PERMIT FACT SHEET

General Information

Permit Number:	WI-0057657-07-0
Permit Name:	Landspreading of Industrial Sludge
Permittee:	Point source dischargers in the state of Wisconsin
Discharge Location:	Statewide
Receiving Water:	Discharges to groundwater via landspreading on department approved sites in the state of Wisconsin.

Section 283.35, Wis. Stats., authorizes the Department of Natural Resources (hereafter department) to issue a general permit (GP) for discharge from specified categories or classes of point sources if they are not a significant contributor of pollution. It is more efficient for the department to cover multiple facilities under a GP rather than issuing individual permits for each facility when no special circumstances warrant site-specific permit requirements or limitations. The GP program is intended to minimize effort for the permittee and the department while ensuring that groundwater quality standards are met.

When a GP is issued, all facilities meeting its requirements may be covered by the GP. Upon receipt of a request of coverage and determination that the facility is eligible, the department sends a letter granting coverage and a copy of the permit to the facility. The letter includes the department's determination that the permittee's discharge is covered under the GP.

A permittee may need to be covered under more than one GP, depending on the different types of waste streams that a facility discharges. For example, if a cheese processor separates their normal strength wastewater for further treatment and whey. The landspreading of the whey may need to be covered under the "Landspreading of Industrial Liquid Wastes" GP. The sludge generated during the treatment of the normal strength wastewater may need to be covered under the "Landspreading of Industrial Sludge" GP.

Section 214.10, Wis. Adm. Code, states that the department may withdraw a discharge from the coverage of this general Wisconsin Pollution Discharge Elimination System (WPDES) permit and issue an individual WPDES permit pursuant to s. 283.35, Wis. Stats., on its own motion, or upon the petition of any general permittee, affected state, or 5 or more persons affected by the disposal practices of this general permittee. If the department determines that a discharge covered by this general WPDES permit is better regulated by an individual WPDES permit, it shall notify the affected person in writing of the need to apply for an individual permit and shall provide the person with an application form. Any person so notified shall submit that application form within 60 days of receipt of the notice and application form.

Changes from Previous Permit

Several changes are proposed to the "Landspreading of Industrial Sludge" General Permit (WI-0057657-06). Changes are proposed to many sections of the proposed permit to clarify requirements specified in chs. NR 140, 205, 213, and 214, Wis. Adm. Code. Changes to the format of the permit and fact sheet were made to be consistent with standard language in other WPDES general permits.

The department added the following new sections to the "Landspreading of Industrial Sludge" general permit: Sections 2, 3.3, 4.1, 4.2, and 7.4.

Due to the insertion of Sections 2 and 4, the following section numbers have changed:

- Section 5 ("Management Plan") of the prior permit is Section 7 in this permit.
- Section 6 ("Operational Requirements") of the prior permit is Section 8 in this permit.
- Section 7 ("Standard Requirements") of the prior permit is Section 9 in this permit.

- Section 8 (“Summary of Reports Due”) of the prior permit is Section 10 in this permit.

The department increased sampling frequency for Outfalls 001 and 002 (Sections 6.2.1 and 6.2.2, respectively) from annual to quarterly. Increased sampling frequency ensures representative sample collection and accurate calculation of pollutant loading rates (lbs./acre/crop year).

Important note: Monitoring is only required during periods of active landspreading.

Section 9 (“Standard Requirements”) includes several updates to maintain consistency with other WPDES general permits.

The Notice of Intent and Daily Log have been added to Section 10 (“Summary of Reports Due”).

General Permit Description

The sludge spreading or “landspreading” of industrial sludge is regulated by ch. NR 214, Wis. Adm. Code, entitled “Land Treatment of Industrial Liquid Waste, By-product Solids and Sludges.” The regulation of industrial sludge is necessary because experience has shown that improper management of these industrial sludges can lead to surface water or groundwater pollution. The department is responsible for approving the suitability of sites used for landspreading of industrial sludges and to protect the groundwater from contamination.

This permit is intended to be issued for the infrequent or temporary spreading of industrial sludges containing primarily organic material and crop nutrients, and small amounts of metals, and which have been known to have beneficial properties as a soil conditioner or fertilizer (reference: sub. NR 214.02(1), Wis. Adm. Code). This includes but is not limited to sludges generated by fruit and vegetable processing, dairy products processing, meat processing (including slaughterhouses), fish and poultry products processing, mink raising operations, aquaculture, and any other industrial, commercial, or agricultural operation meeting the applicability criteria.

