required by this permit; K. Copy of any Industrial By-Product Transfer to Manure Storage Application form submitted for storage of industrial by-product in a manure storage structure; and L. Any applicable records requirements pertaining to the storage of industrial by-product as specified by Industrial By-Products Storage part of this chapter. [Minn. R. 7001]
	5.29.174	The Permittee shall maintain the following information as the Daily Hauling Record, organized by site or storage area/structure for each site or storage unit used for the land application or storage of industrial by-product covered by this permit and structures used for the storage of sweet corn silage: A. Name of site; B. Date delivered to site/storage area/structure; C. Date applied to site/removed from storage area/structure; D. Volume applied/delivered to site/storage area/structure; E. Application rate; F. Visual observations of site, including but not limited to frozen or snow-covered soils, such that incorporation or injection of industrial by-product is not possible; and G. Running total of industrial by-product applied to site/added to storage unit during the cropping year. Records for industrial by-product transferred to manure storage structures do not need to include items C, E or F above; however, these do need to indicate on the Daily Hauling Record whether three feet of freeboard existed within the manure structure at the time of transfer. [Minn. R. 7001]
	5.29.175	**Industrial By-Product Storage. [Minn. R. 7001]**
	5.29.176	**General Requirements for Storage of All Industrial By-Products. [Minn. R. 7001]**
	5.29.177	Applicability. The Permittee may store or stage industrial by-product prior to land application only under the terms and conditions of this permit for the industrial by-product(s) covered by this permit. This part is divided into several subparts. This first subpart is applicable to all industrial by-product storage. The permit lists additional requirements for dewatered and liquid industrial by-product following this subpart. [Minn. R. 7001]
	5.29.178	The Permittee shall notify the appropriate local authorities prior to use of an area or structure for storage of an industrial by-product within a county, township, or city. Notification to local officials as required by this section shall include as least the following information, and a response section: A. A description of the necessity for storage at the land application site; B. The location of the storage area delineated on maps submitted; C. The dimensions of the storage area; D. The quantity of industrial by-product to be stored;

		E. The expected duration of storage before land application; and F. A description of precautions or practices to minimize or prevent drainage, runoff, or nuisance conditions at the storage area. [Minn. R. 7001]
	5.29.179	Management of Storage Area. All of the following requirements apply to areas and structures used for the storage of industrial by-products: A. No runoff of the industrial by-product from the storage site is allowed; B. If the storage area contains any particulate matter that may be subject to wind dispersion, the owner or operator shall cover or otherwise manage the waste to control wind dispersion; and C. The Permittee shall control and manage nuisance conditions resulting from the storage of industrial by-product. [Minn. R. 7001]
	5.29.180	Records Requirements. In addition to the records retention requirements of this permit, owners and operators of structures used for the storage of industrial by-products shall retain, for the life of the storage structure, the following additional records: A. Maintenance and repair documentation; B. Third-party certifications of storage structure(s) used for the storage of industrial by-product; and C. As-built drawings of any storage structure(s) used for the storage of industrial by-product. Additional requirements pertaining to record retention is required in accordance with Minn. R. 7151 for storage of an industrial by-product in a tank or tank system. [Minn. R. 7001]
	5.29.181	**A. Requirements for the Storage of Industrial By-Product in an Aboveground Storage Tank System. [Minn. R. 7001]**
	5.29.182	If the Permittee stores industrial by-product in an aboveground storage tank system as defined in Minn. R. 7151.1200, subp. 2, the Permittee shall comply with the design and operating requirements of Minn. R. ch. 7151 as applicable to storage of other regulated substances as defined in Minn. R. 7151.1200, subp. 25. The exclusion for wastewater treatment equipment in Minn. R. 7151.1300, subp. 2.A, does not apply to such storage. [Minn. R. 7001]
	5.29.183	Certification Required. Prior to use of a tank for the storage of an industrial by-product under this section, owners and operators shall obtain written certification from an engineer licensed in Minnesota stating that the tank, based on their assessment of the applicable provisions of Minn. R. 7151 is compliant with the Aboveground Storage Tank Rules. [Minn. R. 7001]
	5.29.184	The following standards apply to the short-term storage of industrial by-products in a vehicle, such as a tank truck, frac tank, railroad tank car, or similar designed and used to transport substances from one location to another: A. Storage under this section shall not exceed thirty (30) days. B. Short-term storage shall only occur at the facility or on the land application site where the industrial by-product will be applied. The quantity of industrial by-product stored at an application site shall not exceed the quantity of material that can be applied to that site. C. The Permittee shall maintain the separation distances in Table 5 of Appendix A for all areas and structures used for the storage of industrial by-products. D. The storage structure shall be structurally sound and leak proof. [Minn. R. 7001]
	5.29.185	**B. Additional Requirements for the Transfer of Industrial By-Products to Manure Storage Structures. [Minn. R. 7001]**
	5.29.186	Applicability. The MPCA regulates structures designed primarily for the storage of manure wherein industrial by-product and manure are co-mingled under the requirements of this part. [Minn. R. 7001]
	5.29.187	Maximum Amount Transferred to Each Structure. The Permittee may transfer a maximum of 50,000 gallons of industrial by-product, or up to 10% of the available volume of the structure, whichever is greater, to each approved manure storage structure. A second transfer to the manure storage structure during a cropping year is also subject to a maximum of 50,000 gallons, or up to 10% of the available volume of the structure, whichever is greater. Two transfers of product may occur as long as the Permittee removes the first quantity prior to receiving the second transfer. The Permittee shall record the available capacity of the structure at the time of transfer and the amount transferred in the Daily Hauling Record as required by the Records part

		of this chapter. [Minn. R. 7001]
	5.29.188	Storage Structure Minimum Standards. The following restrictions apply to the storage of industrial by-product in a manure storage structure: A. The structure shall meet the design and operational standards of Minn. R. 7020.2100 pertaining to liquid manure storage areas; B. The Permittee shall not use biological treatment lagoons for the storage of industrial by-product; C. The manure storage structure shall maintain a minimum of three feet of freeboard at all times; and D. Industrial by-products shall be compatible with the structure and manure to prevent damage to the structure and changes in biological activity. Examples of problems associated with incompatible wastes are damage to concrete and soil liners, physical or chemical changes in the mixture which make it difficult to agitate or pump, cause odors, or cause other nuisance or structural problems. [Minn. R. 7001]
	5.29.189	Prior to the use of the manure storage structure, the Permittee shall: A. Complete an Industrial By-Product Transfer to Manure Storage Application form and submit it for signature approval to the appropriate feedlot officer in delegated counties or MPCA feedlot staff in nondelegated counties in the county in which the manure storage structure is located. A copy of the form is available electronically at https://www.pca.state.mn.us/business-with-us/land-application-of-industrial-by-products; B. Submit a copy of the completed, signed form to the township or city where the manure storage structure is located; and C. Submit a copy of the completed, signed form to the MPCA. [Minn. R. 7001]
	5.29.190	Feedlot Facility Minimum Standards. In order for a facility to obtain approval for a manure storage structure for industrial by-product use, the feedlot receiving the industrial by-product shall be in compliance with MPCA feedlot manure management requirements and have no unresolved compliance issues. [Minn. R. 7020]
	5.29.191	Land Application of Industrial By-product/Manure Mixtures. The following requirements apply to the land application of mixtures of industrial by-products and manure: A. Sampling and analysis of the industrial by-product/manure mixture shall occur prior to land application to determine allowable application rates; B. Land application of the mixture shall be in accordance with Minn. R. 7020.2225, pertaining to the land application of manure; and C. The Permittee shall provide the following information to the owner and operator of the manure storage structure at the time of transfer: i. A copy of the analysis of the industrial by-product as required in the Limits and Monitoring section; and ii. An account of the volume transferred to the manure storage facility. [Minn. R. 7020]
	5.29.192	Land Application of Industrial By-product/Manure Mixtures (continued): D. The Permittee shall obtain a copy of the Manure Management Plan from the owner or operator of the manure storage structure and ensure that the addition of the industrial by-product is appropriately addressed in the plan. Minn. R. 7020 requires a Manure Management Plan for operations with more than 300 animal units; for operations with less than 300 animal units, a manure management plan is not required, but the manure shall be land applied in accordance with the requirements of Minn. R. 7020; E. The Permittee shall not relinquish control of the industrial by-product until the Manure Management Plan has been appropriately updated or if there is reason to believe that the industrial by-product will not be managed in accordance with this permit or Minn. R. 7020.2225; F. The Permittee shall submit the total quantity of by-product transferred and a copy of analysis results to the MPCA in accordance with the Annual Report part of this chapter; G. The Permittee shall maintain daily hauling records pertaining to the transfer of the industrial by-product to/from a manure storage structure, as required by the Records part of this chapter; and H. The Permittee shall manage the resulting mixture of materials land applied as manure and the

		mixture is subject to the requirements for manure management. [Minn. R. 7020]
	5.29.193	**Dewatered Industrial By-Product Storage Requirements. [Minn. R. 7001]**
	5.29.194	Permittees that spread dewatered industrial by-products concurrently with the unloading of bulk material on the land application site and do not stockpile greater than 24 hours are not subject to the additional requirements for storage under this part. [Minn. R. 7001]
	5.29.195	Permittees that received approval for storage of a dewatered industrial by-product under a previous permit action or other written approval shall meet the requirements of the applicable subparts of this part. [Minn. R. 7001]
	5.29.196	Separation Distances. The Permittee shall maintain the separation distances in Table 5 of Appendix A for all areas and structures used for the storage of industrial by-products. [Minn. R. 7001]
	5.29.197	**A. Short-Term Storage of Dewatered Industrial By-Product. [Minn. R. 7001]**
	5.29.198	Short-term storage requirements under this subpart are applicable to dewatered industrial by-product as defined by this permit. [Minn. R. 7001]
	5.29.199	The following standards apply to the short-term storage of industrial by-products: A. Storage under this section shall not exceed thirty (30) days; B. Short-term storage shall only occur on the land application site where the industrial by-product will be applied. The quantity of industrial by-product stored at an application site shall not exceed the quantity of material that can be applied to that site; and C. Short-term storage shall not take place on land with a slope greater than two percent (2%) unless the Permittee takes measures to control water runoff. [Minn. R. 7001]
	5.29.200	**B. Long-Term Storage of Dewatered Industrial By-Product. [Minn. R. 7001]**
	5.29.201	Long-term storage requirements under this subpart are applicable to dewatered industrial by-product as defined by this permit. [Minn. R. 7001]
	5.29.202	The following standards apply to the long-term storage of industrial by-products: A. Long term storage shall not exceed a period of 7 months; B. Long-term storage of an industrial by-product is allowed only when land application will occur on the site where it is stored, or on land that is owned, leased, or rented by the same person, and all sites are within a one-half mile radius of the storage site; C. Long-term storage shall not occur on land with greater than a two percent (2%) slope unless the Permittee takes measures to control water runoff; D. Long-term storage areas shall be located in areas where the texture of all the horizons in the soil profile to a depth of five feet is sandy loam or finer, unless there is construction of an impervious pad with a drainage collection system; E. Long-term storage shall not take place on the same area for two or more consecutive years unless there is construction of an impervious pad with a drainage collection system; and F. Prior to the use of an area for long-term storage (whether or not a pad is constructed), the Permittee shall submit boring logs from at least two soil borings taken to a depth of ten feet at the perimeter of the proposed storage area. Boring logs shall include the following information: i. Texture and thickness of each soil horizon encountered; ii. Color and presence or absence of mottling for each soil horizon encountered (by the Munsell Soil Color Charts); iii. Depth to seasonal high water table, if encountered; and iv. Depth to bedrock, if encountered. [Minn. R. 7001]
	5.29.203	Locational Prohibitions. All of the locational standards in Table 5 of Appendix A apply to all areas and structures used for the storage of industrial by-products. [Minn. R. 7001]
	5.29.204	Certification Required. Prior to use of a constructed pad or other structure for the long-term storage of an industrial by-product, the Permittee shall obtain and submit written certification from a Professional Engineer registered in the state of Minnesota stating that the storage area and/or structure (storage facility), based on their assessment of the requirements of the Long Term Storage of Dewatered Industrial By-Products subpart of this chapter, is suitable for the long-term storage of the industrial by-product. [Minn. R. 7001]

	5.29.205	Certification Required. Prior to the use of an area for the long-term storage of an industrial by-product, the Permittee shall submit written certification by a Professional Soil Scientist registered by the state of Minnesota or a Professional Engineer registered in the state of Minnesota, that the site, based on their assessment of the boring logs required under the Long-Term Storage of Dewatered Industrial By-Product subpart of this chapter, is suitable for the long-term storage of the industrial by-product. [Minn. R. 7001]
	5.29.206	**C. Permanent Storage of Dewatered Industrial By-Product. [Minn. R. 7001]**
	5.29.207	Permanent storage requirements are applicable to dewatered industrial by-products that are stored for a period of more than seven months and are not stored in a tank or tank system. [Minn. R. 7001]
	5.29.208	The following standards apply to the permanent storage of industrial by-products: A. Any area used for permanent storage of dewatered industrial by-products shall be paved with asphalt, concrete, or other material designed to restrict seepage to less than 500 gallons per acre per day, and shall be sufficient to bear the weight of unloading and loading trucks and equipment without cracking. The pad shall be sloped and curbed to collect all runoff water. Runoff water must be collected and managed in a manner approved by the MPCA; B. The Permittee shall not store the industrial by-product at the permanent storage location for more than three years without processing or utilizing the product; and C. Prior to operation of a storage facility, the Permittee shall evaluate the potential for migration of contaminants into adjacent subsurface soil, groundwater, or surface water from the stored industrial by-product. This evaluation shall take into consideration the characteristics of the industrial by-product, the quantity of industrial by-product to be stored, and the length of time the industrial by-product will be stored. [Minn. R. 7001]
	5.29.209	Certification Required. Prior to use of a constructed area or structure for the permanent storage of an industrial by-product under this subpart, the Permittee shall obtain and submit written certification from an engineer licensed in Minnesota stating that the storage area and/or structure (storage facility), based on their assessment of the requirements of this subpart are suitable for the permanent storage of the industrial by-product. [Minn. R. 7001]
	5.29.210	**Annual Report. [Minn. R. 7001]**
	5.29.211	The Permittee shall submit an Industrial By-Product Annual Report by December 31 of each year following permit issuance. The Permittee shall report on the MPCA form available electronically at https://www.pca.state.mn.us/business-with-us/land-application-of-industrial-by-products or another MPCA approved form. The Permittee shall submit an industrial by-product land application annual report: Due by December 31 of each year following permit issuance. [Minn. R. 7001]
	5.29.212	The Industrial By-Product Annual Report shall include the following information: A. Total quantity of each industrial by-product land applied during the cropping year (if none land applied, indicate on the form); B. Results of all analyses conducted and the average of these analyses; C. Site-specific information: i. Crops grown/vegetation receiving nutrient benefit; ii. Realistic yield goal; iii. Months site used; iv. Soil analysis results; v. Application rate of industrial by-product; vi. Application rates for sodium, phosphorus, and nitrogen; vii. Description of any management problems associated with land application that occurred during the cropping year and how these problems have been or will be resolved; and D. Total quantity of industrial by-product transferred to/from a storage area/structure under the terms of the Industrial By-Product Storage part of this chapter, if applicable. [Minn. R. 7001]
	5.29.213	The Permittee shall report monitoring results for the completed reporting period in the units specified by this permit on the Industrial By-Product Annual Report form, as provided electronically at

		https://www.pca.state.mn.us/business-with-us/land-application-of-industrial-by-products. [Minn. R. 7001]
	5.29.214	**Definitions. [Minn. R. 7001]**
	5.29.215	"Agency" means the Minnesota Pollution Control Agency (MPCA). [Minn. R. 7001]
	5.29.216	"Agronomic Rate" means the industrial by-product application rate (dry weight basis) designed to: A. Provide the amount of nitrogen which can be utilized by the food crop, feed crop, fiber crop, cover crop, or vegetation grown on the land; and B. Minimize the amount of nitrogen in the industrial by-product that passes below the root zone of the crop or vegetation grown on the land to the groundwater. [Minn. R. 7001]
	5.29.217	"Available Nitrogen" means the nitrogen present in the industrial by-product which is available for the plant to use during the cropping year. [Minn. R. 7001]
	5.29.218	"By-Product" has the same meaning as solid waste given in Minn. R. 7035.0300. [Minn. R. 7001]
	5.29.219	"Carbon to Nitrogen Ratio" means the calculated ratio of total elemental carbon to total elemental nitrogen reported on a dry weight basis. [Minn. R. 7001]
	5.29.220	"Class 2 Surface Water," as defined in Minn. R. 7050.0200, means all waters of the state that are or may be used for fishing, fish culture, bathing, or any other recreational purpose, and for which quality control is or may be necessary to protect aquatic or terrestrial life, or the public health, safety, or welfare. [Minn. R. 7001]
	5.29.221	"Compatible" means the ability of two or more substances or materials in a tank system to maintain their respective physical and chemical properties upon contact with one another. [Minn. R. 7001]
	5.29.222	"Cover Crop" means vegetation which is planted specifically to prevent soil erosion and to take up nutrients that may otherwise be lost before the next cropping year. This typically includes crops such as rye, oats, or other types of fast-growing vegetation. Cover crops, in general, are not harvested. [Minn. R. 7001]
	5.29.223	"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 1994 cropping year began September 1, 1993 and ended August 31, 1994. [Minn. R. 7001]
	5.29.224	"Crop Year Total" is the calculated total quantity of a given measurement for a cropping year (September 1 - August 31). For example, total quantity of industrial by-product land applied during the cropping year. The "Crop Year Total" limit is an upper limit. [Minn. R. 7001]
	5.29.225	"Dewatered Industrial By-product" means an industrial by-product with a total solids content of 20% or greater or which can be transported and handled as a solid material. [Minn. R. 7001]
	5.29.226	"Dike" means an embankment, ridge, or wall which is impermeable to stored substances and which forms the perimeter of the secondary containment area. [Minn. R. 7001]
	5.29.227	"Dry Weight Basis" means calculated on the basis of having been dried at 105 degrees Celsius until reaching a constant mass, or essentially 100 percent solids content. [Minn. R. 7001]
	5.29.228	"End User" means the person that has accepted the by-product for their use as a soil amendment. [Minn. R. 7001]
	5.29.229	"Fallow Land" means land which is not cropped throughout a cropping year and has a vegetative cover of less than 25 percent. [Minn. R. 7001]
	5.29.230	"Grassed Waterways" means natural or constructed areas seeded to grass as protection against erosion. Separation distances are from the centerline of grassed waterways. For a grassed waterway which is wider than the separation distances required, application is allowed to the edge of the grass strip. [Minn. R. 7001]
	5.29.231	"Hazardous Waste" means a waste that may pose greater human health or environmental risks due to their chemical properties. See the following fact sheet: https://www.pca.state.mn.us/sites/default/files/w-hw1-01.pdf. [Minn. R. 7001]
	5.29.232	"Highly Permeable Soil" means soils whose soil leaching potentials are rated as severe, poor filter for soil pesticide loss, by the Natural Resources Conservation Service using the procedure found in part 620, Soil Interpretation Rating Guides of the United States Department of Agriculture-Natural Resources Conservation Service National Soils Survey Handbook. [Minn. R. 7001]

	5.29.233	"Immediately Incorporated" means incorporated into the soil with tillage within 48 hours after surface application of an industrial by-product. [Minn. R. 7001]
	5.29.234	"Industrial By-Product" has the same meaning as solid waste given in Minn. R. 7035.0300. [Minn. R. 7001]
	5.29.235	"Intermittent Stream" means a drainage channel with definable banks that provides for runoff flow to any of the surface waters during snow melt or rainfall events. [Minn. R. 7001]
	5.29.236	"Karst topography" means an area underlain by fractured carbonate bedrock in which erosion has produced geological characteristics such as: sinkholes; springs, subsurface drainage; caves; sinking streams; dissolutionally enlarged joints (grikes) or bedding planes, and bedrock surface channels (karren). Counties known for karst features include parts of Dakota, Rice, Dodge, and Mower, and most of Goodhue, Olmsted, Winona, Wabasha, Houston and Fillmore. [Minn. R. 7001]
	5.29.237	"Liquid Industrial By-Product" means any industrial by-product that does not meet the definition of dewatered industrial by-product. [Minn. R. 7001]
	5.29.238	"Long-term Storage" means storage of dewatered industrial by-product less than 7 months. Further requirements are listed in the Industrial By-Product Storage section of the permit. [Minn. R. 7001]
	5.29.239	"Maximum Allowable Nitrogen Application Rate" means the maximum amount of available nitrogen which can be applied to a site during a single cropping year. [Minn. R. 7001]
	5.29.240	"MPCA" means the Minnesota Pollution Control Agency, or Minnesota Pollution Control Agency staff as delegated by the Minnesota Pollution Control Agency. [Minn. R. 7001]
	5.29.241	"Other Regulated Substances" means any substance, including a food-based product intended for human or animal consumption, which may cause pollution of waters of the state and is not: A. A petroleum substance under standard temperature and pressure; or B. A hazardous material. [Minn. R. 7001]
	5.29.242	"Pathogens" means organisms that are capable of producing an infection or disease in a susceptible host. [Minn. R. 7001]
	5.29.243	"Perched Water Table" means the soil is saturated with water in one or more layers within 200 centimeters of the mineral soil surface and has one or more unsaturated layers with an upper boundary above 200 centimeters in depth below the saturated layer. The zone of saturation , i.e. the water table is perched on top of a relatively impermeable layer. The Natural Resources Conservation Service also classifies this as epi-saturation. [Minn. R. 7001]
	5.29.244	"Permanent Storage" means storage of dewatered industrial by-product more than 7 months. Further requirements are listed in the Industrial By-Product Storage section of the permit. [Minn. R. 7001]
	5.29.245	"Permittee" means the entity or multiple entities identified as Permittee(s) on the permit cover page of this permit. [Minn. R. 7001]
	5.29.246	"Private livestock truck wash" means a truck washing facility owned or leased, operated, and used only by a feedlot operator to wash trucks owned or leased by the feedlot operator and used to transport animals or supplies to and from the feedlot. [Minn. Stat. ch. 116.07]
	5.29.247	"Public Contact Site" means land with a high potential for contact by the public. This includes, but is not limited to, public parks, ball fields, cemeteries, and golf courses. [Minn. R. 7001]
	5.29.248	"Realistic Yield Goal" means the most recent five-year average of crop yields, excluding the worst year, or the most recent three to five year average yield increased by ten percent. If the crop has never been grown, the yield goal can be determined based on information provided by the Natural Resources Conservation Service, county Extension agent, or crop consultant. [Minn. R. 7001]
	5.29.249	"Short-term Storage" means storage of dewatered of industrial by-product less than 30 days. Further requirements are listed in the Industrial By-Product Storage section of the permit. [Minn. R. 7001]
	5.29.250	"Single Value" is a reported value from a single sample or measurement for which there is no limit. [Minn. R. 7001]
	5.29.251	"Soil Horizon" means a layer of soil that is approximately parallel to the soil surface and has some set of properties that has been produced by soil-forming processes, and has some properties that