The following situations are examples of how this permit can be used to regulate landspreading of industrial sludge:

1. Landspreading of Small Volumes of Industrial Sludges

   If a food processor has a small treatment system that generates a small quantity of industrial sludge (infrequently landspread), then this discharge can be regulated with this GP. However, if these dischargers have a specific WPDES permit for a wastewater discharge, all discharges, including sludge disposal, shall be regulated by the individual WPDES permit.

2. Short Term or One-Time Disposal

   Occasionally an industrial wastewater treatment system is emptied for maintenance and large deposits of industrial sludge are discovered. This situation most often occurs when repairs are needed to aeration basins or aerated lagoons. It is important to remove and dispose of the sludge as soon as possible so that the industrial wastewater treatment system can be put back in operation. Since this is a one-time operation that will be completed in accordance with a department-approved management plan, a general permit can be issued in lieu of an individual WPDES.

3. Interim Regulation

   Until such time as the department can issue, reissue, or modify site individual permits for entities that landspread industrial sludges, this GP can be used as interim WPDES permit. This excludes industrial sludges containing or requiring monitoring for oil and grease, nitrate nitrogen, chemical oxygen demand (COD), volatile organic chemicals (VOCs), bio-accumulating toxic substances and sodium, mercury, arsenic, chromium, etc., since these cannot be added to the general permit requirements. The situation of interim regulation shall be limited

to extraordinary situations and is only likely to occur for a biological pretreatment system as most other treatment systems will already require an individual WPDES permit for discharge of the treated wastewater. An independent contractor that manages the disposal of industrial sludge may be covered under this permit in this case. In all cases, the permittee must develop and follow a management plan approved by this department.

1 Applicability Criteria

1.1 Activities Covered

The permit is applicable to sludge spreading system or commonly referred to as landspreading of low volume sludges from an industrial, commercial, or agricultural facility to a land treatment system. "Sludge" means the accumulated solids generated during the biological, physical, or chemical treatment, coagulation or sedimentation of water or wastewater as defined in sub. NR 214.03(34), Wis. Adm. Code. "Land treatment system" means a system that utilizes the physical, chemical, and biological abilities of the soil to decompose pollutants in the wastes as defined in sub. NR 214.03(24), Wis. Adm. Code. All industrial sludges shall have no detrimental effect on soils, vegetation or groundwater of a land treatment system and shall have beneficial properties as a soil conditioner or fertilizer as specified in sub. NR 214.02(1), Wis. Adm. Code).

1.2 Activities Not Covered

This permit is not applicable to landspreading discharges that meet any of the following conditions:

a. Industrial By-Product Solids

The landspreading of by-product solids are not covered by this GP. "By-product solids" means waste materials from the animal product or food processing industry including, but not limited to: remains of butchered animals, paunch manure and vegetable waste materials such as leaves, cuttings, peelings and actively fermenting sweet corn silage generated which result in a point source discharge to a land treatment system as defined in sub. NR 214.03(4), Wis. Adm. Code. By-product solids may be covered under the "Landspreading of By-Product Solids" general permit WI-0057665 or an individual WPDES permit.

b. Industrial Liquid Wastes

The landspreading of industrial liquid wastes is not covered by this GP. "Liquid wastes" means process wastewater and waste liquid products, including silage leachate, whey, whey permeate, whey filtrate, contact cooling water, cooling or boiler water containing water treatment additives, and wash water generated in industrial, commercial, and agricultural operations which result in a point source discharge to a land treatment system as defined in sub. NR 214.03(27), Wis. Adm. Code. Industrial liquid wastes may be covered under the "Landspreading of Industrial Liquid Wastes" general permit WI-0055867 or an individual WPDES permit.

c. Domestic Sewage Sludges

The land application of domestic sewage sludges is not covered by this GP. "Sewage sludge" or "biosolids" means the solid, semi-solid or liquid residue generated during the treatment of domestic sewage in a treatment works. Sewage sludge includes scum or solids removed in primary, secondary, or advanced wastewater treatment processes and material derived from sewage sludge as specified in sub. NR 204.03(55), Wis. Adm. Code. "Domestic sewage" means waste and wastewater from humans or household operations that is discharged to or otherwise enters a treatment works as defined in sub. NR 204.03(17), Wis. Adm. Code. The land application of sewage sludges shall be covered under an individual WPDES permit.

d. Septage

The landspreading of septage is not covered by this GP. "Septage" means the scum, liquid, sludge, or other waste in any of the following: a) a septic or holding tank, dosing chamber, grease interceptor, seepage bed, seepage pit, seepage trench, distribution cell, or other component of private onsite wastewater treatment systems, or b) a privy or portable restroom system as defined in sub. NR 113.03(55), Wis. Adm. Code.

e. Industrial Sludge Exceeds High Quality Metal Concentrations

The landspreading of industrial sludge that exceed the high-quality concentrations provided in Table 1 (Section 6.8) of the general permit, is not covered by this GP. An individual WPDES permit is required for these industrial sludges in order to more frequently monitor and track metal addition to landspreading fields. However, the department may allow the applicant to be covered under this general permit in the interim until an individual WPDES permit is issued or modified to include the landspreading discharge.

f. Other Methods of Disposal

Any portion of industrial sludge that is hauled to another WPDES permitted facility such as a publicly owned treatment works (POTW), a landfill, an incinerator, a livestock feeding operation, or a contract hauler is not covered under this GP. Rather, this GP applies only to landspreading of industrial sludges directly to department approved landspreading sites.

g. Toxic or Hazardous Substances

The landspreading of industrial sludges that contain toxic or hazardous substances that are required to be reported under ch. NR 706, Wis. Adm. Code, is not authorized by this permit in accordance with s. NR 214.05, Wis. Adm. Code. Exemptions for landspreading discharge of these substances require an individual permit which provides the oversight, monitoring and discharge limitations necessary to protect public health and the waters of the State. The discharges containing only toxic or hazardous substances to land treatment systems are prohibited as specified in s. NR 664.0270, Wis. Adm. Code. Additional information and data on per/polyfluoroalkyl substances (PFAS) is available at https://dnr.wisconsin.gov/topic/PFAS

h. Landspreading Requirements and Groundwater Standards

The landspreading discharges from facilities eligible for this GP are not expected to exceed groundwater standards. Facilities with landspreading discharges that have a reasonable potential to violate groundwater standards in ch. NR 140, Wis. Adm. Code, may be issued an individual WPDES permit.

i. Landspreading of Solid Waste

The landspreading of industrial sludges that are regulated under the provisions of ch. NR 518, Wis. Adm. Code, are not eligible under this permit in accordance with s. NR 214.02, Wis. Adm. Code. Chapter NR 518, Wis. Adm. Code, entitled “Landspreading of Solid Waste”, exempts vegetable waste specifically and has a general exemption for non-detrimental wastes applied as a soil conditioner or fertilizer. The wastes regulated by the GP must be exempt from ch. NR 518, Wis. Adm. Code.

j. Wetlands

This permit does not cover landspreading discharges of industrial sludges to wetlands. “Wetlands” means an area where water is at, near or above the land surface long enough to be capable of supporting aquatic or hydrophytic vegetation and which has soils indicative of wet conditions as defined in s. NR 214.03(38), Wis. Adm. Code. In accordance with s. NR 214.18(2)(e), Wis. Adm. Code, sludge may not be spread on wetlands or on areas subject to flooding or ponding.

k. Surface Waters

This permit does not cover landspreading discharges of industrial sludges to surface waters. "Surface water" means those portions of Lake Michigan and Lake Superior within the boundaries of Wisconsin, all lakes, bays, rivers, streams, springs, ponds, impounding reservoirs, marshes, water courses, drainage systems, and other surface water, natural or artificial, public, or private within the state or under its jurisdiction as defined in sub. NR 214.3(64), Wis. Adm. Code. In accordance with

s. NR 214.18(2)(d), Wis. Adm. Code, sludge may not be surface spread within 200 feet from any surface water course, dry run, or wetlands, except that if a vegetative buffer strip is maintained between the site and the surface water, the department may approve a reduced separation distance to 100 feet. If the sludge is incorporated in the soil, the separation distance from any surface water may be reduced to a minimum of 50 feet.

l. Endangered and Threatened Resources

Landspreading discharges that affect endangered and threatened resources are not eligible for this permit, unless the department determines that the discharges comply with the endangered and threatened resource protection requirements of s. 29.604, Wis. Stats., and ch. NR 27, Wis. Adm. Code. Facilities with discharges that require more oversight to ensure that they do not violate these protection requirements may need to be covered by an individual permit.