		are not like those of the layers above and beneath it. These properties include color, structure, texture, consistency, and bulk density. [Minn. R. 7001]
	5.29.252	"Soil Texture" means the relative portion of the soil separates sand, silt, and clay. It can be measured using methods described in Minn. R. 7041.3400, subp. 1. Coarse texture is US Department of Agriculture textural classifications sand, loamy sand, and sandy loam. Medium texture is US Department of Agriculture classifications loam, silt, silt loam, and sandy clay loam. Fine texture is US Department of Agriculture classifications clay loam, silty clay loam, sandy clay, and clay. [Minn. R. 7001]
	5.29.253	"Type IV Certified Operator or Inspector" means a person certified according to Minn. R. ch. 7048 for land application. A Type IV facility is any disposal facility that applies on the land any sewage sludge or semisolids from commercial or industrial operations. [Minn. R. 7001]
	5.29.254	"Underground Storage Tank" means any one or combination of containers including tanks, vessels, enclosures, or structures and appurtenances connected to them that is used to contain or dispense regulated substances pursuant to Minn. R. 7150, and the volume of which, including the volume of piping connected to them, is ten percent or more beneath the surface of the ground. [Minn. R. 7001]
	5.29.255	"Vector Attraction" means the characteristic of industrial by-product that attracts rodents, flies, mosquitoes, or other organisms capable of transporting infectious agents. [Minn. R. 7001]
	5.29.256	"Waters of the State" means all streams, lakes, ponds, marshes, wetlands, watercourses, waterways, wells, springs, reservoirs, aquifers, irrigation systems, drainage systems and all other bodies or accumulations of water, surface or underground, natural or artificial, public or private, which are contained within, flow through, or border upon the state or any portion thereof. [Minn. R. 7001]
	5.29.257	"Wetlands" means those areas that are inundated or saturated by surface water or groundwater at a frequency and duration sufficient to support, and that under normal circumstances do support, a prevalence of vegetation typically adapted for life in saturated soil conditions. Wetlands generally include swamps, marshes, bogs, and similar areas. Constructed wetlands designed for wastewater treatment are not waters of the state. Wetlands must have the following attributes: A. A predominance of hydric soils; B. Inundated or saturated by surface water or groundwater at a frequency and duration to support a prevalence of hydrophytic vegetation typically adapted for life in a saturated soil condition; and C. Under normal circumstances support a prevalence of such vegetation. [Minn. R. 7001]
		Spray Irrigation
	5.30.258	**Authorization**. [Minn. R. 7001]
	5.30.259	This chapter authorizes the Permittee to spray irrigate industrial process wastewater, as described in the Permitted Facility Description section of this permit, to spray irrigation sites as part of a wastewater treatment system. This activity, referred to as industrial spray irrigation, is limited by the Limits and Monitoring section of this permit, as well as the other terms and conditions of this permit. [Minn. R. 7001]
	5.30.260	**Site Management, Limitations, and Restrictions**. [Minn. R. 7001]
	5.30.261	**Site Selection and Use Procedure**. [Minn. R. 7001]
	5.30.262	Prior to initial use of a site for industrial spray irrigation, the Permittee shall obtain written MPCA approval. [Minn. R. 7001.150, subp. 3(F)]
	5.30.263	The Permittee is responsible for determining whether a site meets the limitations identified for spray irrigation sites in the Limits and Monitoring section of this permit. [Minn. R. 7001.150, subp. 3(F)]
	5.30.264	**Hydraulic Loading Rates**. [Minn. R. 7001]
	5.30.265	Hydraulic loading rate limits are set to prevent ponding and runoff from spray irrigation sites. The limitations specified in this part shall not cause any other application limits of this chapter or

		the Limits and Monitoring section of this permit to be exceeded. The following hydraulic loading limitations apply to industrial spray irrigation: A. No runoff of industrial process wastewater from the spray irrigation site is allowed; B. Industrial spray irrigation shall be limited to prevent the runoff of any industrial process wastewater mixed with rain water; C. Industrial process wastewater may not be sprayed during any rainfall event that causes runoff from the site; D. Uncontaminated stormwater may be allowed to drain from a spray irrigation site; and E. Industrial process wastewater shall not be sprayed to a cover crop that is dormant because of frost or below-freezing temperatures. [Minn. R. 7001.150, subp. 3(F)]
	5.30.266	**Miscellaneous Management Practices/Restrictions**. [Minn. R. 7001]
	5.30.267	The following standards apply to industrial spray irrigation: A. Operate each spray irrigation site in a load and rest cycle. Evenly distribute the discharge to individual sections of the spray irrigation site and allow for sufficient resting periods to maintain the absorptive capacity of the soil; B. Cut and remove the site cover crop at least twice per year to stimulate vegetative growth and to remove nutrients from the system. If forage crops are grown, conduct a crop survey by a crop expert to determine the percent of all predominant varieties, percent broad leaves, and percent other grasses; C. Industrial process wastewater authorized for spray irrigation shall not have physical or chemical characteristics that prevent the proper operation of the wastewater treatment system. The wastewater shall be free of material that interferes with the operation of spray nozzles, orifices, and flow measurement devices; D. Develop a process control test or method to determine the potential to exceed the five-day carbonaceous biochemical oxygen demand (CBOD5) intervention limit of 25 milligrams per liter (mg/L) for tile line discharges; and E. Conduct a visual inspection of the discharge at each tile line outlet at least once per day for changes that indicate a potential exceedance of a tile line intervention limit. Document daily tile line discharge observations in accordance with the Records part of this chapter. [Minn. R. 7001.150, subp. 3(F)]
	5.30.268	Nuisance Conditions. Schedule and complete spray irrigation activities so as to minimize adverse effects resulting from odors, noise, and aerosol drift. Provide reasonable assurance that spray irrigation of wastewater will not cause nuisance conditions. Operational and structural controls, or some combination thereof, may be considered in providing reasonable assurance, and shall be specified in the facility's Spray Irrigation Management Plan. Operational controls include methods such as increasing setback distances and timing irrigation events to minimize inconvenience to neighboring residents and to minimize the potential for human contact. Structural controls include methods such as innovative structural design, use of a weather station with an anemometer, use of drop nozzle irrigation to minimize spray drift toward public land or access ways, and aeration. In the event that measures or equipment intended to create reasonable assurance no longer function as intended, corrective action is required, which may include additional maintenance or modifications of the wastewater treatment system. The Permittee shall submit a written description of the corrective actions taken to eliminate nuisance conditions to the MPCA within five (5) days of discovery of an incident. Other corrective action may be required by the MPCA Commissioner, as necessary, to comply with the requirements of this part. [Minn. R. 7001.150, subp. 3(F)]
	5.30.269	Install and maintain outlet protection measures at tile line outlets to prevent erosion. [Minn. R. 7001.150, subp. 3(F)]
	5.30.270	**Spray Irrigation Outside of Effective Periods**. [Minn. R. 7001]
	5.30.271	If conditions require spray irrigation outside of the effective period designated in the Limits and

		Monitoring section of this permit, or if an emergency condition exists, the Permittee shall submit the "Spray Irrigation/Rapid Infiltration Basin Discharge Not Authorized Within Permit Form" (wq-wwtp7-06, 1/14). Submit the form to the MPCA at least two weeks prior to needing to spray irrigate. [Minn. R. 7001.150, subp. 3(F)]
	5.30.272	**Operator Certification**. [Minn. R. 7001]
	5.30.273	All industrial spray irrigation activities shall be done by or under the supervision of a Type V certified operator. [Minn. R. 7001]
	5.30.274	The Permittee shall employ at least one Type V certified operator as required in Minn. R. 7048.0500, subp. 1, onsite at the Permittee's operations, who will be responsible for the day-to-day operations of the wastewater treatment system. [Minn. R. 7048]
	5.30.275	**Spray Irrigation Management Plan**. [Minn. R. 7001]
	5.30.276	To address the specific operations of the spray irrigation site(s); optimize the performance of the wastewater treatment system; and maintain compliance with Minn. Stat. chs. 115 and 116, as amended, and Minn. R. chs. 7001, 7050, 7053, and 7060; the Permittee shall prepare and implement an approved Spray Irrigation Management Plan. submit a spray irrigation management plan: Due by 60 days after permit issuance. [Minn. R. 7001.150, subp. 3(F)]
	5.30.277	If the MPCA does not respond to the Spray Irrigation Management Plan within 90 days of its receipt with comments or requested changes to the plan, the submitted plan becomes the facility's operating Spray Irrigation Management Plan. If the MPCA determines that the operating Spray Irrigation Management Plan is not effective in preventing permit violations, the Permittee may be required by the MPCA to revise their Spray Irrigation Management Plan. [Minn. R. 7001.150, subp. 3(F)]
	5.30.278	Submit changes or updates to the Spray Irrigation Management Plan to the MPCA as part of the annual report required by the Annual Report part of this chapter. [Minn. R. 7001.150, subp. 3(F)]
	5.30.279	The Spray Irrigation Management Plan shall include the following elements, at a minimum: A. Facility information, including the following: i. A description of the spray irrigation facility and maps; ii. Locations of all monitoring locations, such as tile line outlets, monitoring wells, etc.; and iii. A general description of spray irrigation operations. B. A description of the management of process wastewater application, including the following: i. Irrigation scheduling (daily, monthly, annually); ii. Irrigation intensity; iii. Loading rates (hydraulic and nutrient); iv. Load/rest cycle; v. Runoff collection, if applicable; vi. Tile line discharge or collection, if applicable; vii. Process control test or method for tile line discharges required by the Miscellaneous Management Practices/Restrictions part of this chapter; and viii. Soil moisture monitoring methods used. C. Identify areas susceptible to runoff and identify management practices to prevent and control runoff; D. A description of crop management practices, as described in the following subparts; E. A Spill Prevention and Response Procedure, as described in the following subparts; F. A Contingency Plan, as described in the following subparts; G. A Monitoring Plan, as described in the following subparts; H. A Groundwater Monitoring Plan, as described in the following subparts, if groundwater monitoring is required by this chapter or by another chapter in this permit. [Minn. R. 7001.150, subp. 3(F)]; and I. A Maintenance Plan, as described in the Facilities Operation part of this chapter. [Minn. R. 7001.150, subp. 3(F)]
	5.30.280	The description of crop management practices shall include the following elements, at a minimum:

		A. A list of cover crop type(s); B. Procedures for crop establishment and maintenance; C. A schedule for crop harvest and removal; D. Methods for estimating crop yield and crop nitrogen removal; and E. Methods for conducting the crop survey required by the Miscellaneous Management Practices/Restrictions part of this chapter. [Minn. R. 7001.150, subp. 3(F)]
	5.30.281	Prepare and implement a Spill Prevention and Response Procedure, which shall include the following elements, at a minimum: A. Identification of where spills have occurred and where they have the potential to occur; B. Determination and identification of drainage points for potential spill areas, and development of appropriate spill prevention and containment measures for these areas; C. Detailed description of procedures for notifying state, local, and company personnel in the event of a spill, which shall be made available to appropriate personnel; D. Detailed procedures for containing and cleaning up a spill, which shall be made available to appropriate personnel; E. A list of all spill control equipment, including the equipment location; and F. An employee training program to inform appropriate personnel of notification and spill response procedures. [Minn. R. 7001.150, subp. 3(F)]
	5.30.282	Prepare and implement a Contingency Plan for managing the wastewater treatment system during periods when irrigation is not possible due to adverse climatic conditions, equipment failure, or in the event the management requirements of the Site Management, Limitations, and Restrictions part of this chapter are violated. The plan should include alternatives such as: A. Storage tanks or lagoons; B. Additional land; C. Set-aside corners or other unused parcels of land; D. Transporting process wastewater off site for treatment, disposal, or storage; E. Processing shutdown; and F. Additional or alternative onsite treatment. [Minn. R. 7001.150, subp. 3(F)]
	5.30.283	Prepare and implement a Monitoring Plan, which shall contain the following elements, at a minimum: A. Sampling point identification; B. Sampling protocol for all monitoring points; C. Sampling schedule; D. List of parameters to be analyzed; E. Standard test methods; and F. Reporting limits. [Minn. R. 7001.150, subp. 3(F)]
	5.30.284	Prepare and implement a Groundwater Monitoring Plan, which shall include the following elements, at a minimum: A. Maps of spray irrigation sites, monitoring well locations, water supply well locations, and water table contour map(s) illustrating groundwater flow direction; B. A description of site hydrogeology and soils, including well and boring logs and cross sections; C. A water supply well survey that includes the location, property owner, property address, depth, and aquifer information for wells within a 0.5-mile radius of the spray irrigation site boundary; and D. A description of monitoring well sampling procedures. If monitoring wells are sampled by a contractor, a copy of their procedures and quality assurance program shall be provided as part of the Groundwater Monitoring Plan. Refer to the MPCA publication, "Sampling Procedures for Ground Water Monitoring Wells, July 1997, Reviewed and re-approved September 2006" (wq-gw1-01, 9/06), for further information. [Minn. R. 7001.150, subp. 3(F)]
	5.30.285	**Facilities Operation**. [Minn. R. 7001]
	5.30.286	Prepare and implement a Maintenance Plan to eliminate water quality degradation, which shall include the following elements, at a minimum: A. A description of the inspection and maintenance program for wastewater treatment

		equipment; B. A description of the inspection and maintenance program for pipeline breaks and associated irrigation equipment; and C. A proposed schedule of routine inspection and maintenance activities. Submit the plan as part of the Spray Irrigation Management Plan required in the Spray Irrigation Management Plan part of this chapter. Operate the wastewater treatment system in accordance with the plan, as approved by the MPCA. [Minn. R. 7001.150, subp. 3(F)]
	5.30.287	The Permittee shall at all times maintain in good working order and operate as efficiently as possible all facilities or systems of control installed or used to achieve compliance with the terms and conditions of this 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. [Minn. R. 7001.150, subp. 3(F)]
	5.30.288	The Permittee is responsible for ensuring system reliability and shall install leak detection equipment and/or implement routine inspection and maintenance programs to prevent pipeline breaks and other associated equipment failures that may endanger human health, public drinking water supplies, or the environment. Maintain a record of all inspections, maintenance, and tests conducted. These records shall be made available to the MPCA upon request. [Minn. R. 7001.150, subp. 3(F)]
	5.30.289	Maintenance of the treatment facility that results in impairment of the efficiency of the wastewater treatment system and/or degradation of water quality shall be scheduled as much as possible during non-critical water quality periods and shall be carried out in a manner approved by the MPCA. [Minn. R. 7001.150, subp. 3(F)]
	5.30.290	Conduct necessary in-plant control tests at a frequency adequate to ensure continuous efficient operation of the treatment facility. [Minn. R. 7001.150, subp. 3(F)]
	5.30.291	The Permittee shall provide an adequate operating staff that is duly qualified under Minn. R. ch. 9400 and, if applicable, as determined by the MPCA pursuant to Minn. R. 7001.0150, to carry out the operation, maintenance, and testing functions required to ensure compliance with the conditions of this permit. [Minn. R. 7001.150, subp. 3(F)]
	5.30.292	**Compliance Responsibility**. [Minn. R. 7001]
	5.30.293	**Exceedance of a Groundwater Intervention Limit for Total Nitrite plus Nitrate (as N)**. [Minn. R. 7001]
	5.30.294	If a groundwater intervention limit for total nitrite plus nitrate (as N) is exceeded, take the following actions: A. Determine the validity of the test result and resample if past test results have not exceeded the intervention limit or if the result may be invalid for other reasons; B. Submit a data analysis of the exceedance that includes the following information as part of the annual report required by the Annual Report part of this chapter; i. Potential sources and causes for the limit exceedance; ii. An evaluation of the exceedance(s) as compared to past groundwater quality data that considers trends and the significance of limit exceedances; and iii. Nutrient loading from process wastewater relative to crop uptake and yield, application timing, tile line quality data, soil nitrate levels, and other factors over the last five years that could contribute to the exceedance for the spray irrigation site(s) affecting the monitoring well. C. Submit a corrective action plan that describes the steps to be taken to reduce nitrate concentrations in groundwater. Update the corrective action plan annually to determine its effectiveness and whether alternative actions are necessary to reduce groundwater nitrate concentrations. Submit the corrective action plan and subsequent updates as part of the annual report required by the Annual Report part of this chapter. [Minn. R. 7001]
	5.30.295	If an exceedance is greater than or equal to the nitrate (as N) drinking water standard of 10 mg/L or background levels, whichever is greater, take the following additional actions unless the MPCA

		states in writing that these actions are not necessary: A. Evaluate the need for installing additional monitoring wells to determine the extent of groundwater contamination and install additional wells if needed; B. Update the water supply well survey completed as part of the Groundwater Monitoring Plan and described in the Spray Irrigation Management Plan part of this chapter; C. Evaluate the hydraulic interconnection between the aquifer being monitored and the drinking water aquifer(s) if they are different; D. Sample and analyze drinking water supply wells for total nitrite plus nitrate (as N) within a 0.5-mile radius of the spray irrigation site boundary if aquifers are found to be interconnected and there is a potential that drinking water may be affected by irrigation activities; E. Complete other actions as necessary to evaluate the problem and determine appropriate corrective actions to be taken; and F. Submit this information as part of the annual report required by the Annual Report part of this chapter. [Minn. R. 7001]
	5.30.296	**Exceedance of a Total Annual Loading Rate Intervention Limit for Nitrogen**. [Minn. R. 7001]
	5.30.297	If a total annual nitrogen loading rate intervention limit is exceeded, submit a corrective action plan. The corrective action plan shall include detailed information on how nitrogen loading will be managed both on a short- and long-term basis so that the intervention limit is not exceeded and a detailed evaluation and summary of the following information: A. Groundwater quality trends from monitoring wells for the spray irrigation site(s) where the exceedance occurred; B. An evaluation of nutrient loading from wastewater relative to crop uptake and yield for all spray irrigation sites over the last five (5) years; C. Tile line discharge quality over the last five (5) years; and D. Other information that can assist in providing a more complete evaluation of the possible impacts the exceedance may have on the environment. Examples of this type of information may include soil nitrate concentrations, weather conditions, timing of applications, nitrogen mineralization or loss study results, and so forth. Submit the corrective action plan as part of the annual report required by the Annual Report part of this chapter. [Minn. R. 7001]
	5.30.298	**Exceedance of a Process Wastewater Intervention Limit for Sodium Adsorption Ratio (SAR)**. [Minn. R. 7001]
	5.30.299	If a process wastewater intervention limit for SAR is exceeded, submit a corrective action plan that includes detailed information pertaining to: A. How salts in the process wastewater can be reduced; B. The impacts of the exceedance on soils, crop health/vigor, and groundwater quality; and C. Proposed changes in operation to mitigate any problems identified. Submit the corrective action plan as part of the annual report required by the Annual Report part of this chapter. [Minn. R. 7001]
	5.30.300	**Exceedance of a Soil Intervention Limit for Water Soluble Salts**. [Minn. R. 7001]
	5.30.301	If a soil intervention limit for water-soluble salts is exceeded, submit a corrective action plan that includes detailed information pertaining to: A. How salts in the process wastewater can be reduced; B. The impacts of the exceedance on soils, crop health/vigor, and groundwater quality; and C. Proposed changes in operation to mitigate any problems identified. Submit the corrective action plan as part of the annual report required by the Annual Report part of this chapter. [Minn. R. 7001]
	5.30.302	**Exceedance of a Groundwater Intervention Limit for Chloride**. [Minn. R. 7001]
	5.30.303	If a groundwater intervention limit for chloride is exceeded, submit a corrective action plan that includes detailed information pertaining to:

		A. How salts in the process wastewater can be reduced; B. The impacts of the exceedance on soils, crop health/vigor, and groundwater quality; and C. Proposed changes in operation to mitigate any problems identified. Submit the corrective action plan as part of the annual report required by the Annual Report part of this chapter. [Minn. R. 7001]
	5.30.304	**Annual Report**. [Minn. R. 7001]
	5.30.305	The Permittee shall submit an industrial spray irrigation annual report: Due annually, by the 1st of February, for the previous calendar year. Submit a summary of spray irrigation monitoring results for the previous calendar year to the MPCA. [Minn. R. 7001]
	5.30.306	The Industrial Spray Irrigation Annual Report shall include the following information: A. A description of the wastewater treatment system, including any changes made during the year; B. A description of system operation during the past year, including the following: i. Nutrient and hydraulic loading; ii. Irrigation scheduling and intensity; iii. Crop harvesting and nitrogen removal; and iv. Problems encountered and any remedial actions. C. A description of system maintenance during the past year, including the following: i. Crop information; and ii. Irrigation equipment. D. A summary of monitoring results obtained during the past year, including the following: i. Groundwater monitoring; ii. Soil monitoring; iii. Effluent monitoring; iv. Tile line monitoring; and v. Crop monitoring information. E. An analysis of the information submitted and recommendations for changes, including the following: i. Analysis of the year's operation; and ii. Proposed changes for the coming year's operation. F. Sweet corn silage summary, including the following: i. A list of sites that received sweet corn silage, with quantities; and ii. Inspection reports for those sites that store more than 150 tons of sweet corn silage. [Minn. R. 7001.150, subp. 3(F)]
	5.30.307	**Records**. [Minn. R. 7001]
	5.30.308	Maintain a daily record of the operations and observations of the spray irrigation system at the facility, which shall be available at the facility for review by MPCA staff. At a minimum, maintain daily operational records pertaining to flows, areas of irrigation, inches of wastewater applied, and nitrogen loading. Also perform visual observations to assess ponding, runoff, tile line discharges, and crop conditions. [Minn. R. 7001.150, subp. 3(F)]
	5.30.309	**Definitions**. [Minn. R. 7001]
	5.30.310	"Absorptive capacity" is the ability of the soil to absorb additional water in the event of possible rainfall. It means maintaining a soil water deficit while spray irrigation is occurring. [Minn. R. 7001]
	5.30.311	"Background level" means the concentration of a monitored parameter due to naturally occurring conditions, hydraulically upgradient off-site activities, and/or preconstruction activities. Background may be determined by the average concentration of all monitoring points located hydraulically upgradient of a spray irrigation site. [Minn. R. 7001]
	5.30.312	"Effective rooting depth" means the depth from which the crop extracts most of the water needed for transpiration. This is typically considered the upper half of the maximum rooting depth where most plants obtain 70% of their water. Maximum rooting depth may be affected by multiple factors, including crop maturity; actual rooting depth should be verified in the field.

		[Minn. R. 7001]
	5.30.313	"Groundwater" means water contained below the surface of the earth in the saturated zone including, without limitation, all waters whether under confined, unconfined, or perched conditions, in near-surface unconsolidated sediment or regolith, or in rock formations deeper underground. [Minn. R. 7001]
	5.30.314	"Industrial spray irrigation" means the act of supplying process wastewater for agricultural and horticultural purposes to land, crops, or plants by means of pipes, hoses, sprinklers, drippers, ditches, furrows, or other devices that are connected directly to a source of process wastewater. [Minn. R. 7001]
	5.30.315	"Monitoring well" means an excavation that is drilled, cord, bored, washed, driven, dug, jetted, or otherwise constructed to extract groundwater for physical, chemical, or biological testing. "Monitoring well" includes a groundwater quality sampling well. [Minn. R. 7001]
	5.30.316	"Sodium adsorption ratio (SAR)" means a ratio of specific available cations in wastewater or soil solution that indicates whether the accumulation of sodium in the soil exchange complex will lead to degradation of the soil structure and thus a sharp reduction in infiltration and permeability rates. [Minn. R. 7001]
	5.30.317	"Soil water deficit" is the difference between the amount of water currently held in the soil and the amount of water held at field capacity, expressed in inches and calculated over the effective rooting depth of the crop. [Minn. R. 7001]
	5.30.318	"Spray irrigation site" means the area of land that receives the actual application of wastewater. This area does not include buffer zones, setbacks, or other land where wastewater is not applied. [Minn. R. 7001]
	5.30.319	"Type V certified operator" means a person certified according to Minn. R. ch. 7048 for land application. A Type V facility is any disposal facility that applies on the land any nonhazardous liquid waste from commercial, industrial, or agricultural operations. [Minn. R. 7001]
		Industrial Stormwater Sector U: Food and Kindred Products
	5.31.320	**Authorization**. [Minn. R. 7090]
	5.31.321	This chapter authorizes the Permittee to discharge stormwater associated with industrial activity from industrial activities associated with SIC code(s) 2022 in accordance with the terms and conditions of this chapter. [Minn. R. 7090]
	5.31.322	Sector U industrial facilities have authorization to use designed infiltration systems or industrial stormwater ponds 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]
	5.31.323	**Prohibitions and Limitations on Authorization**. [Minn. R. 7090]
	5.31.324	The Permittee cannot discharge the following under this chapter: Stormwater discharges co-mingled with wastewaters or sources of non-stormwater, including those from industrial plant yards; material handling sites; refuse sites; sugar beet piling sites; sites used for application or disposal of process wastewaters; sites used for storage and maintenance of material handling equipment; sites used for residential wastewater treatment, storage, or disposal; shipping and receiving areas; manufacturing buildings; and storage areas for raw material and intermediate and finished products. This includes areas where industrial activity took place in the past and significant materials remain. Material handling activities include the storage, loading and unloading, transportation, or conveyance of any raw material, intermediate product, finished product, by-product, or waste product. [Minn. R. 7090]
	5.31.325	**Water Quality Standards**. [Minn. R. 7050]
	5.31.326	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]

	5.31.327	The Permittee shall limit and control the use of materials at the facility that may cause exceedances of groundwater 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]
	5.31.328	**Potential Pollutant Sources**. [Minn. R. 7090]
	5.31.329	The Permittee shall describe, in addition to food and kindred products processing-related industrial activities, application and storage of pest control chemicals (e.g. rodenticides, insecticides, fungicides) the Permittee uses on plant grounds. [Minn. R. 7090]
	5.31.330	**Stormwater Control Measures**. [Minn. R. 7090]
	5.31.331	Permittee shall design and implement all stormwater control measures, including best management practices (BMP)s, to reduce or eliminate contact or exposure of pollutants to stormwater, to prevent erosion, control sediment and manage runoff, or remove pollutants from stormwater prior to discharge from the facility. The Stormwater Pollution Prevention Plan (SWPPP) must include the type and objective of the BMP, and a description of how the Permittee shall evaluate each BMP to determine proper function. The Permittee shall implement all non-structural BMPs immediately and all structural BMPs within 12 months of receiving authorization to discharge industrial stormwater under this permit. [Minn. R. 7090]
	5.31.332	**Good Housekeeping**. [Minn. R. 7090]
	5.31.333	The Permittee shall keep exposed areas that may contribute pollutants to stormwater sufficiently clean to reduce or eliminate contaminated stormwater runoff. Typical problem areas include but are not limited to: A. Trash containers, storage areas, loading docks, vehicle fueling, maintenance areas; B. Locations where dust is generated. Identify and properly manage through BMPs all on-site sources of dust to minimize stormwater contamination from the deposition of dust on the areas exposed to precipitation; and C. Locations where vehicle tracking of significant materials occur. The Permittee shall remove and properly dispose of significant materials that have been tracked off-site within one day of discovery. [Minn. R. 7090]
	5.31.334	**Eliminating and Reducing Exposure**. [Minn. R. 7090]
	5.31.335	The Permittee shall evaluate their stormwater control measures of their significant materials to determine if and how they can reduce or eliminate exposed materials. To the extent prudent and feasible, the Permittee shall situate industrial activities and significant materials in areas not exposed to rain, snow, snowmelt, or runoff. [Minn. R. 7090]
	5.31.336	**Salt Storage, Use, and Management at the Facility**. [Minn. R. 7090]
	5.31.337	The Permittees should implement the following BMPs if salt piles are present at the facility: A. Cover salt piles or store the salt within a storm-resistant shelter on an impervious surface; B. Implement practices to reduce exposure resulting from adding or removing material from the salt piles (e.g., sweeping, diversions, containment); and C. Document within the SWPPP the location of any storage piles containing salt stored outside. [Minn. R. 7090]
	5.31.338	The Permittee shall document within the SWPPP how the facility employees and/or hired contractors will minimize runoff from the use of salt or other de-icing/anti-icing materials used on the facility property. [Minn. R. 7090]
	5.31.339	**Erosion Prevention & Sediment Control**. [Minn. R. 7090]
	5.31.340	The Permittee shall identify areas at the facility that, due to topography, land disturbance (e.g. construction, grading, landscaping), or other factors, have potential for soil erosion. In those areas, the Permittee shall implement structural, vegetative, and/or stabilization BMPs to prevent or control on-site erosion and reduce sediment loads in stormwater discharges. [Minn. R. 7090]
	5.31.341	**Chemical Additive Use**. [Minn. R. 7090]
	5.31.342	If the Permittee intends to use polymers, flocculants, or other sedimentation treatment chemicals

		at the facility, the Permittee shall comply with the following minimum requirements: A. The Permittees must use conventional erosion and sediment controls prior to chemical addition to ensure effective treatment; B. Chemicals may only be applied where treated stormwater flows to a sediment control system that allows for filtration or settlement of the floc prior to discharge; C. Chemicals must be selected that are appropriately suited to the types of soils likely to be exposed to stormwater runoff at the facility, and to the expected turbidity, pH, and flow rate of stormwater flowing into the chemical treatment system; and D. Use chemicals in accordance with standard engineering practices, and with dosing specifications and sediment removal design specifications of the manufacturer or chemical supplier. [Minn. R. 7090]
	5.31.343	The SWPPP must contain an inventory of all chemical additives the Permittee uses to treat stormwater including, at a minimum, the following: A. The process for the use of the additive; B. The method of application, application frequency, concentration, and daily average and maximum rates of use; C. A complete product use and instruction label; and D. Material Safety Data Sheet (MSDS), for the additive(s), which must include: i. Aquatic toxicity, human health, and environmental fate information for the additive. The aquatic toxicity information must 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; and ii. The commercial and chemical names and Chemical Abstract Survey (CAS) number for all ingredients in the additive to the extent possible. [Minn. R. 7090]
	5.31.344	**Management of Runoff**. [Minn. R. 7090]
	5.31.345	The SWPPP must describe all permanent stormwater BMPs the Permittee implements at the facility to manage runoff, including, but not limited to, the permanent structural BMPs used to divert stormwater runoff away from fueling, manufacturing, treatment, storage, and disposal areas, and BMPs that treat, infiltrate, reuse, contain, or otherwise reduce pollutants in stormwater discharges. [Minn. R. 7090]
	5.31.346	The Permittee shall install and maintain stormwater outlet protection measures to prevent erosion at all areas where stormwater is discharging from the Permittee's operational control. [Minn. R. 7090]
	5.31.347	Permittees shall prevent the discharge of stormwater to or from areas that have been impacted by the release of a pollutant or contaminant. This includes preventing potential pollutant mobilization through subsurface soils. [Minn. R. 7060.200, Minn. Stat. ch. 115.03]
	5.31.348	Industrial stormwater ponds and infiltration systems must not contribute to a pollutant or contaminant spreading to a greater extent or magnitude in locations where pollutants or contaminants exist in the soil or in the shallow aquifer and are under other regulatory authority. A qualified professional (e.g. professional hydrogeologist, engineer, etc.) shall conduct a site analysis evaluating for extent and magnitude of impacted soil and groundwater and file a report with the SWPPP for any pollutant or contaminant on-site. [Minn. R. 7090, Minn. Stat. ch. 115.03]
	5.31.349	If the Permittee finds that industrial stormwater ponds and infiltration systems are a contributor to contaminant increases or movement, the Permittee shall submit a plan to the MPCA that describes how the Permittee will reduce contaminants, or will redesign, relocate, or eliminate the industrial stormwater ponds and infiltration systems, as needed, to eliminate the contribution to contaminant problems. The Permittee shall submit the plan to the MPCA within one year of the Permittee's authorization to discharge under this permit or within one year of discovery if the Permittee discovers their ponds or infiltration systems are a contributor of contaminant spreading. The Permittee shall implement the plan as soon as the MPCA grants approval. The plan does not reduce or eliminate more stringent requirements that other MPCA regulatory programs may impose. [Minn. R. 7090]

	5.31.350	This permit prohibits Permittees from constructing infiltration systems in areas within 1,000 feet up-gradient or 100 feet down-gradient of active karst features. The Permittee shall not use industrial stormwater ponds and infiltration systems in any high-risk karst area unless a qualified professional (e.g. professional hydrogeologist, engineer, etc.) conducts a geotechnical evaluation to ensure that the industrial stormwater pond or infiltration system does not present a significant risk to groundwater. The Minnesota Stormwater Manual describes standard engineering practices. The Manual can be found on the MPCA's website. If the industrial stormwater ponds and infiltration systems present a risk, the Permittee shall take appropriate measures to minimize or eliminate the risk, such as sealing or removal of the industrial stormwater ponds or infiltration systems. The Permittee shall document the evaluation with the SWPPP. [Minn. R. 7090]
	5.31.351	This permit prohibits the construction of a new infiltration system in the following areas: A. Areas that receive discharges from vehicle fueling and maintenance activity; B. Areas with less than three feet of separation distance from the bottom of the infiltration system to the elevation of the seasonally saturated soils or the top of bedrock; C. Areas of predominately Hydrologic Soil Group D (clay) soils; and D. Areas where soil infiltration rates are field measured at more than 8.3 inches per hour unless the Permittee amends the soil to slow the infiltration rate below 8.3 inches per hour. [Minn. R. 7090]
	5.31.352	The Permittee shall coordinate industrial stormwater ponds and infiltration systems in vulnerable wellhead protection areas with local drinking water authorities and design them to not adversely affect drinking water supplies. The Permittee shall contact the appropriate local drinking water authorities and document coordination efforts with the SWPPP. [Minn. R. 7090]
	5.31.353	This permit prohibits Permittees from constructing infiltration systems within a Drinking Water Supply Management Area (DWSMA) as defined in Minn. R. 4720.5100, subp. 13. If Permittees locate infiltration systems within the following areas, Permittees shall review and apply the requirements found in the "Guidance and recommendations for conducting a higher level of engineering review for stormwater infiltration in DWSMAs and Wellhead Protection Areas" section of the Minnesota Stormwater Manual (www.pca.state.mn.us): A. In an Emergency Response Area (ERA) within a DWSMA classified as having high or very high vulnerability as defined by the Minnesota Department of Health (MDH); or B. In an ERA within a DWSMA classified as moderate vulnerability unless a regulated MS4 Permittee performed or approved a higher level of engineering review sufficient to provide a functioning treatment system and to prevent adverse impacts to groundwater; or C. Outside of an ERA within a DWSMA classified as having high or very high vulnerability, unless a regulated MS4 Permittee performed or approved a higher level of engineering review sufficient to provide a functioning treatment system and to prevent adverse impacts to groundwater. [Minn. R. 7090]
	5.31.354	Permittees with any infiltration system defined as a US EPA Class V injection well shall contact the US EPA Region V to determine the need to register as a Class V injection well. Refer to the US EPA Underground Injection Well Program for the definitions and complete registration process. The Permittee shall document contacts and US EPA response with the SWPPP. [Minn. R. 7090]
	5.31.355	**Facility Inspection Requirements**. [Minn. R. 7090]
	5.31.356	The Permittee shall develop and implement an inspection schedule that includes a minimum of one facility inspection per calendar month. In addition, a total of 2 inspections must occur during runoff events, with at least one inspection occurring during a snowmelt runoff event. Each inspection must include a visual assessment of the runoff to identify any visible sheens or films that indicate the presence of oil or grease in the discharge. If sheens are present in stormwater discharges, implement corrective actions to prevent sheen and document those corrective actions in the SWPPP. [Minn. R. 7090]
	5.31.357	If a facility is inactive and unstaffed, monthly facility inspections are not required as long as there are no industrial materials or activities exposed to stormwater. However, the Permittee shall include the following in the SWPPP: A. BMP implementation that assures adequate protection of all waters receiving industrial

		stormwater discharges from the facility during the months the facility is inactive and unstaffed; and B. Which months the facility was inactive and unstaffed. [Minn. R. 7090]
	5.31.358	All facility inspections must include the following: A. An evaluation of the facility to determine that the SWPPP accurately reflects site conditions. At a minimum, the Permittee shall inspect storage tank areas, waste disposal areas, maintenance areas, loading/unloading areas, and raw material, intermediate product, by-product and final product storage areas; B. An evaluation of all structural and non-structural BMPs to determine effectiveness and proper function; C. An evaluation of the facility to determine whether there are new exposed significant materials or activities at the site since completion of the SWPPP; and D. During an inspection conducted during a runoff event, an evaluation of the stormwater runoff to determine discoloration or if other contaminants are visible in the runoff (e.g. oil & grease). [Minn. R. 7090]
	5.31.359	The Permittee shall document all inspections, and the following information must be stored with the SWPPP: A. Inspection date (i.e. mm/dd/yyyy), time, and weather conditions; B. Inspector name; C. Inspection findings; and D. A description of any necessary corrective actions and a schedule for corrective action completion. [Minn. R. 7090]
	5.31.360	The Permittee shall inspect the following areas where the potential for exposure to stormwater exists: A. Waste management units; B. Vents and stacks associated with industrial activities; C. Spoiled product and broken product container holding areas; D. Animal holding pens; E. Staging areas; and F. Air pollution control equipment. [Minn. R. 7090]
	5.31.361	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]
	5.31.362	**Maintenance Requirements**. [Minn. R. 7090]
	5.31.363	**BMP Maintenance**. [Minn. R. 7090]
	5.31.364	The Permittee shall maintain all stormwater BMPs at the facility, to ensure BMP effectiveness. A. The Permittee shall develop a schedule for preventive maintenance of all stormwater BMPs, and store the schedule with the SWPPP; B. If the Permittee identifies BMPs that are not functioning properly, the Permittee shall replace, maintain, or repair the BMPs within seven calendar days of discovery. If the Permittee cannot complete BMP replacement, maintenance, or repair within seven calendar days, the Permittee shall implement effective backup BMPs within 48 hours of discovery and maintain the backup BMPs until the Permittee restores the effectiveness of the original BMPs. The Permittee shall document the justification for an extended replacement, maintenance, or repair schedule of the failed BMPs, and store it with the SWPPP; and C. The Permittee shall record dates of maintenance and repairs. The Permittee shall store these records with the SWPPP. [Minn. R. 7090]
	5.31.365	Stormwater sedimentation basins and infiltration basins must have maintenance plans that are included within the SWPPP. The plans must include but aren't limited to information detailing how the basin will be maintained and monitored to ensure effectiveness. The plans must include a description of the minimal maintenance frequency that will be implemented. There shall be no outflow from the stormwater sedimentation basin while sediment is being removed from the basin. Permanent erosion control, such as rip rap, splash pads, or gabions shall be installed at the

		outlet(s) to prevent downstream erosion. [Minn. R. 7090]
	5.31.366	**Equipment Preventive Maintenance**. [Minn. R. 7090]
	5.31.367	The Permittee shall develop and implement a preventive maintenance program and store the information with the SWPPP. The program must require regular inspection, maintenance, and repair of industrial equipment and systems. The inspections must identify conditions that could cause breakdowns or failures, which may result in leaks, spills, and other releases (e.g. hydraulic leaks, torn bag-house filters, etc.), and the discharge of pollutants to stormwater. The preventive maintenance program may incorporate, by reference, a separate Operation and Maintenance Manual (or equivalent), as long as it addresses the items the preventive maintenance program requires above. [Minn. R. 7090]
	5.31.368	**Spill Prevention and Response Requirements**. [Minn. R. 7090]
	5.31.369	The Permittee shall develop and implement a spill prevention and response procedure. If the facility already has a separate plan (e.g. Prevention and Response Plan as required by Minn. Stat. ch. 115E, or Spill Prevention Control and Countermeasure (SPCC) Plan as required by Federal Law), that Permittee can incorporate the plan by reference into the SWPPP. In either case, the Permittee shall include a minimum of the following components with the SWPPP or in a separate SPCC document: A. Areas where the storage, transfer, or use of solid or liquid significant materials occurs and, where spills and leaks of the material may potentially contribute pollutants to stormwater discharges; B. Identify areas, monitoring locations and surface waters that may be affected by spills, leaks, or discharges from emergency firefighting activities; C. Report and document spills or leaks (pursuant to Minn. Stat. 115.061) that occur in exposed areas, or that drain to a monitoring location; D. Material handling procedures, storage requirements, and cleanup equipment/materials and procedures necessary to recover as rapidly and thoroughly as possible spills or leaks pursuant to Minn. Stat. 115.061. The Permittee shall make all methods and procedures available to appropriate facility personnel; E. Contact information for individuals and emergency and regulatory agencies that require notification in the event of a spill. When a spill or discharge of a potentially polluting material occurs, the Permittee shall immediately notify the Minnesota Department of Public Safety Duty Officer at 800-422-0798 (toll free) or 651-649-5451 (metro area) per Minn. Stat. 115.061; and F. Any use or release of per-and polyfluoroalkyl (PFAS)-containing foam must immediately be reported to the Minnesota Duty Officer. Permittees must detail in their spill response plan all actions that will be taken to prevent finished Class B foam and foam-containing firefighting runoff water from entering stormwater systems or flowing to surface waters. [Minn. R. 7090]
	5.31.370	The Permittee shall ensure the use of infiltration is not part of a spill containment plan. This includes spill plans required under Federal Spill Prevention Containment and Control (SPCC) requirements or Minn. Stat. ch. 115E "The Spill Bill.". [Minn. R. 7090]
	5.31.371	The Permittee shall ensure the use of a pond is not part of a spill containment plan, including spill plans required under Federal SPCC requirements or Minn. Stat. ch. 115E, unless appropriate controls are in place to contain the spill. If the Permittee uses a pond as part of a spill containment plan, the pond must have a chemically compatible liner for chemical spills that the Permittee expects to enter the pond and must have outlet controls to contain a spill. A plan must also be in place to clean up a spill so that the pond will not continue to be a source of spilled pollutants. The Permittee shall document evaluations with the SWPPP. [Minn. R. 7090]
	5.31.372	**Mercury Minimization Plan**. [Minn. R. 7090]
	5.31.373	The Permittee shall evaluate the facility to determine if stormwater has the potential to come into contact with any mercury sources. If mercury sources are exposed to stormwater, the Permittee shall develop a Mercury Minimization Plan that describes how the Permittee will manage mercury sources at the site to eliminate exposure to precipitation and stormwater runoff. To the extent feasible, the Permittee shall remove and manage mercury sources and devices from stormwater

		exposure in accordance with Minn. R. ch. 7045, Hazardous Waste, and any additional applicable state and federal rules. [Minn. R. 7090]
	5.31.374	**Employee Training Program**. [Minn. R. 7090]
	5.31.375	The Permittee shall develop and implement a training program for employees. Training must cover stormwater control measures, components and goals of the SWPPP, monitoring procedures, and other applicable requirements of the permit. The program must include a training schedule that includes training at least annually. Training must correlate with the job function of the employee. The Permittee shall ensure that employees identified below in this Employee Training Program section are familiar with facility specific stormwater plans, requirements, and BMPs at the facility. The Permittee shall ensure that individuals receive training prior to assuming responsibilities listed in this Employee Training Program section. [Minn. R. 7090]
	5.31.376	At a minimum, the Permittee shall ensure that the following individuals receive training: A. Employee(s) responsible for writing, revising, and implementing the SWPPP; B. Employee(s) responsible for installing, inspecting, maintaining, and repairing BMPs; C. Employee(s) whose work involves the regulated industrial activity, including but not limited to: i. Loading/unloading areas; ii. Processing areas; iii. Waste and fluid management areas; iv. Fueling areas; and v. Vehicle maintenance areas; D. Employee(s) who conduct stormwater discharge monitoring. E. Employee(s) responsible for conducting winter maintenance activities. [Minn. R. 7090]
	5.31.377	The Permittee shall maintain training records including: A. The trainer's name and trainer's organization (internal or external); B. The names (printed first and last) of the employee(s) and date(s) the employee(s) received training; and C. A detailed description of the training provided to each employee. [Minn. R. 7090]
	5.31.378	The Permittee shall maintain the training records either in the SWPPP, or in a separate record stored with the SWPPP, for at least three years. [Minn. R. 7090]
	5.31.379	The Permittee shall include the following activities as appropriate: A. Used oil and spent solvent management; B. Segregation of organic materials, raw materials, and products from contact with stormwater and precipitation; and C. Pest control. [Minn. R. 7090]
	5.31.380	**Stormwater Pollution Prevention Plan**. [Minn. R. 7090]
	5.31.381	A. The Permittee shall develop and implement a SWPPP to address the specific conditions at the facility. B. A Permittee with authorization under the previous version of this permit shall modify the SWPPP to comply with the requirements of this updated permit. C. The SWPPP must identify the individuals responsible for managing, implementing, maintaining, modifying, and ensuring compliance with the facility's SWPPP. D. The Permittee shall incorporate into the SWPPP, a section specific to any mobile industrial activities the Permittee conducts away from the facility. The Permittee shall keep a copy of this section of the SWPPP at the location where the mobile industrial activity occurs. E. The SWPPP must list all personnel receiving training to conduct facility inspections. F. The SWPPP must include records of all details relating to the monthly visual inspections in accordance with the Stormwater Control Measures section of this chapter. G. The SWPPP must include all information pertaining to maintenance in accordance with the Stormwater Control Measures section of this chapter. H. The SWPPP must contain, or the Permittee shall keep as a separate document, any documentation the Spill Prevention and Response Requirements of the Stormwater Control Measures section of this chapter requires.