m. Discharges within Tribal Lands

The department lacks the authority to issue WPDES permits within tribal lands due to the state delegation agreement with U.S. EPA. In such instances, the Tribe or U.S. EPA regulates the landspreading discharge and would issue a permit.

n. Contract Haulers and Facilities that Comingle Industrial Sludges

This GP does not apply to contract haulers that transport or landspread industrial sludge. The landspreading of industrial sludges that are mixed or comingled with other industrial wastes are not eligible under this GP. The department's intent for this GP is not to be used for contract haulers servicing multiple industrial customers generating dissimilar industrial sludge solids as this can lead to a greater risk of surface water or groundwater pollution. In the event that a contract hauler landspreads mixed, dissimilar sludge from multiple industries, an individual WPDES permit is required.

2 Application for Permit Coverage

The department has retained permit application requirements in the reissued permit. The permit application requirements assures that all the necessary discharge information is properly reported to the department and will help the department determine if a discharge is eligible for the general permit. Data provided will be entered into the department permitting database to facilitate setting-up discharge monitoring reports and compliance monitoring that may be required. The sections below explain the rationale and assumptions used in deriving the permit application requirements for this general permit.

Changes from Previous Permit:
Section 2, ("Application for Permit Coverage") includes updated application requirements and replaces information found in Sections 7.1.1-7.1.2 of the prior permit ("Request for Coverage" and "Department Coverage Determination").

2.1 New Permittees

2.1.1 Submittal of a Notice of Intent

In accordance with s. NR 205.08(3), Wis. Adm. Code, on a case−by−case basis the department may by letter require a discharger to submit a notice of intent (NOI) to be covered by a general permit. Additionally, general permits shall specify the deadlines for submitting NOI to be covered under the permit as specified by 40 CFR 122.28(b)(2)(iii). The applicant must submit a complete NOI under the general permit to the department at least thirty (30) business days before the expected start date of discharge. As of December 21, 2020, all NOIs submitted in compliance with this section must be submitted electronically by the discharger in compliance with 40 CFR 122.28(b)(2)(i) and 40 CFR 127. New permittees must submit an eNOI to obtain coverage under this general permit using the online ePermitting System pursuant to 40 CFR Part 127.

2.1.2 NOI Review Time Period

The department will evaluate the information submitted in the eNOI to determine whether the eNOI is true, accurate, complete, and whether the facility is eligible for coverage under the general permit within 30 calendar days of receipt of the complete NOI and associated attachments pursuant to ss. NR 205.08(3), Wis. Adm. Code.

In accordance with s. NR 205.08(5), Wis. Adm. Code, if the department notifies an applicant that a discharge is ineligible for coverage under this general permit but still requires WPDES permit coverage, the applicant shall apply for and obtain coverage under an individual WPDES permit (or alternative general permit, if available) prior to discharging to the waters of the state. The necessary steps to apply for coverage under an individual permit can be found at the department website: http://dnr.wi.gov/topic/wastewater/PermitApplications.html.

2.1.3 Content of the NOI

The contents of the notice of intent shall be specified in the general permit and shall require the submission of information necessary for adequate program implementation, including at a minimum, the legal name and address of the owner or operator, the facility name and address, type of facility or discharges, the receiving stream(s), and other required data elements as identified in appendix A to part 127 pursuant to 40 CFR Part 122.28(b)(2)(ii)

2.1.4 NOI Attachments

Attachments to a NOI are considered a part of the NOI and must be submitted pursuant to ss. NR 205.08(3), Wis. Adm. Code.

2.1.5 Incomplete NOI

The department may require more information than what is provided in the notice of intent in order to determine if coverage under a general permit is appropriate. The applicant shall provide additional information requested by the department within 30 days from receipt of notification by the department pursuant to ss. NR 205.08(3), Wis. Adm. Code.

2.1.6 Granting of Permit Coverage to New Permittees

The department will transmit a coverage letter via email addressed to the permittee stating that the discharge from the facility is granted coverage under this general permit within 30 calendar days of receipt of the eNOI unless the department has otherwise notified the permittee of the need for additional information as identified in section 2.1.2 and 2.1.5 or the department determines that the permittee is ineligible for coverage under this general permit. The applicant may not discharge to a water of the state until a coverage letter has been received from the department. Initial coverage under this permit will become effective at a new facility beginning upon the Start Date specified by the department in the coverage letter in accordance with ss. NR 205.08(3), Wis. Adm. Code and 40 CFR 122.28(b)(2)(iv).