		I. The SWPPP must contain a Mercury Minimization Plan if the Permittee discovers mercury sources as a result of compliance with the Stormwater Control Measures section of this chapter. J. The SWPPP must include all information regarding the Employee Training Program requirements from the Stormwater Control Measures section of this chapter. K. The SWPPP must describe all stormwater BMPs the Permittee implements at the facility to manage runoff, including, but not limited to: i. The permanent structural BMPs used to divert stormwater runoff away from fueling, manufacturing, treatment, storage, and disposal areas; and ii. BMPs that treat, infiltrate, reuse, contain, or otherwise reduce pollutants in stormwater discharges. L. The SWPPP must include the date it was implemented and the date it was last modified. M. The SWPPP must include any stormwater contamination and/or runoff mitigation measures proposed to be part of the final project in any environmental review. [Minn. R. 7090]
	5.31.382	**Facility Description**. [Minn. R. 7090]
	5.31.383	The SWPPP must include: A. A narrative description of the industrial activities the Permittee conducts at the facility; B. The total size of the facility property in acres; and C. A calculation of the facility acreage that has industrial activity and/or significant materials in contact with stormwater. The calculation excludes acreage that does not discharge industrial stormwater, such as natural and landscaped areas, employee parking lots, and office buildings, etc. [Minn. R. 7090]
	5.31.384	**Facility Map**. [Minn. R. 7090]
	5.31.385	The SWPPP must include a map. The facility map(s) must be a United States Geological Survey map or equivalent and must depict the following: A. Location of the facility in relation to surface waters receiving industrial stormwater discharges from the facility. Include the name of the surface water on the map. If the name is not known, indicate that on the map; B. Location of all impervious surfaces within the facility property boundaries; C. Arrows that indicate directions of stormwater flow; D. Location of all activities and materials identified in the Facility Assessment of Activities and Materials section below; E. Location of all structural BMPs; F. Location of all impaired waters within one mile of any monitoring location. The Permittee shall include the name of the impaired water and the impairment (e.g. impaired for biota, turbidity, nutrients, etc.); G. Location and name of any designated, special or restricted waters described in the Additional Requirements for Discharges to Special and Impaired Waters section of this chapter that is within one mile of a facility's monitoring location; H. Location of all storm sewer inlets; I. Location of all loading dock drains, including those that connect to a storm sewer; and J. Location of each benchmark monitoring location. Assign each benchmark monitoring location a unique identifying number that the Permittee uses when submitting monitoring data to the MPCA. Clearly label each benchmark monitoring location from which a discharge flows to, and is within one mile of, an impaired water and/or special water. [Minn. R. 7090]
	5.31.386	In addition, the Permittee shall also comply with the following: A. Facility Map. The Permittee shall identify the locations of the following activities if they are exposed to stormwater: i. Vents and stacks from cooking, drying, and similar operations; ii. Dry product vacuum transfer lines; iii. Animal holding pens; and iv. Spoiled product and broken product container storage areas. [Minn. R. 7090]
	5.31.387	**Facility Assessment of Activities and Materials**. [Minn. R. 7090]
	5.31.388	**Assessment of Activities**. [Minn. R. 7090]

	5.31.389	The SWPPP must include an assessment and inventory of all activities that can potentially be sources of pollutants to industrial stormwater discharges. Examples of these activities include, but are not limited to: A. Fueling; B. Vehicle and equipment maintenance; C. Loading and unloading of dry bulk materials or liquids; D. Liquid storage tanks; E. Outdoor manufacturing and processing; F. Outdoor storage of significant materials; G. Access roads, rail cars, and tracks; H. Waste treatment, storage, or disposal including waste ponds, dumpsters, and solid waste storage or management; I. Dust or particulate-generating processes including dust collection devices and vents; and J. Contamination of rooftops by pollution control devices. [Minn. R. 7090]
	5.31.390	**Assessment of Materials and Associated Pollutants**. [Minn. R. 7090]
	5.31.391	The SWPPP must include documentation of an assessment and inventory of all facility materials that can potentially be a source of pollutants to industrial stormwater discharges from the following: A. Raw materials; B. Intermediate products; C. By-products; D. Final products; and E. Waste products. The assessment must also include pollutant constituents, such as crankcase oil, zinc, sulfuric acid, cleaning solvents, etc. associated with the sources listed above. [Minn. R. 7090]
	5.31.392	**BMP Documentation**. [Minn. R. 7090]
	5.31.393	The Permittee shall document in the SWPPP all BMPs the Permittee uses to comply with each stormwater control measure required in the Stormwater Control Measures section of this chapter. The Permittee shall design and implement BMPs to address the potential pollutants associated with the activities and materials that the Permittee identifies in the Facility Assessment of Activities and Materials section above. The documentation must include a list of all structural and non-structural BMPs the Permittee designs and implements at the facility. [Minn. R. 7090]
	5.31.394	**SWPPP Modification Requirements**. [Minn. R. 7090]
	5.31.395	The Permittee shall review the SWPPP at least annually. The Permittee shall modify the SWPPP within 30 days if: A. There is construction or a change in design, operation, or maintenance at the facility that affects stormwater management or compliance with this permit; B. The Permittee identifies a monitoring location that is within one mile of an impaired water, including newly listed impaired waters; C. A routine inspection, compliance evaluation, or visual inspection identifies deficiencies in the SWPPP and/or BMPs; D. Additional stormwater control measures and BMPs are necessary to meet applicable water quality standards or to address exceedances of benchmark values; E. There is an unauthorized discharge from the facility. If the SWPPP modification is because of a release or unauthorized discharge, update the SWPPP to include a description and date of the release, the circumstances leading to the release, actions taken in response to the release, and measures to prevent the recurrence of such releases. Unauthorized releases and discharges are subject to the reporting requirements in the Stormwater Control Measures section of this chapter; or F. There is a change in personnel responsible for managing the SWPPP, implementing BMPs, conducting monthly visual inspections, or collecting stormwater samples at the facility. [Minn. R. 7090]

	5.31.396	**SWPPP Implementation and Availability Requirements**. [Minn. R. 7090]
	5.31.397	The SWPPP shall be developed and implemented within 180 days after permit issuance and shall be available to the MPCA upon request. [Minn. R. 7090]
	5.31.398	**Benchmark Monitoring Requirements**. [Minn. R. 7090]
	5.31.399	The Permittee shall monitor each benchmark monitoring location for all benchmark parameters specified for the facility's SIC code at the frequency outlined in the Limits and Monitoring section of this permit specified for the Surface Discharge Stormwater, Non-Specific Runoff Station(s). [Minn. R. 7090]
	5.31.400	Specified parameters shall be sampled on a calendar quarter basis beginning the first full calendar quarter following permit issuance. Each quarterly sample may be collected at any time during the calendar quarter. Quarterly sample results shall be averaged annually and the annual quarterly average shall be reported on the December electronic Discharge Monitoring Report (eDMR). [Minn. R. 7090]
	5.31.401	**Monitoring Procedures and Sample Collection Methods**. [Minn. R. 7090]
	5.31.402	The Permittee shall maintain written records of all calibrations and maintenance within the SWPPP. [40 CFR 136.3]
	5.31.403	**Where to Collect a Sample; Number of Samples**. [Minn. R. 7090]
	5.31.404	Permittees shall collect one sample per quarter from each benchmark monitoring location and analyze each sample for the sector-specific benchmark parameters. The Permittee shall collect samples from each stormwater benchmark monitoring location. The benchmark monitoring location(s) selected by the Permittee shall be in a location that: A. Is after the final down-gradient BMP from the source of 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 Limits and Monitoring section of this permit, and that receives discharge from an area of industrial activities, processes, and significant materials exposed to stormwater. [Minn. R. 7090]
	5.31.405	Sampling intervals correspond to calendar quarters. Sampling requirements begin the first full calendar quarter following the permit issuance date. For example, if the Permittee obtains coverage on June 29, monitoring starts in the quarter beginning July 1. If the Permittee obtains coverage on April 1, monitoring starts in the quarter beginning July 1. [Minn. R. 7090]
	5.31.406	**When to Collect a Sample**. [Minn. R. 7090]
	5.31.407	Permittees shall collect samples from a measurable runoff event (rain or snowmelt) at the benchmark monitoring location(s), provided there is a gap of three days between measurable runoff events. To the extent feasible, during a measurable runoff event, Permittees shall collect samples each calendar quarter. The Permittee shall attempt to collect a stormwater discharge sample within the first 30 minutes after the discharge reaches the benchmark monitoring location. If unable to collect a sample within 30 minutes the Permittee shall document an explanation as to why they could not collect the sample within 30 minutes on the eDMR. [Minn. R. 7090]
	5.31.408	**How to Collect a Sample**. [Minn. R. 7090]
	5.31.409	The Permittee shall take samples either manually by grab method, automated sampling, sheet flow collection, or creating a collection point that concentrates runoff. If a Permittee uses automated sampling, the device must either collect one sample during the first 30 minutes of discharge or must collect samples throughout the discharge period, and then combine them as a composite sample. [Minn. R. 7090]
	5.31.410	**Unable to Collect a Sample**. [Minn. R. 7090]
	5.31.411	Permittees shall submit an eDMR to the MPCA for every calendar year. In the absence of a measurable runoff event during a quarter due to weather conditions and/or site soil

		characteristics, the Permittee shall include a comment on the eDMR, providing an explanation as to why a sample was not able to be collected, and submit the report to the MPCA. [Minn. R. 7090]
	5.31.412	**Compare four quarterly samples to benchmark value**. [Minn. R. 7090]
	5.31.413	After collecting and analyzing four separate quarterly samples, one per calendar quarter for each benchmark monitoring location, Permittees shall average the most recent four consecutive values for each benchmark parameter and compare it against the benchmark value. If the Permittee collects more than one sample per calendar quarter then, the results must be averaged within the quarter. The Permittee shall compare the average of the quarterly monitoring results with the applicable benchmark value for its applicable sectors and refer to the Benchmark Values Met and/or Benchmark Values Exceeded sections below to determine any necessary further actions. [Minn. R. 7090]
	5.31.414	For averaging purposes, the Permittee shall use a value of zero for any sample result the laboratory reports that is less than the method detection limit. For results the laboratory reports as falling between the method detection level and the quantitation limit (i.e. a confirmed detection, but below the level that can be reliably quantified), the Permittee shall use a value halfway between zero and the quantitation limit. [Minn. R. 7090]
	5.31.415	**Benchmark Values Exceeded**. [Minn. R. 7090]
	5.31.416	An exceedance of an applicable benchmark value 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 benchmark value exceedances is a violation of the permit. [Minn. R. 7090]
	5.31.417	The Permittee shall complete the following steps if benchmark monitoring intervention limits are exceeded: A. Collect at least one sample in the following quarter at the benchmark monitoring location(s) where exceedance(s) have occurred. Calculate the average of the four most recent quarters and compare this new average with the applicable benchmark value(s); B. Modify the SWPPP and document all corrective actions necessary to meet the applicable benchmark values, including improvements to BMPs; C. Initiate modifications and upgrade the SWPPP and BMPs immediately, but no later than 14 days beyond discovery of a benchmark value exceedance; and D. Install a new or repair an existing control measure to make it operational as soon as possible. i. If the Permittee is unable to complete the installation or repair within 14 calendar days, the Permittee shall document why it is infeasible within the 14-day timeframe. ii. Identify a schedule for completing the work, and document as soon as practicable after the 14-day timeframe but no longer than 45 days after discovery. Include all documentation within or as an attachment to the SWPPP. [Minn. R. 7090]
	5.31.418	If any single sampling event results in a parameter meeting or exceeding the applicable benchmark value by four times or greater, it is considered an exceedance of the benchmark value and the steps required after a benchmark value exceedance are required. [Minn. R. 7090]
	5.31.419	**Records**. [Minn. R. 7090]
	5.31.420	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]
	5.31.421	**Reporting**. [Minn. R. 7090]
	5.31.422	The Permittee shall submit a Stormwater Annual Report: Due annually, by the 31st of March of each year following permit issuance. The Permittee shall submit the Annual Report through the

		MPCA e-Services online portal. [Minn. R. 7090]
	5.31.423	The Annual Report must cover those portions of the previous calendar year the Permittee had authorization to discharge industrial stormwater. The Annual Report must include, at a minimum, the following information: A. A summary of inspection dates, findings, and any BMP maintenance the Permittee conducted during the course of the reporting year; B. The results of any inspection requirements involving oil and grease, if applicable; C. A confirmation that the SWPPP accurately reflects facility conditions; D. A confirmation that newly-exposed significant materials (if any) are identified and that the Permittee modifies the SWPPP to address them; E. A confirmation that the Permittee conducts a review of impaired waters and special waters; F. A confirmation that the Permittee modified the SWPPP to address applicable permit requirements of the Stormwater Pollution Prevention Plan and Benchmark Monitoring Requirements sections of this permit, if necessary; G. A confirmation that the Permittee meets the review requirements of US EPA-approved TMDLs that may apply to the facility; H. A description of any SWPPP modification the Permittee makes in accordance with the Stormwater Pollution Prevention Plan section of this permit; I. A list of all spills and leaks (as pursuant to Minn. Stat. 115.061) occurring at the facility during the reporting year; and J. If applicable, a summary of all facility mobile industrial activities. At a minimum, the summary must include: i. A description including SIC code and/or narrative activity; ii. Locations of the mobile industrial activity including latitude and longitude coordinates; and iii. Length of time of the mobile industrial activity occurrence(s). [Minn. R. 7090]
	5.31.424	**Notification**. [Minn. R. 7090]
	5.31.425	If the Permittee has an industrial stormwater discharge and directly discharges into a regulated Municipal Separate Storm Sewer System (MS4), the Permittee shall notify the MS4 operator that they are discharging industrial stormwater into their storm sewer system. [Minn. R. 7090]
	5.31.426	**Definitions**. [Minn. R. 7090]
	5.31.427	"Active" means that significant materials and/or industrial activities, whether temporary or permanent, are present at the facility, regardless of if staff is present at the facility. [Minn. R. 7090]
	5.31.428	"Benchmark monitoring location" for purposes of the industrial stormwater permit, 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. [Minn. R. 7090]
	5.31.429	"Benchmark Value" means the average of four consecutive quarterly sampling results. [Minn. R. 7090]
	5.31.430	"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, and other management practices, and includes treatment requirements, operating procedures, and practices to control plant site runoff, spillage or leaks, sludge, or waste disposal or drainage from raw material storage. [Minn. Stat. ch. 115.03]
	5.31.431	"Class B Foam" means a stable combination of per- and poly-fluorinated surfactants (PFAS) and foaming agents used to extinguish flammable liquids, such as burning oil, gasoline, and jet fuel, and is most commonly referred to as Aqueous Film Forming Foam (AFFF). [Minn. R. 7090]
	5.31.432	"Commissioner" means the Commissioner of the Minnesota Pollution Control Agency or the Commissioner's designee. [Minn. Stat. ch. 116.36, subp. 3]
	5.31.433	"Effluent Limit" means a restriction established by rule or permit condition on quantities, discharge rates, and concentrations of pollutants that are discharged from point sources into waters of the state. [Minn. R. 7001]
	5.31.434	"Effluent monitoring location" for the purposes of this permit means the location(s) within the

		boundary of the facility where the Permittee will collect stormwater samples for the purpose of compliance with the Limits and Monitoring section of this permit. [Minn. R. 7090]
	5.31.435	"Facility" for the purposes of this section, means land that shares a common border and that has an industrial stormwater discharge as defined in 40 C.F.R. 122.26(b)(14) with the discharge having a common owner or operator. [40 CFR 122.26(b)(14)]
	5.31.436	"Impaired water" means waters identified as impaired by the MPCA, and approved by the US EPA, pursuant to section 303(d) of the Clean Water Act. [CWA Sect. 303]
	5.31.437	"Impervious surface" means a constructed hard surface that either prevents or retards the entry of water into the soil and causes water to run off the surface in greater quantities and at an increased rate of flow than prior to development. Examples include rooftops, sidewalks, patios, driveways, parking lots, storage areas, and concrete, asphalt, or gravel roads. [Minn. R. 7090]
	5.31.438	"Inactive" means a facility or portion of a facility at which significant materials are not present and at which no industrial activities are conducted and is not an active facility, and where the inactive portion is not covered by any active permit issued by the applicable State or Federal agency. An inactive facility has no staff, no significant materials, and no industrial activities exposed to stormwater. [Minn. R. 7090]
	5.31.439	"Industrial activity" means the eleven categories of industrial activity which are directly related to manufacturing, processing, or raw materials storage areas at an industrial plant, as defined in 40 C.F.R. 122.26(b)(14)(i)-(xi). [Minn. R. 7090.0080, subp. 6]
	5.31.440	"Industrial stormwater pond" means constructed detention or retention facilities for the treatment of stormwater runoff under the requirements of this permit. This includes permanent ponds, dry ponds, flow equalization ponds (followed by other BMPs), and constructed wetlands. However, natural wetlands (including types 1-8) and other natural surface water bodies are not industrial stormwater ponds, parts of ponds or pond systems, and cannot be used as BMPs for stormwater treatment unless mitigated in accordance with applicable state rules. [Minn. R. 7090]
	5.31.441	"Infiltration system" means a designed and constructed Best Management Practice to which industrial stormwater runoff is diverted, collected, or conveyed for the purpose of infiltration. An infiltration system does not include the parts of the system that diverts, collects, or conveys industrial stormwater. Incidental infiltration from conveyances such as swales or ditches, including those with erosion prevention devices such as vegetation, silt fence, or fiber bails, is not an infiltration system. However, swales, ditches, or similar devices constructed with stop logs, ditch excavation for storage or other retention devices, which are for the purpose of increased infiltration, are infiltration systems. Wetlands (including types 1 through 8) and other natural surface water bodies are not infiltration systems or parts of infiltration system systems, and cannot be used as infiltration systems, unless mitigated in accordance with applicable state rules. [Minn. R. 7090]
	5.31.442	"Measurable Runoff Event" means precipitation, snow melt, or other event that causes stormwater to flow at a monitoring location. [Minn. R. 7090]
	5.31.443	"Monitoring location" means any Monitoring Location (including those locations that are part of a representative location) and/or any Effluent Monitoring Location. [Minn. R. 7090]
	5.31.444	"Municipal separate storm sewer system or MS4" means a conveyance or system of conveyances including roads with drainage systems, municipal streets, catch basins, curbs, gutters, ditches, man- made channels, or storm drains: A. Owned or operated by a state, city, town, county, district, association, or other public body, created by or pursuant to state law, having jurisdiction over disposal of sewage, industrial wastes, storm water, or other wastes, including special districts under state law such as a sewer district, flood control district, or drainage district or similar entity, or an Indian tribe or an authorized Indian tribe organization, or a designated and approved management agency under section 208 of the federal Clean Water Act, United States Code, title 33, section 1288, that discharges into waters of the state; B. Designed or used for collecting or conveying storm water; C. That is not a combined sewer; and D. That is not part of a publicly owned treatment works as defined in Code of Federal Regulations,

		title 40, section 122.2. Municipal separate storm sewer systems do not include separate storm sewers in very discrete areas, such as individual buildings. [Minn. R. 7090.0800, subp. 8]
	5.31.445	"Narrative activity" means those industrial activities as defined by 40 C.F.R. 122.26(b)(14)(i), (iv), (v), (vii), and (ix). [40 CFR 122]
	5.31.446	"No exposure" means that all industrial materials or activities are protected by a storm-resistant shelter to prevent exposure to rain, snow, snowmelt, or runoff. Industrial materials or activities include, but are not limited to, material handling equipment or activities, industrial machinery, raw materials, intermediate products, by-products, final products, or waste products. Material handling activities include the storage, loading and unloading, transportation, or conveyance of any raw material, intermediate product, final product, or waste product. [Minn. R. 7090.0080, subp. 9]
	5.31.447	"Non-stormwater discharge" means any discharge not comprised entirely of stormwater. [Minn. R. 7090]
	5.31.448	"One mile" means a direct horizontal distance of one mile measured from any monitoring location to the Ordinary High-Water Level (Minn. Stat. 103G.005, subd. 14) where the stormwater discharge associated with industrial activity enters either an impaired water, or any water described in the Additional Requirements for Discharges to Special and Impaired Waters section. [Minn. R. 7090]
	5.31.449	"Operator" is the person responsible for the overall operation of an industrial facility under Minn. R. 7090.3000. [Minn. R. 7090]
	5.31.450	"Owner" is the person who owns an industrial facility or part of an industrial facility under Minn. R. 7090.3000. [Minn. R. 7090]
	5.31.451	"Permittee" means a person or persons, firm, or governmental agency or other institution that signs the permit application submitted to the MPCA and is responsible for compliance with the terms and conditions of this permit. [Minn. R. 7090]
	5.31.452	"Person" means any human being, any municipality or other governmental or political subdivision or public agency, any public or private corporation, any partnership, firm, association, or other organization, any receiver, trustee, assignee, agent, or other legal representative of any of the foregoing, or any other legal entity, but does not include the MPCA. [Minn. Stat. ch. 116.06, subp. 17]
	5.31.453	"Primary standard industrial classification (SIC) code" is the SIC code associated with the industrial activity that generates the greatest revenue. If revenue data is not available, the owner/operator shall base the determination on the number of employees engaged in the industrial activity. If it is not possible to determine the primary SIC code using either of these two methods, the owner/operator shall base the determination on the SIC code with the greatest production. The industrial activity that generates the greatest revenue, employs the most personnel, or has the greatest production, is the industrial activity assigned the primary SIC code. [Minn. R. 7090]
	5.31.454	"Saturated soil" means the highest seasonal elevation in the soil that is in a reduced chemical state because of soil voids being filled with water. Saturated soil is evidenced by the presence of redoximorphic features or other information upon determination by a Minnesota-licensed Professional Geoscientist or Engineer. [Minn. R. 7090]
	5.31.455	"Significant materials" includes, but is not limited to: raw materials; fuels; materials such as solvents, detergents, and plastic pellets; finished materials such as metallic products; raw materials used in food processing or production; hazardous substances designated under Section 101(14) of the Comprehensive Environmental Response, Compensation, and Liability Act (CERCLA); any chemical the facility is required to report pursuant to Section 313 of the Emergency Planning and Community Right-to-Know Act (EPCRA); fertilizers; pesticides; and waste products such as ashes, slag, and sludge that have the potential to be released with stormwater discharges. When determining whether a material is significant, the physical and chemical characteristics of the material should be considered (e.g. the material's solubility, transportability, and toxicity characteristics) to determine the material's pollution potential. [40 CFR 122.26(b)(12)]

	5.31.456	"Storm-resistant shelter" means completely roofed and walled buildings or structures, as well as structures with only a top cover but no side coverings, and the material under the structure is not subjected to any run-on and subsequent runoff of stormwater. [Minn. R. 7090]
	5.31.457	"Stormwater" means stormwater runoff, snowmelt runoff, and surface runoff and drainage. [Minn. R. 7090.0080 , subp. 12]
	5.31.458	"Stormwater discharge associated with industrial activity" or "industrial stormwater discharge" means the discharge from any conveyance that is used for collecting and conveying stormwater and that is directly related to manufacturing, processing, or raw materials storage areas at an industrial plant. The term does not include discharges from facilities or activities excluded from the NPDES program under 40 C.F.R. pt. 122. For the categories of industries identified in this section, the term includes, but is not limited to, stormwater discharges from: A. Industrial plant yards; B. Immediate access roads and rail lines used or traveled by carriers of raw materials, manufactured products, waste material, or by-products used or created by the facility; C. Material handling sites; D. Refuse sites; E. Sites used for the application or disposal of process wastewater (as defined at part 401 of this chapter); F. Sites used for the storage and maintenance of material handling equipment; G. Sites used for residual treatment, storage, or disposal; H. Shipping and receiving areas; I. Manufacturing buildings; J. Storage areas (including tank farms) for raw materials, and intermediate and final products; and K. Areas where industrial activity has taken place in the past and significant materials remain and are exposed to stormwater. For the purposes of this paragraph, material handling activities include storage, loading and unloading, transportation, or conveyance of any raw material, intermediate product, final product, by- product or waste product. The term excludes areas located on plant lands separate from the plant's industrial activities, such as office buildings and accompanying parking lots as long as the drainage from the excluded areas is not mixed with stormwater drained from the above-described areas. Industrial facilities include those that are federally, State, or municipally owned or operated that meet the description of the facilities listed in 40 C.F.R. 122.26 (b)(14)(i) through (xi), except (x). The term also includes those facilities designated under the provisions of 40 C.F.R. 122.26 (a)(1)(v). [40 CFR 122, Minn. R. 7090]
	5.31.459	"Stormwater pollution prevention plan" or "SWPPP" means a plan for stormwater discharge that includes facility-specific activities and actions to, first, identify sources of pollution or contamination at the facility, and second, select and implement BMPs to reduce or eliminate contact of stormwater with significant materials that may result in polluted runoff from the facility. [40 CFR 122.26]
	5.31.460	"Control Measure or Stormwater Control Measure" means any stormwater control or other method (including numeric or narrative effluent limitations) used to prevent or reduce the discharge of pollutants to waters of the United States. [Minn. R. 7090]
	5.31.461	"Surface water or waters" means all streams, lakes, ponds, marshes, wetlands, reservoirs, springs, rivers, drainage systems, waterways, watercourses, and irrigation systems whether natural or artificial, public, or private. [Minn. R. 7090]
	5.31.462	"Total maximum daily load" or "TMDL" means the sum of the individual wasteload allocations for point sources and load allocations for nonpoint sources and natural background, as more fully defined in Code of Federal Regulations, title 40, section 130.2, paragraph (i). A TMDL sets and allocates the maximum amount of a pollutant that may be introduced into a water of the state and still assure attainment and maintenance of water quality standards. [Minn. R. 7052.0010, subp. 42]
	5.31.463	"Waters of the state" means all streams, lakes, ponds, marshes, watercourses, waterways, wells, springs, reservoirs, aquifers, irrigation systems, drainage systems and all other bodies or

		accumulations of water, surface or underground, natural or artificial, public or private, which are contained within, flow through, or border upon the state or any portion thereof. [Minn. Stat. ch. 115.01, subp. 22]
	5.31.464	"Water quality standards" means those provisions contained in Minn. R. 7050 and 7052. [Minn. R. 7050, Minn. R. 7052]
	5.31.465	"Wetlands" are those areas that are inundated or saturated by surface water or groundwater at a frequency and duration sufficient to support, and that under normal circumstances do support, a prevalence of vegetation typically adapted for life in saturated soil conditions. Wetlands generally include swamps, marshes, bogs, and similar areas. Constructed wetlands designed for wastewater treatment are not waters of the state. Wetlands shall have the following attributes: A. A predominance of hydric soils; B. Inundated or saturated by surface water or groundwater at a frequency and duration sufficient to support a prevalence of hydrophytic vegetation typically adapted for life in a saturated soil condition; and C. Under normal circumstances support a prevalence of such vegetation. [Minn. R. 7050.0186, subp. 1B]
		Total Residual Oxidants
	5.32.466	**General Requirements**. [Minn. R. 7001]
	5.32.467	Total Residual Chlorine (TRC) shall be analyzed immediately. This means within 15 minutes or less of sample collection. [40 CFR 136.6]
	5.32.468	A Reporting Limit (RL) shall be established for this parameter. This must be based on the analysis of a standard at or below the RL. [Minn. R. 7001]
	5.32.469	A RL of 0.04 mg/L is considered in compliance with the 0.038 mg/L limit. [Minn. R. 7001]
	5.32.470	The RL shall be verified against a known standard at least monthly during the monitoring period. For successful verification, the standard needs to be recovered at +/- 40% of the actual value. [Minn. R. 7001]
	5.32.471	Monitoring results below the RL should be reported as "<" the RL. If the RL is 0.01 mg/L, based on the analysis of a standard at or below that level, and a parameter is not detected at a value of 0.01 mg/L or greater, the concentration shall be reported as "<0.01 mg/L." The symbol "<" means "less than.". [Minn. R. 7001]
	5.32.472	**Compliance with a Daily Maximum Limit**. [Minn. R. 7001]
	5.32.473	Compliance with a Daily Maximum limit for Total Residual Chlorine (TRC) concentration limits can be evaluated using one of the two following methods. [State Definitions]
	5.32.474	Single Sample Value - A single sample taken in a 24-hour period with a value of 0.038 mg/L or less is considered in compliance; or. [Minn. R. 7001]
	5.32.475	Multiple Sample Value - If the single value sample is greater than 0.038 mg/L, an average can be calculated using two to twelve samples analyzed in a 24-hour period. To calculate using multiple samples: A. The second sample shall be taken two hours after the initial sample; and B. Subsequent samples shall be taken at one-hour intervals not to exceed twelve samples in a 24-hour period The average value of the multiple samples must be 0.038 mg/L or less to be considered in compliance. Values below the RL for TRC are assumed to be zero for averaging purposes only. [Minn. R. 7001]
		Total Facility Requirements (NPDES/SDS)
	5.33.476	**Definitions.** Refer to the Permit User's Manual found on the MPCA's website at https://www.pca.state.mn.us/sites/default/files/wq-wwtp7-09.pdf for standard definitions. [Minn. R. 7001]

	5.33.477	**Incorporation by Reference**. This permit incorporates the following applicable federal and state laws as enforceable parts of this permit: 40 CFR pts. 122.41, 122.42, 136, 403 and 503; Minn. R. chs. 7001, 7041, 7045, 7050, 7052, 7053, 7060, and 7080; and Minn. Stat. chs. 115 and 116. [Minn. R. 7001]
	5.33.478	**Permittee Responsibility.** The Permittee shall perform the actions or conduct the activities authorized by this permit in compliance with the conditions of the permit and, if required, in accordance with the plans and specifications approved by the MPCA. [Minn. R. 7001.0150, subp. 3 (E)]
	5.33.479	**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 40 CFR pts. 400 to 460; Minn. R. chs. 7050, 7052, 7053 and any other applicable MPCA rules. [Minn. R. 7001.1090, subp. 1(A)]
	5.33.480	**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, excessive suspended solids, material discoloration, obnoxious odors, gas ebullition, deleterious sludge deposits, undesirable slimes or fungus growths, aquatic habitat degradation, excessive growths of aquatic plants, acutely toxic conditions to aquatic life, or other adverse impact on the receiving water. The discharge shall not cause a material discoloration in the receiving water. Any discharge that results in a discernible change to the existing/ambient color of the receiving water constitutes material discoloration. [Minn. R. 7050.0210, subpt. 2]
	5.33.481	**Property Rights.** This permit does not convey a property right or an exclusive privilege. [Minn. R. 7001.0150, subp. 3(C)]
	5.33.482	**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)]
	5.33.483	The MPCA's issuance of this permit does not obligate the MPCA to enforce local laws, rules, or plans beyond what Minnesota statutes authorize. [Minn. R. 7001.0150, subp. 3(D)]
	5.33.484	**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)]
	5.33.485	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)]
	5.33.486	**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]
	5.33.487	**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]
	5.33.488	**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 Permittee shall allow the MPCA, or an authorized employee or agent of the MPCA, 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, monitoring, and other inspection equipment , pertaining to the construction, modification, or operation of the facility covered by the permit or pertaining to the activities covered by the

		permit. [Minn. R. 7001.0150, subp. 3(I)]
	5.33.489	**Control Users.** The Permittee shall regulate the users of its facility 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)]
	5.33.490	**Sampling.** [Minn. R. 7001]
	5.33.491	**Representative Sampling.** Sampling and measurements required by the permit shall be conducted as specified in the permit and shall be representative of the discharge or monitored activities. [Minn. R. 7001.0150, subp. 2(B)]
	5.33.492	**Additional Sampling.** If the Permittee monitors more frequently than required, they shall report the results and the frequency of monitoring on their eDMR for that reporting period. [Minn. R. 7001.1090, subp. 1(E)]
	5.33.493	**Certified/Accredited Laboratory.** A laboratory accredited by the Minnesota Department of Health [Minn. R. 4740.2010 through Minn. R. 4740.2120] and/or certified by the MPCA [Minn. R. 7001.4310 through Minn. R. 7001.4390] shall conduct analyses required by this permit, unless approved in writing by the MPCA. A certified/accredited laboratory does not need to complete analyses of dissolved oxygen, pH, temperature, specific conductance, and total residual oxidants (chlorine, bromine). Those analyses shall comply with 40 CFR pt. 136, including calibrations and the QA/QC section. Dissolved oxygen, pH, and total residual oxidants must be performed on-site. Follow the manufacturer's specifications for equipment maintenance and use. [Minn. R. 4740.2010-4740.2120, Minn. R. 7001.4310-7001.4390]
	5.33.494	**Sample Preservation and Procedure.** Sample preservation and test procedures for the analysis of pollutants shall conform to 40 CFR pt. 136, including calibrations, the QA/QC section, and Minn. R. 7041.3200. Note – Table II of 40 CFR pt. 136.3 contains the requisite sample container, preservation (including, but not limited to thermal and pH adjustment), and holding times. [Minn. R. 7001.0150, subp. 2(B), Minn. R. 7041.3200]
	5.33.495	**Equipment Calibration.** The Permittee shall check and/or calibrate flow meters, pumps, flumes, lift stations, or other flow monitoring equipment used for purposes of determining compliance (within plus or minus ten percent of the true flow values) with permit requirements at least twice annually. [Minn. R. 7001.0150, subp. 2(B & C)]
	5.33.496	**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 and time 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, subp. 2(C)]
	5.33.497	**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 or as stipulated elsewhere in this permit. The Permittee shall record the information in the specified areas on those forms and in the units specified. Required forms may include a Sample Values Form. If required, the Permittee shall record individual values for each sample and measurement on the Sample Values Form provided by the MPCA. The Permittee shall submit the Sample Values Form with the appropriate eDMRs. The Permittee may design and use their own Sample Values Form after MPCA review and approval. Note: The Permittee shall also record required summary information on their eDMR. Permittee

		submitted summary information contained only on the Sample Values Form does not comply with reporting requirements. [Minn. R. 7001.0150, subp. 2(B), Minn. R. 7001.1090, subp. 1(D)]
	5.33.498	**Submitting Reports.** The Permittee shall submit eDMRs, Sample Values Forms, and other supplemental attachment forms via MPCA e-Services after the MPCA approves their authorization request. The Permittee shall electronically submit eDMRs, Sample Values Forms, and other supplemental attachment forms by the 21st day of the month following the sampling period or otherwise as specified in this permit. The Permittee shall complete eDMR submittal on or before 11:59 p.m. of the 21st day of the month following the sampling period or as otherwise specified in this permit. The Permittee shall submit an eDMR for each required station even if no discharge occurred during the reporting period. The Permittee shall submit other reports required by this permit electronically. The Permittee shall submit reports by the date specified in this permit. The Permittee shall submit reports on or before 11:59 p.m. on the date specified in this permit. Electronically: wq.submittals.mpca@state.mn.us Include water quality submittals form: www.pca.state.mn.us/sites/default/files/wq-wwprm7-71.docx [Minn. R. 7001.0150, subp. 2(B), Minn. R. 7001.0150, subp. 3(H)]
	5.33.499	**Incomplete or Incorrect Reports.** The Permittee shall immediately submit an electronically amended report or eDMR to the MPCA upon discovery by the Permittee or notification by the MPCA that it has submitted an incomplete or incorrect report or eDMR. The amended report or eDMR shall contain the missing or corrected data along with a comment on the eDMR explaining the circumstances of the incomplete or incorrect report. If it is impossible to amend the report or eDMR electronically, the Permittee shall immediately notify the MPCA and the MPCA will provide direction for the amendment submittals. [Minn. R. 7001.0150, subp. 3(G)]
	5.33.500	**Required Signatures.** The Permittee or the duly authorized representative of the Permittee shall sign all eDMRs, forms, reports, and other documents submitted to the MPCA per Minn. R. 7001.0150, subp. 2(D). The person or persons who sign the eDMRs, forms, reports, or other documents shall certify that he or she understands and complies with the certification requirements of Minn. R. chs. 7001.0070 and 7001.0540, including the penalties for submitting false information. A registered professional engineer shall certify technical documents, such as design drawings and specifications, and engineering studies submitted as part of a permit application or by permit conditions. [Minn. R. 7001.0540]
	5.33.501	**Reporting Limit (RL).** The Permittee shall report monitoring results below the 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 Permittee shall report the concentration as "< 0.1 mg/L." The Permittee shall not use "non-detected," "undetected," "below detection limit," or "zero" when reporting results. The MPCA considers these terms as permit reporting violations. Where sample values are less than the RL and the permit requires reporting of an average, the Permittee shall calculate the average as follows: A. If some values are less than (<) the RL, substitute zero for all non-detectable values to use in the average calculation; B. If all values are less than (<) the RL, calculate the average and report as < the RL average concentration; and C. To calculate a mass loading with a less than (<) the RL concentration, use the RL value in the calculation and then add the "<" to the product of the concentration and the volume.

		[Minn. R. 7001.0150, subp. 2(B)]
	5.33.502	**Records.** The Permittee shall, when requested by the MPCA, 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 activities covered by the permit. [Minn. R. 7001.0150, subp. 3(H)]
	5.33.503	**Confidential Information.** Except for data determined to be confidential according to Minn. Stat. ch. 116.075, subd. 2, all reports required by this permit are available for public inspection. The MPCA does not consider effluent data confidential. To request the MPCA maintain data as confidential, the Permittee shall follow Minn. R. 7000.1300. [Minn. R. 7000.1300]
	5.33.504	**Noncompliance and Enforcement** [Minn. R. 7001]
	5.33.505	**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, subp. 1(B)]
	5.33.506	**Criminal Activity.** The Permittee shall not knowingly make a false statement, representation, or certification in a record or other document submitted to the MPCA. A person who falsifies a report or document submitted to the MPCA, or tampers with, or knowingly renders inaccurate a monitoring device or method that requires maintenance under this permit is subject to criminal and civil penalties provided by federal and state law. [Minn. R. 7001.0150, subp. 3(G), Minn. R. 7001.1090, subp. 1(G & H), Minn. Stat. ch. 609.671, subd. 1]
	5.33.507	**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)]
	5.33.508	**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 occurred and that the noncompliance 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 five days of the discovery. If the Permittee discovers other noncompliance that does not explicitly endanger human health, public drinking water supplies, or the environment, the Permittee shall report the description of noncompliance within 30 days of the discovery. If no eDMR is required within 30 days, the Permittee shall submit a written report (see the Submitting Reports part of this chapter) including the description of noncompliance 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. 7001.0150, subp. 3(K)]
	5.33.509	**Upset Defense.** In the event of temporary noncompliance with an applicable effluent limitation(s) 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 MPCA 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(I); and F. That the Permittee implemented the remedial measures required by Minn. R. 7001.0150, subp. 3(J). [Minn. R. 7001.1090]
	5.33.510	**Release.** [Minn. R. 7001]
	5.33.511	**Unauthorized Releases of Wastewater Prohibited.** This permit prohibits overflows, discharges, spills, or other releases of wastewater or materials to the environment, whether intentional or not, except for discharges from outfalls specifically authorized by this permit. 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. [Minn. Stat. ch. 115.061]
	5.33.512	**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 800-422-0798 or 651-649-5451 (metro area) immediately upon discovery of the release. In addition to the required notification to the Duty Officer, the Permittee may also contact the MPCA during business hours at 800-657-3864 or 651-296-6300 (metro area); C. Promptly after notifying the agency of a discharge, a publicly owned treatment works or a publicly or privately owned domestic sewer system owner must provide notice to the potentially impacted public and to any downstream drinking water facility that may be impacted by the discharge. Notice to the public and to any drinking water facility must be made using the most efficient communications system available to the facility owner such as in person, telephone call, radio, social media, web page, or another expedited form. In addition, signage must be posted at all impacted public use areas within the same jurisdiction or notification must be provided to the entity that has jurisdiction over any impacted public use areas. A notice under this paragraph must include the date and time of the discharge, a description of the material released, a warning of the potential public health risk, and the permittee's contact information; and D. 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 Permittee cannot immediately or completely recover the released materials or substances, 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]
	5.33.513	**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 permitted effluent parameters and other 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, the Permittee shall collect fecal coliform bacteria samples where the Permittee determines that the release contains or may contain sewage. If the Permittee cannot immediately stop the release, the Permittee shall consult with the MPCA regarding additional sampling requirements. The Permittee shall collect samples at least, but not limited to, two times per week for as long as

		the release continues, or as stipulated elsewhere in this permit; and B. The Permittee shall submit the release report information and submit within 30 days according to guidance found here: https://www.pca.state.mn.us/sites/default/files/wq-wwtp7-20a.docx The Permittee shall submit the Release Report to the MPCA with the next eDMR or within 30 days, whichever is sooner. If the Permittee submits quarterly eDMRs and the next submittal is greater than 30 days, the Release Report may be submitted to the water quality submittals email address. (see the Submitting Reports part of this chapter); and C. Submit the sampling results on the Release Report located on the MPCA's website at https://www.pca.state.mn.us/business-with-us/discharge-monitoring-reports. [Minn. R. 7001.1090]
	5.33.514	**Bypass.** [Minn. R. 7001]
	5.33.515	"Essential Maintenance" is a scheduled maintenance event that is required to ensure efficient operation of the facility. "Effluent limitation" means a restriction established by rule or permit condition on quantities, discharge rates, and concentrations of pollutants that are discharged from point sources into waters of the state. [Minn. R. 7001.1020 Subp. 13]
	5.33.516	**Anticipated Bypass.** The Permittee may allow any bypass to occur that does not cause effluent limitation exceedances, but only if the bypass is for a scheduled essential maintenance event to assure efficient operation of the facility. The Permittee shall submit prior notice to the MPCA at least ten days before the date of the bypass, if possible. 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, the Permittee shall collect samples 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. [Minn. R. 7001.1090, subp. 1(J)]
	5.33.517	Any bypass that is not anticipated for a scheduled essential maintenance event is considered unanticipated and is prohibited. This permit prohibits all other bypasses. 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 800-422-0798 or 651-649-5451 (metro area) immediately upon commencement of the bypass. In addition to the required notification to the Duty Officer, the Permittee may also contact the MPCA during business hours at 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; and D. The Permittee shall collect samples 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. [Minn. R. 7001.1090, subp. 1(K), Minn. Stat. ch. 115.061]
	5.33.518	**Notification of the Public.** Following immediate notification to the Minnesota Department of Public Safety Duty Officer and the MPCA of any discharge event that could endanger human health, public drinking water supplies, or the environment, or a Release or Bypass, as described above, the Permittee shall promptly notify the public and any drinking water facility of the discharge. Notice to the public and to any drinking water facility must be made using the most efficient

		communications system available to the facility owner such as in person, telephone call, radio, social media, webpage, or another expedited form. In addition, signage must be posted at all impacted public use areas within the same jurisdiction or notification must be provided to the entity that has jurisdiction over any impacted public use areas. A notice under this requirement must include the date and time of the discharge, a description of the material released, a warning of the potential public health risk, and the Permittee's contact information. [Minn. R. 7001.1090]
	5.33.519	In addition to other facts or incidents required by the permit to be reported within 24 hours, the Permittee shall report in accordance with part 7001.0150, subpart 3, item K any unanticipated bypass, or upset that causes an exceedance of an applicable effluent limitation. [7001.1090 subp. I]
	5.33.520	**Operation and Maintenance** [Minn. R. 7001]
	5.33.521	The Permittee shall at all times properly operate and maintain the facilities, sewer system, and systems of treatment and control, and the appurtenances related to them which are installed or used by the Permittee to achieve compliance with the conditions of the permit. Proper operation and maintenance includes effective performance, adequate funding, adequate operator staffing and training, and adequate laboratory and process controls, including appropriate quality assurance procedures. The Permittee shall install and maintain appropriate backup or auxiliary facilities if they are necessary to achieve compliance with the conditions of the permit and, for all permits other than hazardous waste facility permits, if these backup or auxiliary facilities are technically and economically feasible. [Minn. R. 7001.0150, subp. 3(F)]
	5.33.522	In the event of a reduction or loss of effective treatment of wastewater at the facility, the Permittee shall control production or curtail 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 they restore facility treatment processes or until the Permittee provides an alternative method of treatment. [Minn. R. 7001.1090, subp. 1(C)]
	5.33.523	**Solids Management.** The Permittee shall properly store, transport, and manage biosolids, septage, sediments, residual solids, filter backwash, screenings, oil, grease, and other substances so that pollutants do not enter surface waters or groundwaters of the state. The Permittee shall manage solids in accordance with local, state, and federal requirements. [40 CFR 503, Minn. R. 7041]
	5.33.524	**Scheduled Maintenance.** The Permittee shall schedule maintenance of the treatment works during non-critical water quality periods to prevent water quality degradation, except where the facility requires emergency maintenance to prevent a condition that would be detrimental to water quality or human health. [Minn. R. 7001.0150, subp. 2(B), Minn. R. 7001.0150, subp. 3(F)]
	5.33.525	**Control Tests.** The Permittee shall conduct in-plant control tests at a frequency adequate to ensure compliance with the conditions of this permit. [Minn. R. 7001.0150, subp. 2(B), Minn. R. 7001.0150, subp. 3(F)]
	5.33.526	**Changes to the Facility or Permit.** [Minn. R. 7001]
	5.33.527	**Permit Modifications.** Except as provided under Minn. Stat. ch. 115.07, subd. 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 MPCA issues a written permit for the facility or activity. Permittees that propose to make changes to the facility or discharge that requires permit modification shall follow Minn. R. 7001.0190. If the Permittee cannot determine whether the proposed changes require a permit modification, the Permittee shall contact the MPCA prior to any action. The MPCA recommends that Permittees submit the application for permit modification to the MPCA at least 180 days prior to the planned change. [Minn. R. 7001.0300]
	5.33.528	This permit does not require plans, specifications, and MPCA approval 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, Permittees can replace a broken pipe, lift station pump,

		aerator, or blower with the same design-sized equipment without MPCA approval. If this permit does not expressly authorize proposed construction, the MPCA may require a permit modification. If the proposed construction project requires an Environmental Assessment Worksheet under Minn. R. 4410, no construction shall begin until the MPCA issues a negative declaration and the Permittee receives or implements all approvals. [Minn. R. 7001.0030]
	5.33.529	**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, subp. 3(M)]
	5.33.530	**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 increase or new use of a chemical additive at least 60 days, or as soon as possible, before the proposed increase or new use. The Permittee shall include at least the following information for the proposed additive as instructed in the chemical additive approvals section on the MPCA's website at https://www.pca.state.mn.us/business-with-us/wastewater-permit-additional-guidance-and-information (under Chemical additive approvals): A. Follow Chemical Additive Review Guidance (wq-prm2-12) and complete the Chemical Additive calculator tool (wq-wwprm2-12a.xlsm), including; B. The process for which the additive will be used; C. 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 (such as Ceriodaphnia or Daphnia sp.) and b) a 96-hour LC50/EC50 acute study such as rainbow trout, bluegill, or fathead minnow or another North American freshwater aquatic species other than a planktonic crustacean; D. A complete product use and instruction label; E. The commercial and chemical names and Chemical Abstract Survey (CAS) number for all ingredients in the additive (If the SDS 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 F. The proposed method of application, application frequency, 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 or use of an additive not requiring formal review and approval 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, including nuisance conditions and material discoloration. [Minn. R. 7001.0170]
	5.33.531	**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 of this permit pursuant to Minn. R. 7001.0180. [Minn. R. 7001.0170, Minn. R. 7001.0180]
	5.33.532	**Total Maximum Daily Load (TMDL) Impacts.** The MPCA may require facilities that discharge to an impaired surface water, watershed, or drainage basin to comply with additional permits or permit requirements. These requirements can include additional restriction or relaxation of limits and monitoring as authorized by the CWA 303(d)(4)(A) and 40 CFR ch. 122.44(l)(2)(i), necessary to

		ensure consistency with the assumptions and requirements of any applicable EPA approved wasteload allocations resulting from TMDL studies. [40 CFR 122.44(l)(2)i]
	5.33.533	**Permit Transfer.** This permit is not transferable to any person without the express written approval of the MPCA after compliance with the requirements of Minn. R. 7001.0190. A person who receives permit transference shall comply with the conditions of this permit. [Minn. R. 7001.0150, subp. 3(N)]
	5.33.534	**Facility Closure or Significant Reduction in Activity.** 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 Permittee may submit a Facility Closure Plan to the MPCA no later than 150 days prior to the Facility Closure, and the MPCA may require submittal of a Facility Closure Plan via written notification. The Permittee may comply with the submitted Facility Closure Plan. The MPCA may require a permit modification or reissuance for facility closure that could result in a potential long-term water quality concern, such as the ongoing discharge of wastewater to surface or groundwater. 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 the MPCA requires financial assurance, the MPCA shall approve the amount and type of financial assurance, and proposed modifications to previously MPCA-approved financial assurance. [Minn. Stat. ch. 116.07, subd. 4]
	5.33.535	**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. [Minn. R. 7001.0040]
	5.33.536	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: 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; or 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. Stat. ch. 116.07]

6. Submittal action summary

GW 001	**Well, Upgradient**	
		Groundwater Well: Industrial Land Application 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]
GW 006	**Well, Downgradient**	
		Groundwater Well: Industrial Land Application 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]
GW 009	**Well, Downgradient**	
		Groundwater Well: Industrial Land Application 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]
GW 010	**Well, Downgradient**	
		Groundwater Well: Industrial Land Application 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]
GW 011	**Well, Downgradient**	
		Groundwater Well: Industrial Land Application 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]
GW 012	**Well, Downgradient**	
		Groundwater Well: Industrial Land Application 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]
GW 013	**Well, Downgradient**	

		Groundwater Well: Industrial Land Application 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]
GW 014	**Well, Downgradient**	
		Groundwater Well: Industrial Land Application 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]
SD 001	**Effluent To Surface Water**	
		Surface Discharge: Effluent to Surface Water/Storm Sewer Requirements
	6.9.1	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 002	**Stormwater, Non-specific Runoff**	
		Surface Discharge: Industrial Stormwater Sector U Requirements
	6.10.1	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 003	**Stormwater, Non-specific Runoff**	
		Surface Discharge: Industrial Stormwater Sector U Requirements
	6.11.1	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 004	**Stormwater, Non-specific Runoff**	
		Surface Discharge: Industrial Stormwater Sector U Requirements
	6.12.1	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 005	**Stormwater, Non-specific Runoff**	
		Surface Discharge: Industrial Stormwater Sector U Requirements

	6.13.1	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	**Stormwater, Non-specific Runoff**	
		Surface Discharge: Industrial Stormwater Sector U Requirements
	6.14.1	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)]
WS 001	**Influent Waste**	
		Facility Specific Limit and Monitoring Requirements
	6.15.1	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 002	**Intermediate: WW to Land**	
		Waste Stream: Effluent to Land Treatment 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]
WS 003	**Internal Waste Stream**	
		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)]
WS 004	**Internal Waste Stream**	
		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]
WS 005	**Internal Waste Stream**	
		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)]
WS 006	**Internal**	

	Waste Stream	
		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)]
WS 007	**Internal Waste Stream**	
		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)]
MN0047228	**Bongards' Creameries - Perham**	
		Industrial Wastewater General Requirements
	6.22.1	The Permittee shall submit a Piping Integrity Plan: Due by 90 days after permit issuance. The plan shall include the following: A. Maps, drawings, and diagrams along with methods for both pipe assessment and restoration of integrity; B. Timeline (maximum of three years for high priority/high risk pipes and maximum of ten years for all other pipes) for assessing condition of all piping conveying wastewater at the facility; and C. Timeline (maximum of one year) for restoring integrity of any piping found to have defects allowing either infiltration or exfiltration of water. [Minn. R. 7001]
	6.22.2	The Permittee shall submit a Piping Report: Due annually, by the 31st of March. The report shall include findings and summaries of actions taken responsive to the Piping Integrity Plan. [Minn. R. 7001]
		Industrial Pond System
	6.23.3	The Permittee shall submit pond performance evaluation plan: Due by 180 days after permit issuance. [Minn. R. 7001]
	6.23.4	The Permittee shall submit a pond performance evaluation report: Due by 180 days prior to permit expiration. [Minn. R. 7001]
	6.23.5	The Permittee shall submit a Pond Inspection and Certification Report: Due by the end of each calendar five years following permit issuance. Wastewater impoundments; related conveyances; and appurtenances to the impoundment system at the permitted facility shall be inspected and certified for structural integrity, complete containment, and compliance with performance standards. The inspection report and certification shall be prepared by a registered professional engineer with expertise in wastewater containment structures. The inspection report and certification shall be submitted with the application for permit reissuance and/or every five years, whichever comes first. [Minn. R. 7001]
		Land Application of Industrial By-Products
	6.24.6	The Permittee shall submit a Sampling, Analysis and Field Equipment Calibration Plan to address storage, management, and land application schedules by 60 days after permit issuance. The MPCA requires all permitted facilities to submit this plan. The Permittee may submit an updated version of a plan submitted as part of a previous permit term. The Permittee shall submit a Sampling, Analysis and Field Equipment Calibration Plan: Due by 60 days after permit issuance. [Minn. R. 7001]

	6.24.7	The Permittee shall submit an Industrial By-Product Annual Report by December 31 of each year following permit issuance. The Permittee shall report on the MPCA form available electronically at https://www.pca.state.mn.us/business-with-us/land-application-of-industrial-by-products or another MPCA approved form. The Permittee shall submit an industrial by-product land application annual report: Due by December 31 of each year following permit issuance. [Minn. R. 7001]
		Spray Irrigation
	6.25.8	To address the specific operations of the spray irrigation site(s); optimize the performance of the wastewater treatment system; and maintain compliance with Minn. Stat. chs. 115 and 116, as amended, and Minn. R. chs. 7001, 7050, 7053, and 7060; the Permittee shall prepare and implement an approved Spray Irrigation Management Plan. submit a spray irrigation management plan: Due by 60 days after permit issuance. [Minn. R. 7001.150, subp. 3(F)]
	6.25.9	The Permittee shall submit an industrial spray irrigation annual report: Due annually, by the 1st of February, for the previous calendar year. Submit a summary of spray irrigation monitoring results for the previous calendar year to the MPCA. [Minn. R. 7001]
		Industrial Stormwater Sector U: Food and Kindred Products
	6.26.10	The Permittee shall submit a Stormwater Annual Report: Due annually, by the 31st of March of each year following permit issuance. The Permittee shall submit the Annual Report through the MPCA e-Services online portal. [Minn. R. 7090]
		Total Facility Requirements (NPDES/SDS)
	6.27.11	**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. [Minn. R. 7001.0040]

7. Limits and monitoring

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

		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 001 Groundwater Monitoring Well #1 (All Sites)	Chloride, Total						Monitor only. calendar month maximum	milligrams per liter	once per month	Grab	Apr, Jul, Oct	
GW 001 Groundwater Monitoring Well #1 (All Sites)	Elevation of GW Relative to Mean Sea Level		Monitor only. calendar month maximum	feet					once per month	Measurement, Instantaneous	Apr, Jul, Oct	
GW 001 Groundwater Monitoring Well #1 (All Sites)	Nitrite Plus Nitrate, Total (as N)						Monitor only. calendar month maximum	milligrams per liter	once per month	Grab	Apr, Jul, Oct	
GW 001 Groundwater Monitoring Well #1 (All Sites)	Nitrogen, Ammonia, Total (as N)						Monitor only. calendar month maximum	milligrams per liter	once per month	Grab	Apr, Jul, Oct	
GW 001 Groundwater Monitoring Well #1 (All Sites)	Nitrogen, Kjeldahl, Total						Monitor only. calendar month maximum	milligrams per liter	once per month	Grab	Apr, Jul, Oct	
GW 001 Groundwater Monitoring Well #1 (All Sites)	pH, Field				Monitor only. calendar month minimum		Monitor only. calendar month maximum	standard units	once per month	Grab	Apr, Jul, Oct	
GW 001 Groundwater Monitoring Well #1 (All Sites)	Phosphorus, Total (as P)						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 001 Groundwater Monitoring Well #1 (All Sites)	Solids, Total Dissolved (TDS)						Monitor only. calendar month maximum	milligrams per liter	once per month	Grab	Apr, Jul, Oct	
GW 001 Groundwater Monitoring Well #1 (All Sites)	Specific Conductance						Monitor only. calendar month maximum	micromhos per cm	once per month	Grab	Apr, Jul, Oct	
GW 001 Groundwater Monitoring Well #1 (All Sites)	Temperature, Water (C)						Monitor only. calendar month maximum	degrees Celsius	once per month	Grab	Apr, Jul, Oct	
GW 006 Groundwater Monitoring Well #6 (Site 2)	Chloride, Total						Monitor only. calendar month max intervention limit	milligrams per liter	once per month	Grab	Apr, Jul, Oct	The intervention limit is 250 mg/L. If this value is exceeded the Permittee shall take action as specified in the Compliance Responsibility part of the Spray Irrigation chapter of this permit.
GW 006 Groundwater Monitoring Well #6 (Site 2)	Elevation of GW Relative to Mean Sea Level		Monitor only. calendar month maximum	feet					once per month	Measurement, Instantaneous	Apr, Jul, Oct	
GW 006 Groundwater Monitoring Well #6 (Site 2)	Nitrite Plus Nitrate, Total (as N)						Monitor only. calendar month max intervention limit	milligrams per liter	once per month	Grab	Apr, Jul, Oct	The intervention limit is 9.2 mg/L. If this value is exceeded the Permittee shall take

		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**
												action as specified in the Compliance Responsibility part of the Spray Irrigation chapter of this permit.
GW 006 Groundwater Monitoring Well #6 (Site 2)	Nitrogen, Ammonia, Total (as N)						Monitor only. calendar month maximum	milligrams per liter	once per month	Grab	Apr, Jul, Oct	
GW 006 Groundwater Monitoring Well #6 (Site 2)	Nitrogen, Kjeldahl, Total						Monitor only. calendar month maximum	milligrams per liter	once per month	Grab	Apr, Jul, Oct	
GW 006 Groundwater Monitoring Well #6 (Site 2)	pH, Field				Monitor only. calendar month minimum		Monitor only. calendar month maximum	standard units	once per month	Grab	Apr, Jul, Oct	
GW 006 Groundwater Monitoring Well #6 (Site 2)	Phosphorus, Total (as P)						Monitor only. calendar month maximum	milligrams per liter	once per month	Grab	Apr, Jul, Oct	
GW 006 Groundwater Monitoring Well #6 (Site 2)	Solids, Total Dissolved (TDS)						Monitor only. calendar month maximum	milligrams per liter	once per month	Grab	Apr, Jul, Oct	
GW 006 Groundwater Monitoring Well #6 (Site 2)	Specific Conductance						Monitor only. calendar month maximum	micromhos per cm	once per month	Grab	Apr, Jul, Oct	
GW 006 Groundwater Monitoring	Temperature, Water (C)						Monitor only. calendar	degrees Celsius	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 #6 (Site 2)							month maximum					
GW 009 Groundwater Monitoring Well #9 (Sites 1 and 6)	Chloride, Total						Monitor only. calendar month max intervention limit	milligrams per liter	once per month	Grab	Apr, Jul, Oct	The intervention limit is 250 mg/L. If this value is exceeded the Permittee shall take action as specified in the Compliance Responsibility part of the Spray Irrigation chapter of this permit.
GW 009 Groundwater Monitoring Well #9 (Sites 1 and 6)	Elevation of GW Relative to Mean Sea Level		Monitor only. calendar month maximum	feet					once per month	Measurement, Instantaneous	Apr, Jul, Oct	
GW 009 Groundwater Monitoring Well #9 (Sites 1 and 6)	Nitrite Plus Nitrate, Total (as N)						Monitor only. calendar month max intervention limit	milligrams per liter	once per month	Grab	Apr, Jul, Oct	The intervention limit is 9.2 mg/L. If this value is exceeded the Permittee shall take action as specified in the Compliance Responsibility part of the Spray Irrigation chapter of this permit.
GW 009 Groundwater Monitoring Well #9 (Sites 1 and 6)	Nitrogen, Ammonia, Total (as N)						Monitor only. calendar month maximum	milligrams per liter	once per month	Grab	Apr, Jul, Oct	
GW 009	Nitrogen,						Monitor only.	milligrams	once per	Grab	Apr, Jul,	

		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**
Groundwater Monitoring Well #9 (Sites 1 and 6)	Kjeldahl, Total						calendar month maximum	per liter	month		Oct	
GW 009 Groundwater Monitoring Well #9 (Sites 1 and 6)	pH, Field				Monitor only. calendar month minimum		Monitor only. calendar month maximum	standard units	once per month	Grab	Apr, Jul, Oct	
GW 009 Groundwater Monitoring Well #9 (Sites 1 and 6)	Phosphorus, Total (as P)						Monitor only. calendar month maximum	milligrams per liter	once per month	Grab	Apr, Jul, Oct	
GW 009 Groundwater Monitoring Well #9 (Sites 1 and 6)	Solids, Total Dissolved (TDS)						Monitor only. calendar month maximum	milligrams per liter	once per month	Grab	Apr, Jul, Oct	
GW 009 Groundwater Monitoring Well #9 (Sites 1 and 6)	Specific Conductance						Monitor only. calendar month maximum	micromhos per cm	once per month	Grab	Apr, Jul, Oct	
GW 009 Groundwater Monitoring Well #9 (Sites 1 and 6)	Temperature, Water (C)						Monitor only. calendar month maximum	degrees Celsius	once per month	Grab	Apr, Jul, Oct	
GW 010 Groundwater Monitoring Well #10 (Site 2)	Chloride, Total						Monitor only. calendar month max intervention limit	milligrams per liter	once per month	Grab	Apr, Jul, Oct	The intervention limit is 250 mg/L. If this value is exceeded the Permittee shall take action as specified in the Compliance Responsibility part of the Spray

		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**
												Irrigation chapter of this permit.
GW 010 Groundwater Monitoring Well #10 (Site 2)	Elevation of GW Relative to Mean Sea Level		Monitor only. calendar month maximum	feet					once per month	Measurement, Instantaneous	Apr, Jul, Oct	
GW 010 Groundwater Monitoring Well #10 (Site 2)	Nitrite Plus Nitrate, Total (as N)						Monitor only. calendar month max intervention limit	milligrams per liter	once per month	Grab	Apr, Jul, Oct	The intervention limit is 9.2 mg/L. If this value is exceeded the Permittee shall take action as specified in the Compliance Responsibility part of the Spray Irrigation chapter of this permit.
GW 010 Groundwater Monitoring Well #10 (Site 2)	Nitrogen, Ammonia, Total (as N)						Monitor only. calendar month maximum	milligrams per liter	once per month	Grab	Apr, Jul, Oct	
GW 010 Groundwater Monitoring Well #10 (Site 2)	Nitrogen, Kjeldahl, Total						Monitor only. calendar month maximum	milligrams per liter	once per month	Grab	Apr, Jul, Oct	
GW 010 Groundwater Monitoring Well #10 (Site 2)	pH, Field				Monitor only. calendar month minimum		Monitor only. calendar month maximum	standard units	once per month	Grab	Apr, Jul, Oct	
GW 010 Groundwater Monitoring Well #10 (Site 2)	Phosphorus, Total (as P)						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 010 Groundwater Monitoring Well #10 (Site 2)	Solids, Total Dissolved (TDS)						Monitor only. calendar month maximum	milligrams per liter	once per month	Grab	Apr, Jul, Oct	
GW 010 Groundwater Monitoring Well #10 (Site 2)	Specific Conductance						Monitor only. calendar month maximum	micromhos per cm	once per month	Grab	Apr, Jul, Oct	
GW 010 Groundwater Monitoring Well #10 (Site 2)	Temperature, Water (C)						Monitor only. calendar month maximum	degrees Celsius	once per month	Grab	Apr, Jul, Oct	
GW 011 Groundwater Monitoring Well #11 (Site 3)	Chloride, Total						Monitor only. calendar month max intervention limit	milligrams per liter	once per month	Grab	Apr, Jul, Oct	The intervention limit is 250 mg/L. If this value is exceeded the Permittee shall take action as specified in the Compliance Responsibility part of the Spray Irrigation chapter of this permit.
GW 011 Groundwater Monitoring Well #11 (Site 3)	Elevation of GW Relative to Mean Sea Level		Monitor only. calendar month maximum	feet					once per month	Measurement, Instantaneous	Apr, Jul, Oct	
GW 011 Groundwater Monitoring Well #11 (Site 3)	Nitrite Plus Nitrate, Total (as N)						Monitor only. calendar month max intervention	milligrams per liter	once per month	Grab	Apr, Jul, Oct	The intervention limit is 9.2 mg/L. If this value is exceeded the

		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**
							limit					Permittee shall take action as specified in the Compliance Responsibility part of the Spray Irrigation chapter of this permit.
GW 011 Groundwater Monitoring Well #11 (Site 3)	Nitrogen, Ammonia, Total (as N)						Monitor only. calendar month maximum	milligrams per liter	once per month	Grab	Apr, Jul, Oct	
GW 011 Groundwater Monitoring Well #11 (Site 3)	Nitrogen, Kjeldahl, Total						Monitor only. calendar month maximum	milligrams per liter	once per month	Grab	Apr, Jul, Oct	
GW 011 Groundwater Monitoring Well #11 (Site 3)	pH, Field				Monitor only. calendar month minimum		Monitor only. calendar month maximum	standard units	once per month	Grab	Apr, Jul, Oct	
GW 011 Groundwater Monitoring Well #11 (Site 3)	Phosphorus, Total (as P)						Monitor only. calendar month maximum	milligrams per liter	once per month	Grab	Apr, Jul, Oct	
GW 011 Groundwater Monitoring Well #11 (Site 3)	Solids, Total Dissolved (TDS)						Monitor only. calendar month maximum	milligrams per liter	once per month	Grab	Apr, Jul, Oct	
GW 011 Groundwater Monitoring Well #11 (Site 3)	Specific Conductance						Monitor only. calendar month maximum	micromhos per cm	once per month	Grab	Apr, Jul, Oct	
GW 011 Groundwater	Temperature, Water (C)						Monitor only.	degrees Celsius	once per	Grab	Apr, Jul,	

		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 #11 (Site 3)							calendar month maximum		month		Oct	
GW 012 Groundwater Monitoring Well #12 (Sites 1 and 6)	Chloride, Total						Monitor only. calendar month max intervention limit	milligrams per liter	once per month	Grab	Apr, Jul, Oct	The intervention limit is 250 mg/L. If this value is exceeded the Permittee shall take action as specified in the Compliance Responsibility part of the Spray Irrigation chapter of this permit.
GW 012 Groundwater Monitoring Well #12 (Sites 1 and 6)	Elevation of GW Relative to Mean Sea Level		Monitor only. calendar month maximum	feet					once per month	Measurement, Instantaneous	Apr, Jul, Oct	
GW 012 Groundwater Monitoring Well #12 (Sites 1 and 6)	Nitrite Plus Nitrate, Total (as N)						Monitor only. calendar month max intervention limit	milligrams per liter	once per month	Grab	Apr, Jul, Oct	The intervention limit is 9.2 mg/L. If this value is exceeded the Permittee shall take action as specified in the Compliance Responsibility part of the Spray Irrigation chapter of this permit.
GW 012 Groundwater Monitoring Well #12 (Sites 1 and	Nitrogen, Ammonia, Total (as N)						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**
6)												
GW 012 Groundwater Monitoring Well #12 (Sites 1 and 6)	Nitrogen, Kjeldahl, Total						Monitor only. calendar month maximum	milligrams per liter	once per month	Grab	Apr, Jul, Oct	
GW 012 Groundwater Monitoring Well #12 (Sites 1 and 6)	pH, Field				Monitor only. calendar month minimum		Monitor only. calendar month maximum	standard units	once per month	Grab	Apr, Jul, Oct	
GW 012 Groundwater Monitoring Well #12 (Sites 1 and 6)	Phosphorus, Total (as P)						Monitor only. calendar month maximum	milligrams per liter	once per month	Grab	Apr, Jul, Oct	
GW 012 Groundwater Monitoring Well #12 (Sites 1 and 6)	Solids, Total Dissolved (TDS)						Monitor only. calendar month maximum	milligrams per liter	once per month	Grab	Apr, Jul, Oct	
GW 012 Groundwater Monitoring Well #12 (Sites 1 and 6)	Specific Conductance						Monitor only. calendar month maximum	micromhos per cm	once per month	Grab	Apr, Jul, Oct	
GW 012 Groundwater Monitoring Well #12 (Sites 1 and 6)	Temperature, Water (C)						Monitor only. calendar month maximum	degrees Celsius	once per month	Grab	Apr, Jul, Oct	
GW 013 Groundwater	Chloride, Total						Monitor only. calendar	milligrams per liter	once per month	Grab	Apr, Jul, Oct	The intervention limit is 250 mg/L. If

		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 #13 (Site 4)							month max intervention limit					this value is exceeded the Permittee shall take action as specified in the Compliance Responsibility part of the Spray Irrigation chapter of this permit.
GW 013 Groundwater Monitoring Well #13 (Site 4)	Elevation of GW Relative to Mean Sea Level		Monitor only. calendar month maximum	feet					once per month	Measurement, Instantaneous	Apr, Jul, Oct	
GW 013 Groundwater Monitoring Well #13 (Site 4)	Nitrite Plus Nitrate, Total (as N)						Monitor only. calendar month max intervention limit	milligrams per liter	once per month	Grab	Apr, Jul, Oct	The intervention limit is 9.2 mg/L. If this value is exceeded the Permittee shall take action as specified in the Compliance Responsibility part of the Spray Irrigation chapter of this permit.
GW 013 Groundwater Monitoring Well #13 (Site 4)	Nitrogen, Ammonia, Total (as N)						Monitor only. calendar month maximum	milligrams per liter	once per month	Grab	Apr, Jul, Oct	
GW 013 Groundwater Monitoring Well #13 (Site 4)	Nitrogen, Kjeldahl, Total						Monitor only. calendar month maximum	milligrams per liter	once per month	Grab	Apr, Jul, Oct	
GW 013 Groundwater	pH, Field				Monitor only.		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**
Monitoring Well #13 (Site 4)					calendar month minimum		month maximum					
GW 013 Groundwater Monitoring Well #13 (Site 4)	Phosphorus, Total (as P)						Monitor only. calendar month maximum	milligrams per liter	once per month	Grab	Apr, Jul, Oct	
GW 013 Groundwater Monitoring Well #13 (Site 4)	Solids, Total Dissolved (TDS)						Monitor only. calendar month maximum	milligrams per liter	once per month	Grab	Apr, Jul, Oct	
GW 013 Groundwater Monitoring Well #13 (Site 4)	Specific Conductance						Monitor only. calendar month maximum	micromhos per cm	once per month	Grab	Apr, Jul, Oct	
GW 013 Groundwater Monitoring Well #13 (Site 4)	Temperature, Water (C)						Monitor only. calendar month maximum	degrees Celsius	once per month	Grab	Apr, Jul, Oct	
GW 014 Groundwater Monitoring Well #14 (Site 6)	Chloride, Total						Monitor only. calendar month max intervention limit	milligrams per liter	once per month	Grab	Apr, Jul, Oct	The intervention limit is 250 mg/L. If this value is exceeded the Permittee shall take action as specified in the Compliance Responsibility part of the Spray Irrigation chapter of this permit.
GW 014 Groundwater	Elevation of GW Relative to Mean		Monitor only.	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**
Monitoring Well #14 (Site 6)	Sea Level		calendar month maximum									
GW 014 Groundwater Monitoring Well #14 (Site 6)	Nitrite Plus Nitrate, Total (as N)						Monitor only. calendar month max intervention limit	milligrams per liter	once per month	Grab	Apr, Jul, Oct	The intervention limit is 9.2 mg/L. If this value is exceeded the Permittee shall take action as specified in the Compliance Responsibility part of the Spray Irrigation chapter of this permit.
GW 014 Groundwater Monitoring Well #14 (Site 6)	Nitrogen, Ammonia, Total (as N)						Monitor only. calendar month maximum	milligrams per liter	once per month	Grab	Apr, Jul, Oct	
GW 014 Groundwater Monitoring Well #14 (Site 6)	Nitrogen, Kjeldahl, Total						Monitor only. calendar month maximum	milligrams per liter	once per month	Grab	Apr, Jul, Oct	
GW 014 Groundwater Monitoring Well #14 (Site 6)	pH, Field				Monitor only. calendar month minimum		Monitor only. calendar month maximum	standard units	once per month	Grab	Apr, Jul, Oct	
GW 014 Groundwater Monitoring Well #14 (Site 6)	Phosphorus, Total (as P)						Monitor only. calendar month maximum	milligrams per liter	once per month	Grab	Apr, Jul, Oct	
GW 014 Groundwater Monitoring Well #14 (Site 6)	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 014 Groundwater Monitoring Well #14 (Site 6)	Specific Conductance						Monitor only. calendar month maximum	micromhos per cm	once per month	Grab	Apr, Jul, Oct	
GW 014 Groundwater Monitoring Well #14 (Site 6)	Temperature, Water (C)						Monitor only. calendar month maximum	degrees Celsius	once per month	Grab	Apr, Jul, Oct	
SD 001 Non-Contact Cooling Water and Polished Process Wastewater to Storm Sewer	Bicarbonates (HCO3)						Monitor only. calendar month maximum	milligrams per liter	once per month	Grab	Jan-Dec	
SD 001 Non-Contact Cooling Water and Polished Process Wastewater to Storm Sewer	BOD, Carbonaceous 05 Day (20 Deg C)	92.61 calendar month average	241.9 calendar month maximum	kilograms per day		25 calendar month average	40 calendar month maximum	milligrams per liter	once per week	Grab	Jan-Dec	
SD 001 Non-Contact Cooling Water and Polished Process Wastewater to Storm Sewer	Calcium, Total (as Ca)						Monitor only. calendar month maximum	milligrams per liter	once per month	Grab	Jan-Dec	
SD 001 Non-Contact Cooling Water and Polished Process Wastewater to Storm Sewer	Chloride, Total						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**
SD 001 Non-Contact Cooling Water and Polished Process Wastewater to Storm Sewer	Chlorine, Total Residual						0.038 daily maximum	milligrams per liter	once per week	Grab	Jan-Dec	
SD 001 Non-Contact Cooling Water and Polished Process Wastewater to Storm Sewer	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	Jan-Dec	
SD 001 Non-Contact Cooling Water and Polished Process Wastewater to Storm Sewer	Hardness, Calcium & Magnesium, Calculated (as CaCO3)						Monitor only. calendar month maximum	milligrams per liter	once per month	Grab	Jan-Dec	
SD 001 Non-Contact Cooling Water and Polished Process Wastewater to Storm Sewer	Magnesium, Total (as Mg)						Monitor only. calendar month maximum	milligrams per liter	once per month	Grab	Jan-Dec	
SD 001 Non-Contact Cooling Water and Polished Process Wastewater to Storm Sewer	Nitrite Plus Nitrate, Total (as N)						Monitor only. calendar month maximum	milligrams per liter	once per year	Grab	Dec	
SD 001 Non-Contact Cooling Water and Polished Process Wastewater to	Nitrogen, Kjeldahl, Total						Monitor only. calendar month maximum	milligrams per liter	once per year	Grab	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**
Storm Sewer												
SD 001 Non-Contact Cooling Water and Polished Process Wastewater to Storm Sewer	Nitrogen, Total (as N)						Monitor only. calendar month maximum	milligrams per liter	once per year	Calculation	Dec	
SD 001 Non-Contact Cooling Water and Polished Process Wastewater to Storm Sewer	Oxygen, Dissolved				Monitor only. Daily Minimum			milligrams per liter	twice per month	Grab	Jan-Dec	
SD 001 Non-Contact Cooling Water and Polished Process Wastewater to Storm Sewer	pH				6.0 calendar month minimum		9.0 calendar month maximum	standard units	once per week	Measurement, Instantaneous	Jan-Dec	
SD 001 Non-Contact Cooling Water and Polished Process Wastewater to Storm Sewer	Phosphorus, Total (as P)					Monitor only. calendar quarter average		milligrams per liter	once per quarter	Grab	Mar, Jun, Sep, Dec	
SD 001 Non-Contact Cooling Water and Polished Process Wastewater to Storm Sewer	Potassium, Total (as K)						Monitor only. calendar month maximum	milligrams per liter	once per month	Grab	Jan-Dec	
SD 001 Non-Contact Cooling Water and Polished Process	Sodium, Total (as Na)						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**
Wastewater to Storm Sewer												
SD 001 Non-Contact Cooling Water and Polished Process Wastewater to Storm Sewer	Solids, Total Dissolved (TDS)						Monitor only. calendar month maximum	milligrams per liter	once per month	Grab	Jan-Dec	
SD 001 Non-Contact Cooling Water and Polished Process Wastewater to Storm Sewer	Solids, Total Suspended (TSS)	111.13 calendar month average	272.16 calendar month maximum	kilograms per day		30 calendar month average	45 calendar month maximum	milligrams per liter	once per week	Grab	Jan-Dec	
SD 001 Non-Contact Cooling Water and Polished Process Wastewater to Storm Sewer	Specific Conductance						Monitor only. calendar month maximum	micromhos per cm	once per month	Grab	Jan-Dec	
SD 001 Non-Contact Cooling Water and Polished Process Wastewater to Storm Sewer	Sulfate, Total (as SO4)						Monitor only. calendar month maximum	milligrams per liter	once per month	Grab	Jan-Dec	
SD 001 Non-Contact Cooling Water and Polished Process Wastewater to Storm Sewer	Temperature, Water (F)						86 calendar month maximum	degrees Fahrenheit	once per week	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**
SD 002 Roof drain south side of intake building	BOD, Carbonaceous 05 Day (20 Deg C)					Monitor only. calendar year average intervention-qtr		milligrams per liter	once per quarter	Grab	Jan-Dec	The intervention limit is 25 mg/L. If this limit is exceeded, the Permittee shall refer to the Industrial Stormwater Sector U: Food and Kindred Products section of this permit.
SD 002 Roof drain south side of intake building	COD (Chemical Oxygen Demand)					Monitor only. calendar year average intervention-qtr		milligrams per liter	once per quarter	Grab	Jan-Dec	The intervention limit is 120 mg/L. If this limit is exceeded, the Permittee shall refer to the Industrial Stormwater Sector U: Food and Kindred Products section of this permit.
SD 002 Roof drain south side of intake building	Nitrogen, Ammonia, Total (as N)					Monitor only. calendar year average intervention-qtr		milligrams per liter	once per quarter	Grab	Jan-Dec	The intervention limit is 2.8 mg/L. If this limit is exceeded, the Permittee shall refer to the Industrial Stormwater Sector U: Food and Kindred Products section of this permit.
SD 002 Roof drain south side of intake building	Phosphorus, Total (as P)					Monitor only. calendar year average intervention-qtr		milligrams per liter	once per quarter	Grab	Jan-Dec	The intervention limit is 1.0 mg/L. If this limit is exceeded, the Permittee shall refer

		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**
												to the Industrial Stormwater Sector U: Food and Kindred Products section of this permit.
SD 002 Roof drain south side of intake building	Solids, Total Suspended (TSS)					Monitor only. calendar year average intervention-qtr		milligrams per liter	once per quarter	Grab	Jan-Dec	The intervention limit is 100 mg/L. If this limit is exceeded, the Permittee shall refer to the Industrial Stormwater Sector U: Food and Kindred Products section of this permit.
SD 003 Roof drain east side of warehouse	BOD, Carbonaceous 05 Day (20 Deg C)					Monitor only. calendar year average intervention-qtr		milligrams per liter	once per quarter	Grab	Jan-Dec	The intervention limit is 25 mg/L. If this limit is exceeded, the Permittee shall refer to the Industrial Stormwater Sector U: Food and Kindred Products section of this permit.
SD 003 Roof drain east side of warehouse	COD (Chemical Oxygen Demand)					Monitor only. calendar year average intervention-qtr		milligrams per liter	once per quarter	Grab	Jan-Dec	The intervention limit is 120 mg/L. If this limit is exceeded, the Permittee shall refer to the Industrial Stormwater Sector U: Food and Kindred Products section of

		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**
												this permit.
SD 003 Roof drain east side of warehouse	Nitrogen, Ammonia, Total (as N)					Monitor only. calendar year average intervention-qtr		milligrams per liter	once per quarter	Grab	Jan-Dec	The intervention limit is 2.8 mg/L. If this limit is exceeded, the Permittee shall refer to the Industrial Stormwater Sector U: Food and Kindred Products section of this permit.
SD 003 Roof drain east side of warehouse	Phosphorus, Total (as P)					Monitor only. calendar year average intervention-qtr		milligrams per liter	once per quarter	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 U: Food and Kindred Products section of this permit.
SD 003 Roof drain east side of warehouse	Solids, Total Suspended (TSS)					Monitor only. calendar year average intervention-qtr		milligrams per liter	once per quarter	Grab	Jan-Dec	The intervention limit is 100 mg/L. If this limit is exceeded, the Permittee shall refer to the Industrial Stormwater Sector U: Food and Kindred Products section of this permit.
SD 004 Roof Drain South Side of New Cheese	BOD, Carbonaceous 05 Day (20 Deg C)					Monitor only. calendar year average		milligrams per liter	once per quarter	Grab	Jan-Dec	The intervention limit is 25 mg/L. If this limit is

		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**
Cooler						intervention-qtr						exceeded, the Permittee shall refer to the Industrial Stormwater Sector U: Food and Kindred Products section of this permit.
SD 004 Roof Drain South Side of New Cheese Cooler	COD (Chemical Oxygen Demand)					Monitor only. calendar year average intervention-qtr		milligrams per liter	once per quarter	Grab	Jan-Dec	The intervention limit is 120 mg/L. If this limit is exceeded, the Permittee shall refer to the Industrial Stormwater Sector U: Food and Kindred Products section of this permit.
SD 004 Roof Drain South Side of New Cheese Cooler	Nitrogen, Ammonia, Total (as N)					Monitor only. calendar year average intervention-qtr		milligrams per liter	once per quarter	Grab	Jan-Dec	The intervention limit is 2.8 mg/L. If this limit is exceeded, the Permittee shall refer to the Industrial Stormwater Sector U: Food and Kindred Products section of this permit.
SD 004 Roof Drain South Side of New Cheese Cooler	Phosphorus, Total (as P)					Monitor only. calendar year average intervention-qtr		milligrams per liter	once per quarter	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 U: Food and Kindred Products section of

		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**
												this permit.
SD 004 Roof Drain South Side of New Cheese Cooler	Solids, Total Suspended (TSS)					Monitor only. calendar year average intervention-qtr		milligrams per liter	once per quarter	Grab	Jan-Dec	The intervention limit is 100 mg/L. If this limit is exceeded, the Permittee shall refer to the Industrial Stormwater Sector U: Food and Kindred Products section of this permit.
SD 005 Roof Drain New Cheese Dryer	BOD, Carbonaceous 05 Day (20 Deg C)					Monitor only. calendar year average intervention-qtr		milligrams per liter	once per quarter	Grab	Jan-Dec	The intervention limit is 25 mg/L. If this limit is exceeded, the Permittee shall refer to the Industrial Stormwater Sector U: Food and Kindred Products section of this permit.
SD 005 Roof Drain New Cheese Dryer	COD (Chemical Oxygen Demand)					Monitor only. calendar year average intervention-qtr		milligrams per liter	once per quarter	Grab	Jan-Dec	The intervention limit is 120 mg/L. If this limit is exceeded, the Permittee shall refer to the Industrial Stormwater Sector U: Food and Kindred Products section of this permit.
SD 005 Roof Drain New Cheese Dryer	Nitrogen, Ammonia, Total (as N)					Monitor only. calendar year average		milligrams per liter	once per quarter	Grab	Jan-Dec	The intervention limit is 2.8 mg/L. If this limit is

		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**
						intervention-qtr						exceeded, the Permittee shall refer to the Industrial Stormwater Sector U: Food and Kindred Products section of this permit.
SD 005 Roof Drain New Cheese Dryer	Phosphorus, Total (as P)					Monitor only. calendar year average intervention-qtr		milligrams per liter	once per quarter	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 U: Food and Kindred Products section of this permit.
SD 005 Roof Drain New Cheese Dryer	Solids, Total Suspended (TSS)					Monitor only. calendar year average intervention-qtr		milligrams per liter	once per quarter	Grab	Jan-Dec	The intervention limit is 100 mg/L. If this limit is exceeded, the Permittee shall refer to the Industrial Stormwater Sector U: Food and Kindred Products section of this permit.
SD 006 Roof Drain New Intake Building	BOD, Carbonaceous 05 Day (20 Deg C)					Monitor only. calendar year average intervention-qtr		milligrams per liter	once per quarter	Grab	Jan-Dec	The intervention limit is 25 mg/L. If this limit is exceeded, the Permittee shall refer to the Industrial Stormwater Sector

		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**
												U: Food and Kindred Products section of this permit.
SD 006 Roof Drain New Intake Building	COD (Chemical Oxygen Demand)					Monitor only. calendar year average intervention-qtr		milligrams per liter	once per quarter	Grab	Jan-Dec	The intervention limit is 120 mg/L. If this limit is exceeded, the Permittee shall refer to the Industrial Stormwater Sector U: Food and Kindred Products section of this permit.
SD 006 Roof Drain New Intake Building	Nitrogen, Ammonia, Total (as N)					Monitor only. calendar year average intervention-qtr		milligrams per liter	once per quarter	Grab	Jan-Dec	The intervention limit is 2.8 mg/L. If this limit is exceeded, the Permittee shall refer to the Industrial Stormwater Sector U: Food and Kindred Products section of this permit.
SD 006 Roof Drain New Intake Building	Phosphorus, Total (as P)					Monitor only. calendar year average intervention-qtr		milligrams per liter	once per quarter	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 U: Food and Kindred Products section of this permit.
SD 006 Roof Drain New Intake	Solids, Total Suspended (TSS)					Monitor only. calendar year		milligrams per liter	once per quarter	Grab	Jan-Dec	The intervention limit is 100 mg/L. If

		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**
Building						average intervention-qtr						this limit is exceeded, the Permittee shall refer to the Industrial Stormwater Sector U: Food and Kindred Products section of this permit.
WS 001 Process Wastewater Influent to WWTF	BOD, 05 Day (20 Deg C)					Monitor only. calendar month average	Monitor only. calendar month maximum	milligrams per liter	once per week	24-Hour Flow Composite	Jan-Dec	
WS 001 Process Wastewater Influent to WWTF	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 001 Process Wastewater Influent to WWTF	Solids, Total Suspended (TSS)					Monitor only. calendar month average	Monitor only. calendar month maximum	milligrams per liter	once per week	24-Hour Flow Composite	Jan-Dec	
WS 002 Process Wastewater to Spray Irrigation	Area Of Disposal, Used		304.7 calendar year maximum	acres					once per year	Measurement	Dec	
WS 002 Process Wastewater to Spray Irrigation	BOD, 05 Day (20 Deg C)					Monitor only. calendar month average	Monitor only. calendar month maximum	milligrams per liter	once per week	24-Hour Flow Composite	Apr-Oct	
WS 002 Process Wastewater to Spray Irrigation	Calcium, Total (as Ca)					Monitor only. calendar month average	Monitor only. calendar month maximum	milligrams per liter	once per week	24-Hour Flow Composite	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**
WS 002 Process Wastewater to Spray Irrigation	Chloride, Total					Monitor only. calendar month average	Monitor only. calendar month maximum	milligrams per liter	once per week	24-Hour Flow Composite	Apr-Oct	
WS 002 Process Wastewater to Spray Irrigation	Flow		163.967 calendar year to date total	million gallons					once per week	Calculation	Apr-Oct	
WS 002 Process Wastewater to Spray Irrigation	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	Apr-Oct	
WS 002 Process Wastewater to Spray Irrigation	Magnesium, Total (as Mg)					Monitor only. calendar month average	Monitor only. calendar month maximum	milligrams per liter	once per week	24-Hour Flow Composite	Apr-Oct	
WS 002 Process Wastewater to Spray Irrigation	Nitrite Plus Nitrate, Total (as N)					Monitor only. calendar month average	Monitor only. calendar month maximum	milligrams per liter	once per week	24-Hour Flow Composite	Apr-Oct	
WS 002 Process Wastewater to Spray Irrigation	Nitrogen, Ammonia, Total (as N)					Monitor only. calendar month average	Monitor only. calendar month maximum	milligrams per liter	once per week	24-Hour Flow Composite	Apr-Oct	
WS 002 Process Wastewater to Spray Irrigation	Nitrogen, Kjeldahl, Total					Monitor only. calendar month average	Monitor only. calendar month maximum	milligrams per liter	once per week	24-Hour Flow Composite	Apr-Oct	
WS 002 Process Wastewater to Spray Irrigation	pH				Monitor only. calendar month minimum		Monitor only. calendar month maximum	standard units	once per week	Grab	Apr-Oct	
WS 002 Process	Sodium					Monitor only.	Monitor only.	ratio	once per	Calculation	Apr-Oct	The intervention

		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**
Wastewater to Spray Irrigation	Adsorption Ratio (SAR)					calendar year average intervention	calendar month maximum		week			limit is a ratio of 8.5. If this value is exceeded, the permittee shall take action as specified in the Intervention Limit section of the Spray Irrigation chapter of this permit.
WS 002 Process Wastewater to Spray Irrigation	Sodium, Total (as Na)					Monitor only. calendar month average	Monitor only. calendar month maximum	milligrams per liter	once per week	24-Hour Flow Composite	Apr-Oct	
WS 002 Process Wastewater to Spray Irrigation	Solids, Total Dissolved (TDS)					Monitor only. calendar month average	Monitor only. calendar month maximum	milligrams per liter	once per week	24-Hour Flow Composite	Apr-Oct	
WS 002 Process Wastewater to Spray Irrigation	Specific Conductance						Monitor only. calendar month maximum	micromhos per cm	once per week	Grab	Apr-Oct	
WS 003 Polished Process Wastewater	BOD, 05 Day (20 Deg C)	18.28 calendar month average	44.95 daily maximum	kilograms per day		Monitor only. calendar month average	Monitor only. daily maximum	milligrams per liter	once per week	24-Hour Flow Composite	Jan-Dec	
WS 003 Polished Process Wastewater	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 003 Polished Process Wastewater	pH				6.0 calendar month		9.0 calendar month maximum	standard units	once per week	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**
					minimum							
WS 003 Polished Process Wastewater	Solids, Total Suspended (TSS)	27.23 calendar month average	66.21 daily maximum	kilograms per day		Monitor only. calendar month average	Monitor only. daily maximum	milligrams per liter	once per week	24-Hour Flow Composite	Jan-Dec	
WS 004 Polished Process Wastewater	BOD, 05 Day (20 Deg C)	18.28 calendar month average	44.95 daily maximum	kilograms per day		Monitor only. calendar month average	Monitor only. daily maximum	milligrams per liter	once per week	24-Hour Flow Composite	Jan-Dec	
WS 004 Polished Process Wastewater	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 004 Polished Process Wastewater	pH				6.0 calendar month minimum		9.0 calendar month maximum	standard units	once per week	Measurement	Jan-Dec	
WS 004 Polished Process Wastewater	Solids, Total Suspended (TSS)	27.23 calendar month average	66.21 daily maximum	kilograms per day		Monitor only. calendar month average	Monitor only. daily maximum	milligrams per liter	once per week	24-Hour Flow Composite	Jan-Dec	
WS 005 Pond 1 Monitoring	Elevation, Water		Monitor only. calendar month maximum intervention	feet					once per week	Measurement	Jan-Dec	The intervention limit is 1,372.5 feet of elevation. If this limit is exceeded, the Permittee shall refer to the Intervention Limit Requirements – Industrial Pond Water Elevations Stormwater section

		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**
												of this permit.
WS 005 Pond 1 Monitoring	Precipitation		Monitor only. calendar month total	inches					once per day	Measurement	Jan-Dec	
WS 006 Pond 2 Monitoring	Elevation, Water		Monitor only. calendar month maximum intervention	feet					once per week	Measurement	Jan-Dec	The intervention limit is 1,372.5 feet of elevation. If this limit is exceeded, the Permittee shall refer to the Intervention Limit Requirements – Industrial Pond Water Elevations Stormwater section of this permit.
WS 007 Pond 3 Monitoring	Pond Water Elevation		Monitor only. calendar month maximum intervention	feet					once per week	Measurement	Jan-Dec	The intervention limit is 1,370.5 feet of elevation. If this limit is exceeded, the Permittee shall refer to the Intervention Limit Requirements – Industrial Pond Water Elevations Stormwater section of this permit.

Spray Irrigation Site with Soil Monitoring Requirements: LA 301 (Spray Irrigation Site 1)

Parameter	Limit	Units	Limit Type	Effective Period	Sample Type	Frequency	Notes
Area of Disposal, Used	121.7	acres	Instantaneous Maximum	Jan-Dec	Measurement	1/year	1
Crop Yield	Monitor Only	tons/acre	Calendar Year Total	Jan-Dec	Estimate	1/year	2
Flow Application Rate	0.597	MG/ac/year	Calendar Year Total	Jan-Dec	Calculation	1/year	3
Nitrogen, Total Annual Loading Rate	300	lb/ac/yr	Calendar Year Total Intervention	Jan-Dec	Calculation	1/year	4
Organic Matter, Total in Soil	Monitor Only	%	Calendar Year Maximum	Jan-Dec	Composite	1/year	5
pH, 1 to 1 Soil to Water	Monitor Only	SU	Calendar Year Maximum	Jan-Dec	Composite	1/year	5
Phosphorus, BRAY-1 Ext in Soil	Monitor Only	ppm	Calendar Year Maximum	Jan-Dec	Composite	1/year	5
Potassium, NH4AC, Exch in Soil	Monitor Only	ppm	Calendar Year Maximum	Jan-Dec	Composite	1/year	5
Protein, Crop, Crude	Monitor Only	%	Calendar Year Maximum	Jan-Dec	Grab	1/year	2
Salts, Water Soluble in Soil	3.0	mmhos/cm	Calendar Year Maximum Intervention	Jan-Dec	Composite	1/year	5

1. As a measure of acreage to which waste is applied.
2. Report on a dry weight basis. Report the date each time a crop is harvested. If a crop is harvested more than once during the growing season, determine this characteristic for each cutting.
3. Monitor the volume of wastewater that is reclaimed and reapplied to the spray irrigation site and report this value in the Annual Report.
4. Calculate the total annual loading rate as the flow-weighted sum of total annual mass Kjeldahl nitrogen and nitrate plus nitrite (as nitrogen) applied to the site from industrial spray irrigation, plus any nitrogen applied from other sources, divided by the acreage of the site. The limit applies to the sum of all sources of nitrogen applied to the site.
5. Sample before irrigation or application of commercial or other supplemental fertilizer. Collect composite soil samples from a mixture of 15 to 20 equally proportioned subsamples taken from the soil surface to a depth of six to nine inches. Collect at least one composite sample per 40 acres for each permitted spray irrigation site.

Spray Irrigation Site with Soil Monitoring Requirements: LA 302 (Spray Irrigation Site 2)

Parameter	Limit	Units	Limit Type	Effective Period	Sample Type	Frequency	Notes
Area of Disposal, Used	96.0	acres	Instantaneous Maximum	Jan-Dec	Measurement	1/year	1
Crop Yield	Monitor Only	tons/acre	Calendar Year Total	Jan-Dec	Estimate	1/year	2
Flow Application Rate	0.597	MG/ac/year	Calendar Year Total	Jan-Dec	Calculation	1/year	3
Nitrogen, Total Annual Loading Rate	300	lb/ac/yr	Calendar Year Total Intervention	Jan-Dec	Calculation	1/year	4
Organic Matter, Total in Soil	Monitor Only	%	Calendar Year Maximum	Jan-Dec	Composite	1/year	5
pH, 1 to 1 Soil to Water	Monitor Only	SU	Calendar Year Maximum	Jan-Dec	Composite	1/year	5
Phosphorus, BRAY-1 Ext in Soil	Monitor Only	ppm	Calendar Year Maximum	Jan-Dec	Composite	1/year	5
Potassium, NH4AC, Exch in Soil	Monitor Only	ppm	Calendar Year Maximum	Jan-Dec	Composite	1/year	5
Protein, Crop, Crude	Monitor Only	%	Calendar Year Maximum	Jan-Dec	Grab	1/year	2
Salts, Water Soluble in Soil	3.0	mmhos/cm	Calendar Year Maximum Intervention	Jan-Dec	Composite	1/year	5

1. As a measure of acreage to which waste is applied.
2. Report on a dry weight basis. Report the date each time a crop is harvested. If a crop is harvested more than once during the growing season, determine this characteristic for each cutting.
3. Monitor the volume of wastewater that is reclaimed and reapplied to the spray irrigation site and report this value in the Annual Report.
4. Calculate the total annual loading rate as the flow-weighted sum of total annual mass Kjeldahl nitrogen and nitrate plus nitrite (as nitrogen) applied to the site from industrial spray irrigation, plus any nitrogen applied from other sources, divided by the acreage of the site. The limit applies to the sum of all sources of nitrogen applied to the site.
5. Sample before irrigation or application of commercial or other supplemental fertilizer. Collect composite soil samples from a mixture of 15 to 20 equally proportioned subsamples taken from the soil surface to a depth of six to nine inches. Collect at least one composite sample per 40 acres for each permitted spray irrigation site.

Spray Irrigation Site with Soil Monitoring Requirements: LA 305 (Spray Irrigation Site 3)

Parameter	Limit	Units	Limit Type	Effective Period	Sample Type	Frequency	Notes
Area of Disposal, Used	20.8	acres	Instantaneous Maximum	Jan-Dec	Measurement	1/year	1
Crop Yield	Monitor Only	tons/acre	Calendar Year Total	Jan-Dec	Estimate	1/year	2
Flow Application Rate	0.597	MG/ac/year	Calendar Year Total	Jan-Dec	Calculation	1/year	3
Nitrogen, Total Annual Loading Rate	300	lb/ac/yr	Calendar Year Total Intervention	Jan-Dec	Calculation	1/year	4
Organic Matter, Total in Soil	Monitor Only	%	Calendar Year Maximum	Jan-Dec	Composite	1/year	5
pH, 1 to 1 Soil to Water	Monitor Only	SU	Calendar Year Maximum	Jan-Dec	Composite	1/year	5
Phosphorus, BRAY-1 Ext in Soil	Monitor Only	ppm	Calendar Year Maximum	Jan-Dec	Composite	1/year	5
Potassium, NH4AC, Exch in Soil	Monitor Only	ppm	Calendar Year Maximum	Jan-Dec	Composite	1/year	5
Protein, Crop, Crude	Monitor Only	%	Calendar Year Maximum	Jan-Dec	Grab	1/year	2
Salts, Water Soluble in Soil	3.0	mmhos/cm	Calendar Year Maximum Intervention	Jan-Dec	Composite	1/year	5

1. As a measure of acreage to which waste is applied.
2. Report on a dry weight basis. Report the date each time a crop is harvested. If a crop is harvested more than once during the growing season, determine this characteristic for each cutting.
3. Monitor the volume of wastewater that is reclaimed and reapplied to the spray irrigation site and report this value in the Annual Report.
4. Calculate the total annual loading rate as the flow-weighted sum of total annual mass Kjeldahl nitrogen and nitrate plus nitrite (as nitrogen) applied to the site from industrial spray irrigation, plus any nitrogen applied from other sources, divided by the acreage of the site. The limit applies to the sum of all sources of nitrogen applied to the site.
5. Sample before irrigation or application of commercial or other supplemental fertilizer. Collect composite soil samples from a mixture of 15 to 20 equally proportioned subsamples taken from the soil surface to a depth of six to nine inches. Collect at least one composite sample per 40 acres for each permitted spray irrigation site.

Spray Irrigation Site with Soil Monitoring Requirements: LA 316 (Spray Irrigation Site 4)

Parameter	Limit	Units	Limit Type	Effective Period	Sample Type	Frequency	Notes
Area of Disposal, Used	24.0	acres	Instantaneous Maximum	Jan-Dec	Measurement	1/year	1
Crop Yield	Monitor Only	tons/acre	Calendar Year Total	Jan-Dec	Estimate	1/year	2
Flow Application Rate	0.326	MG/ac/year	Calendar Year Total	Jan-Dec	Calculation	1/year	3
Nitrogen, Total Annual Loading Rate	300	lb/ac/yr	Calendar Year Total Intervention	Jan-Dec	Calculation	1/year	4
Organic Matter, Total in Soil	Monitor Only	%	Calendar Year Maximum	Jan-Dec	Composite	1/year	5
pH, 1 to 1 Soil to Water	Monitor Only	SU	Calendar Year Maximum	Jan-Dec	Composite	1/year	5
Phosphorus, BRAY-1 Ext in Soil	Monitor Only	ppm	Calendar Year Maximum	Jan-Dec	Composite	1/year	5
Potassium, NH4AC, Exch in Soil	Monitor Only	ppm	Calendar Year Maximum	Jan-Dec	Composite	1/year	5
Protein, Crop, Crude	Monitor Only	%	Calendar Year Maximum	Jan-Dec	Grab	1/year	2
Salts, Water Soluble in Soil	3.0	mmhos/cm	Calendar Year Maximum Intervention	Jan-Dec	Composite	1/year	5

1. As a measure of acreage to which waste is applied.
2. Report on a dry weight basis. Report the date each time a crop is harvested. If a crop is harvested more than once during the growing season, determine this characteristic for each cutting.
3. Monitor the volume of wastewater that is reclaimed and reapplied to the spray irrigation site and report this value in the Annual Report.
4. Calculate the total annual loading rate as the flow-weighted sum of total annual mass Kjeldahl nitrogen and nitrate plus nitrite (as nitrogen) applied to the site from industrial spray irrigation, plus any nitrogen applied from other sources, divided by the acreage of the site. The limit applies to the sum of all sources of nitrogen applied to the site.
5. Sample before irrigation or application of commercial or other supplemental fertilizer. Collect composite soil samples from a mixture of 15 to 20 equally proportioned subsamples taken from the soil surface to a depth of six to nine inches. Collect at least one composite sample per 40 acres for each permitted spray irrigation site.

Spray Irrigation Site with Soil Monitoring Requirements: LA 317 (Spray Irrigation Site 5)

Parameter	Limit	Units	Limit Type	Effective Period	Sample Type	Frequency	Notes
Area of Disposal, Used	4.0	acres	Instantaneous Maximum	Jan-Dec	Measurement	1/year	1
Crop Yield	Monitor Only	tons/acre	Calendar Year Total	Jan-Dec	Estimate	1/year	2
Flow Application Rate	0.326	MG/ac/year	Calendar Year Total	Jan-Dec	Calculation	1/year	3
Nitrogen, Total Annual Loading Rate	300	lb/ac/yr	Calendar Year Total Intervention	Jan-Dec	Calculation	1/year	4
Organic Matter, Total in Soil	Monitor Only	%	Calendar Year Maximum	Jan-Dec	Composite	1/year	5
pH, 1 to 1 Soil to Water	Monitor Only	SU	Calendar Year Maximum	Jan-Dec	Composite	1/year	5
Phosphorus, BRAY-1 Ext in Soil	Monitor Only	ppm	Calendar Year Maximum	Jan-Dec	Composite	1/year	5
Potassium, NH4AC, Exch in Soil	Monitor Only	ppm	Calendar Year Maximum	Jan-Dec	Composite	1/year	5
Protein, Crop, Crude	Monitor Only	%	Calendar Year Maximum	Jan-Dec	Grab	1/year	2
Salts, Water Soluble in Soil	3.0	mmhos/cm	Calendar Year Maximum Intervention	Jan-Dec	Composite	1/year	5

1. As a measure of acreage to which waste is applied.
2. Report on a dry weight basis. Report the date each time a crop is harvested. If a crop is harvested more than once during the growing season, determine this characteristic for each cutting.
3. Monitor the volume of wastewater that is reclaimed and reapplied to the spray irrigation site and report this value in the Annual Report.
4. Calculate the total annual loading rate as the flow-weighted sum of total annual mass Kjeldahl nitrogen and nitrate plus nitrite (as nitrogen) applied to the site from industrial spray irrigation, plus any nitrogen applied from other sources, divided by the acreage of the site. The limit applies to the sum of all sources of nitrogen applied to the site.
5. Sample before irrigation or application of commercial or other supplemental fertilizer. Collect composite soil samples from a mixture of 15 to 20 equally proportioned subsamples taken from the soil surface to a depth of six to nine inches. Collect at least one composite sample per 40 acres for each permitted spray irrigation site.

Spray Irrigation Site with Soil Monitoring Requirements: LA 318 (Spray Irrigation Site 6)

Parameter	Limit	Units	Limit Type	Effective Period	Sample Type	Frequency	Notes
Area of Disposal, Used	33.6	acres	Instantaneous Maximum	Jan-Dec	Measurement	1/year	1
Crop Yield	Monitor Only	tons/acre	Calendar Year Total	Jan-Dec	Estimate	1/year	2
Flow Application Rate	0.326	MG/ac/year	Calendar Year Total	Jan-Dec	Calculation	1/year	3
Nitrogen, Total Annual Loading Rate	300	lb/ac/yr	Calendar Year Total Intervention	Jan-Dec	Calculation	1/year	4
Organic Matter, Total in Soil	Monitor Only	%	Calendar Year Maximum	Jan-Dec	Composite	1/year	5
pH, 1 to 1 Soil to Water	Monitor Only	SU	Calendar Year Maximum	Jan-Dec	Composite	1/year	5
Phosphorus, BRAY-1 Ext in Soil	Monitor Only	ppm	Calendar Year Maximum	Jan-Dec	Composite	1/year	5
Potassium, NH4AC, Exch in Soil	Monitor Only	ppm	Calendar Year Maximum	Jan-Dec	Composite	1/year	5
Protein, Crop, Crude	Monitor Only	%	Calendar Year Maximum	Jan-Dec	Grab	1/year	2
Salts, Water Soluble in Soil	3.0	mmhos/cm	Calendar Year Maximum Intervention	Jan-Dec	Composite	1/year	5

1. As a measure of acreage to which waste is applied.
2. Report on a dry weight basis. Report the date each time a crop is harvested. If a crop is harvested more than once during the growing season, determine this characteristic for each cutting.
3. Monitor the volume of wastewater that is reclaimed and reapplied to the spray irrigation site and report this value in the Annual Report.
4. Calculate the total annual loading rate as the flow-weighted sum of total annual mass Kjeldahl nitrogen and nitrate plus nitrite (as nitrogen) applied to the site from industrial spray irrigation, plus any nitrogen applied from other sources, divided by the acreage of the site. The limit applies to the sum of all sources of nitrogen applied to the site.
5. Sample before irrigation or application of commercial or other supplemental fertilizer. Collect composite soil samples from a mixture of 15 to 20 equally proportioned subsamples taken from the soil surface to a depth of six to nine inches. Collect at least one composite sample per 40 acres for each permitted spray irrigation site.

Spray Irrigation Site with Soil Monitoring Requirements: LA 319 (Spray Irrigation Site 7)

Parameter	Limit	Units	Limit Type	Effective Period	Sample Type	Frequency	Notes
Area of Disposal, Used	4.6	acres	Instantaneous Maximum	Jan-Dec	Measurement	1/year	1
Crop Yield	Monitor Only	tons/acre	Calendar Year Total	Jan-Dec	Estimate	1/year	2
Flow Application Rate	0.326	MG/ac/year	Calendar Year Total	Jan-Dec	Calculation	1/year	3
Nitrogen, Total Annual Loading Rate	300	lb/ac/yr	Calendar Year Total Intervention	Jan-Dec	Calculation	1/year	4
Organic Matter, Total in Soil	Monitor Only	%	Calendar Year Maximum	Jan-Dec	Composite	1/year	5
pH, 1 to 1 Soil to Water	Monitor Only	SU	Calendar Year Maximum	Jan-Dec	Composite	1/year	5
Phosphorus, BRAY-1 Ext in Soil	Monitor Only	ppm	Calendar Year Maximum	Jan-Dec	Composite	1/year	5
Potassium, NH4AC, Exch in Soil	Monitor Only	ppm	Calendar Year Maximum	Jan-Dec	Composite	1/year	5
Protein, Crop, Crude	Monitor Only	%	Calendar Year Maximum	Jan-Dec	Grab	1/year	2
Salts, Water Soluble in Soil	3.0	mmhos/cm	Calendar Year Maximum Intervention	Jan-Dec	Composite	1/year	5

1. As a measure of acreage to which waste is applied.
2. Report on a dry weight basis. Report the date each time a crop is harvested. If a crop is harvested more than once during the growing season, determine this characteristic for each cutting.
3. Monitor the volume of wastewater that is reclaimed and reapplied to the spray irrigation site and report this value in the Annual Report.
4. Calculate the total annual loading rate as the flow-weighted sum of total annual mass Kjeldahl nitrogen and nitrate plus nitrite (as nitrogen) applied to the site from industrial spray irrigation, plus any nitrogen applied from other sources, divided by the acreage of the site. The limit applies to the sum of all sources of nitrogen applied to the site.
5. Sample before irrigation or application of commercial or other supplemental fertilizer. Collect composite soil samples from a mixture of 15 to 20 equally proportioned subsamples taken from the soil surface to a depth of six to nine inches. Collect at least one composite sample per 40 acres for each permitted spray irrigation site.

Waste stream station: Industrial by-product to land application (WS 302 and WS 303)

Analytical requirements for specific industrial by-products.

		Dairy			All			Miscellaneous
Analyte	**Units[1]**	**Whey**	**Antibiotic milk or milk**	**Rinse and wash waters**	**Primary and secondary wastewater treatment sludges**	**Vegetative Wastes[2]**	**Vehicle wash**	**Miscellaneous by-products and wash waters**
Chloride, Dry Weight (as Cl)	mg/kg	X		X	X	X	X	X
Nitrogen, Ammonia, Dry Weight	%			X	X		X	X
Nitrogen, Kjeldahl, Total, Solids Fraction, Dry Weight	%	X	X	X	X	X	X	X
Oil and Grease, Total Recoverable (Hexane Extraction)	mg/kg			X[3]	X[3]		X	X[3]
pH, sludge	SU	X		X	X		X	X
Phosphorus, Total	%	X	X	X	X		X	X
Sodium, Dry Weight (as Na)	mg/kg	X		X	X	X	X	X
Solids, Total	%	X	X	X	X	X	X	X
Solids, Total Volatile, Percent of Total	%				X			X
Process controls: • Temperature • Solids retention time	Varies				X			X

[1]Reported on a dry weight basis, except for pH and Total Solids.

[2]Sampling is not required for sweet corn silage if the Best Management Practices in Appendix A are followed.

[3]Required only at facilities where fats, oils, and grease are present in the waste stream

Minimum analysis frequencies for industrial by-products (IBPs).

When Total Solids of IBP are greater than or equal to 20%, use this analysis frequency	*When Total Solids of IBP are less than 20%, use this analysis frequency*	
Quantity land applied per year (dry tons)	**Quantity land applied per year (million gallons)**	**Minimum frequency of analysis per cropping year**
0	0	No sampling required
> 0 but < 320	> 0 but < 1.5	Once
> 320 but < 1,650	> 1.5 but < 8.0	Four
> 1,650 but < 16,500	> 8.0 but < 80	Six
> 16,500	> 80	Twelve

Land application station: Land application sites (LA 307 to LA 315)

Analytical requirements for specific land application sites.

Parameter	Limit	Units	Limit type	Effective period	Sample type	Frequency	Notes
Organic matter, Total in soil	Monitor only	%	Crop year max	Sep-Aug	Composite	1 x 3 years	1
pH	Monitor only	SU	Crop year max	Sep-Aug	Composite	1 x 3 years	1
Phosphorus, BRAY-1 Ext in soil	200	ppm	Crop year max	Sep-Aug	Composite	1 x 3 years	1
Potassium, NH4AC, Exch in soil	Monitor only	ppm	Crop year max	Sep-Aug	Composite	1 x 3 years	1
Salts, water Soluble in soil	4	mmohs/cm	Crop year max	Sep-Aug	Composite	1 x 3 years	1
Soil texture	Monitor only	-	Crop year max	Sep-Aug	Composite	1 x 3 years	1,2

[1]Soil testing must be conducted on each site that is used for land application ***within the three-year period prior to the date that the land application is conducted***. The soil tests submitted with the 'Industrial By-Products Site Notification' form must be collected no greater than six months prior to submittal of the form. The composite sample shall consist of a mixture of 15-20 sub-samples taken in the plow layer for every 40 acres.

[2]USDA Classification.

8. Appendix A: Industrial By-Products

Table 1. Slope restrictions for application sites where industrial by-product is applied.

Slope (percent)	Surface application	Injection or Immediate Incorporation[1]
0 - 6	Allowed	Allowed
> 6 - 12	Not allowed	Allowed
> 12	Not allowed	Not allowed

[1]Immediate incorporation is mixing of the by-product into the soil with some form of tillage within 48 hours of application.

Table 2. Minimum separation distances from the land application site.

		Separation distances (feet)		
Feature		**Surface applied**	**Incorporated within 48 hours**	**Injected**
Private drinking water supply wells		200 feet	200 feet	200 feet
Public drinking water supply wells		1000 feet	1000 feet	1000 feet
Downgradient lakes, rivers, streams, type 3, 4, and 5 wetlands, intermittent streams[1], or tile inlets connected to these surface water features, and sinkholes	Slope 0% to 6%	200 feet	50 feet	50 feet
	Slope 6% to 12%	Not Allowed	100 feet	100 feet
	Winter (0% to 2%)	600 feet	Not applicable	Not applicable
Grassed water ways[2]	Slope 0% to 6%	100 feet	33 feet	33 feet
	Slope 6% to 12%	Not allowed	33 feet	33 feet

[1]Intermittent stream means a drainage channel with definable banks that provides for runoff flow to any of the surface waters listed in the above table during snow melt or rainfall events.

[2]Grassed waterways are natural or constructed and seeded to grass as protection against erosion. Separation distances are from the centerline of grassed waterways. For a grassed waterway, which is wider than the separation distances required, application is allowed to the edge of the grass strip.

Table 3. Additional minimum separation distances from application sites when the industrial by-product contains pathogens.

	Separation distances (feet)		
Feature	**Surface applied**	**Incorporated within 48 hours**	**Injected**
Residences	200 feet[1]	200 feet[1]	100 feet
Residential development	600 feet[1]	600 feet[1]	300 feet
Public contact site	600 feet	600 feet	300 feet
Depth to bedrock	5 feet[2]	5 feet[2]	5 feet[2]
Depth to seasonal high water table or drain tile[3]	5 feet[2]	5 feet[2]	5 feet[2]
Private supply wells	200 feet	200 feet	200 feet
Public supply wells	1000 feet	1000 feet	1000 feet
Irrigation wells	50 feet	25 feet	25 feet

[1]This distance may be reduced with written permission from all persons responsible for residential developments, places of recreation, and all persons inhabiting a residence within the designated separation distance.

[2]The separation distance may be decreased to 3 feet if the soil is not classified as a "highly permeable soil," as defined by this permit.

[3]The depth to subsurface drainage tiles shall be considered the depth to the seasonal high water table for sites that are designed according to Natural Resources Conservation Services engineering standards and criteria.

Table 4. Maximum allowable nitrogen application rates for selected crops.

Crop	**Maximum allowable nitrogen application rates - When actual yields are not measured (lb/acre)**	**Maximum allowable nitrogen application rates - When actual yields are measured**
Non-harvested vegetation, set aside acreage, cover crops[1]	50	–
Soybeans	–	Yield goal (bu/acre) x 3.5 lb N
Alfalfa	200	Yield goal (tons/acre) x 50 lb N/acre
Clover, alfalfa-grass, or clover-grass mixtures	100	Yield goal (tons/acre) x 50 lb N/acre
Brome grass, orchard grass, or timothy	75	Yield goal (tons/acre) x 30 lb N/acre

[1]This category does not include land used as pasture.

Table 5. Minimum separation distances for storage areas and structures of industrial by-products.

Feature		Short-term storage area/structure	Long-term storage area/structure	Permanent storage structure
Depth to bedrock		3 feet	5 feet[1]	3 feet
Depth to seasonal high water table or drain tile[2]		3 feet	5 feet[1]	3 feet
Private drinking water supply wells		200 feet	200 feet	200 feet
Public drinking water supply wells		1000 feet	1000 feet	1000 feet
Irrigation wells		50 feet	50 feet	50 feet
Residences		200 feet	1000 feet[3]	1000 feet[3]
Residential development		600 feet	1000 feet	1000 feet
Public contact site		600 feet	1000 feet	1000 feet
Adjacent properties/roads		100 feet	100 feet	100 feet
Downgradient lakes, rivers, streams, type 3, 4, and 5 wetlands, intermittent streams[5], or tile inlets connected to these surface water features, and sinkholes	Slope 0% to 2%	200 feet	1000 feet[4]	1000 feet[4]
	Slope 2% to 12%	Not allowed	Not allowed	Not allowed
Grassed water ways[6]	Slope 0% to 2%	100 feet	100 feet	100 feet
	Slope 2% to 12%	Not allowed	Not allowed	Not allowed

[1]The separation distance may be decreased to three feet if the storage area or structure includes an engineered pad or liner.

[2]The depth to subsurface drainage tiles shall be considered the depth to the seasonal high water table for sites that are designed according to Natural Resources Conservation Services engineering standards and criteria.

[3]Storage of industrial by-products at a location of 40 acres or less shall not take place within 400 feet from any residence. This separation distance shall increase 100 feet for every additional ten acres of land application area, or portion thereof, up to a maximum of 1,000 feet. Separation distances may be reduced if written permission is obtained from all persons residing within the otherwise protected distance.

[4]Storage of industrial by-product shall not take place within 1,000 feet of any downgradient surface waters, wetlands, tile inlets, or sinkholes unless measures are taken to control runoff; in which case, the separation distance may be reduced to 200 feet.

[5]Intermittent stream means a drainage channel with definable banks that provides for runoff flow to any of the surface waters listed in the above table during snow melt or rainfall events.

[6]Grassed waterways are natural or constructed and seeded to grass as protection against erosion. Separation distances are from the centerline of grassed waterways. For a grassed waterway, which is wider than the separation distances required, application is allowed to the edge of the grass strip.

BEST MANAGEMENT PRACTICES FOR
LAND APPLIED SWEET CORN SILAGE WASTE

University of Minnesota
Southern Experiment Station
Departments of Horticultural Science and Soil, Water, and Climate

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Recommendations

These recommendations are based on a single silage waste application rate of 100 wet tons/A. Application rates higher than 100 t/A were investigated, however they were not practical due to great difficulty in effectively incorporating the silage waste into the soil and possible environmental consequences. In addition, our findings will be summarized within the context of nitrogen availability from the silage in order to be independent of specific crop needs. It is our intent that the amount of nitrogen release from silage waste will be credited to the total nitrogen needs of the subsequent crop.

First, the following recommendations are based on the following properties of sweet corn silage waste:

1. 18% dry matter
2. Contains 1.2% Nitrogen (on a dry weight basis)

Application rates up to 100 wet tons/A, when incorporated into the soil, do not pose any environmental threat.

- It is **recommended that the silage waste be moldboard plowed** to ensure adequate incorporation and subsequent nitrogen release. Chisel plowing the silage waste does not provide for adequate incorporation and as a result, there is limited nitrogen release from the silage waste.

- In the **first production year** following silage waste application, about 20% of the total nitrogen contained within the silage is released. This translates into 80-85 lbs. N/A that is available to the subsequent crop and should be credited to its total nitrogen needs.

- In **both the second and third production years** following silage waste application, about 6% of the total nitrogen contained within the silage is released. This translates into 25-30 lbs. N/A that is available to the crop and should be credited to its total nitrogen needs.

- In the **fourth production year** following silage waste application, < 3% of the total nitrogen contained within the silage is released and available for crop uptake. Because of this low amount of nitrogen release, it is recommended that full nitrogen fertilizer recommendations for the crop to be grown be applied. The results of our study are also represented as a formula, independent of the amount of silage waste applied, as is comprised of the following:
  Pounds of N release/yr (Y) = Wet tons applied each year (A) * [2000 lb./ton * 18% DM * 1.2% N] * B

Year after application factor (B) where:

B = 0.20 for year 1
0.06 for year 2

0.06 for year 3
0.03 for year 4

So in summation, the formula is:
Y = A * 4.32 * B

Example #1:
100 T/A silage waste was applied in fall of 1996; how much N will be available for the 1997 crop?

Y = 100 * 4.32 * 0.20
Y = 86 lbs. N released

Example #2:
100 T/A silage waste was applied in fall of 1995 and again in fall of 1996; how much N will be released for the 1997 crop?

Y = [100 * 4.32 * 0.06 (for 1995)] + [100 * 4.32 * 0.20 (for 1996)]
Y = 26 + 86 = 112 lbs. N released

9. Appendix B: Chemical Additives

Chemical additives currently approved for use at this facility:

Name	Average addition rate	Discharge location
Updated list is pending		