2.2 Existing Permittees

2.2.1 Granting of Permit Coverage to Existing Permittees

Any existing permittee that still meets the applicability criteria in Section 1 of this general permit and has an existing discharge that was previously covered under WPDES Permit No. WI-0057657-06-0 prior to the Effective Date of this general permit is automatically granted coverage under this general permit upon the Effective Date in accordance with ss. NR 205.08(3) and NR 216.22(9), Wis. Adm. Code and 40 CFR 122.28(b)(2)(iv). For existing permittees, coverage under this permit will become effective at an existing facility beginning upon the Effective Date as the Start Date of coverage in accordance with 40 CFR 122.28(b)(2)(iii).

The department will transmit a reissuance letter via mail addressed to the existing permittee stating that the discharge from the facility is granted continued coverage under this general permit in accordance with s. NR 205.08(3), Wis. Adm. Code and 40 CFR 122.28(b)(2)(iv).

3 Landspreading Site Requirements

Changes from Previous Permit:
Section 3.3 ("Landspreading Site Discharge Limitations") specifies that site discharge limitations must be specified in the WPDES permit or plans developed pursuant to a permit requirement (example: management plan).

3.1 Landspreading Site Approval

The permittee is authorized to landspread industrial sludge only on sites approved in writing by the department in accordance with par. NR 214.18(2)(a), Wis. Adm. Code. The department may specify any site use restrictions and discharge limitations per ss. NR 214.05 and NR 214.18, Wis. Adm. Code. The department may grant any case-by-case exemptions per s. NR 214.06, Wis. Adm. Code.

The permittee shall comply with all specified restrictions, discharge limitations, and exemptions. The permittee shall not landspread industrial sludge on a site until approval is received from the department for the site (reference: par. NR 214.18(2)(a), Wis. Adm. Code).

The permittee shall submit a landspreading site request package including the following information: 1) "Land Application Site Request" (form 3400-53); 2) aerial photograph for requested site; 3) soil map unit map of requested site; 4) proof of ownership (example: tax parcel map); and 5) any other relevant site information including field data that demonstrates the site complies with all applicable requirements of s. NR 214.17, Wis. Adm. Code.

3.2 Landspreading Site Location Criteria

The landspreading site location criteria are included by reference from s. NR 214.05 and sub. NR 214.18(2), Wis. Adm. Code, in the permit. The permittee must comply with all these requirements.

3.3 Landspreading Site Discharge Limitations

The discharge to a landspreading site may not exceed the hydraulic, organic, chloride, or other limitation specified in the WPDES permit or plans developed pursuant to a permit requirement. In determining discharge limitations, the department shall consider the past operating performance of the facility, nutrient uptake of the cover crop, site conditions, ability of the soil to treat the pollutants in the discharge, permeability and infiltration rate of the soil, other soil and geologic characteristics, the concentrations, and characteristics of pollutants in the discharge, and other relevant information (reference: par. NR 214.18(4)(a), Wis. Adm. Code).

4 Industrial Sludge Storage Requirements

Changes from Previous Permit:
Sections 4.1 (“Storage Criteria”) and 4.2 (“Odor Mitigation”) clarify chs. NR 213 and NR 214 storage requirements for industrial sludge.

4.1 Storage Criteria

Any system used for the storage or stacking of wastes prior to landspreading shall be designed and constructed in accordance with ch. NR 213, Wis. Adm. Code, or other design criteria as approved in the management plan. Plans and specifications shall be submitted to the department for approval of such storage or stacking systems (reference: sub. NR 214.18(3)(b), Wis. Adm. Code).

4.2 Odor Mitigation

Storage or stacking systems shall be sited and operated to minimize odors or other public nuisance conditions as specified in par. NR 214.18(3)(c), Wis. Adm. Code.

5 Reporting Requirements

Changes from Previous Permit:
Section 5.1 ("Daily Log)"): the daily log template found in Section 6.2.2 has been expanded to include more details than provided in the prior permit.

The permittee shall comply with the reporting requirements in the permit.

5.1 Daily Log

The permittee shall keep a daily log of all discharge and monitoring activity on log sheets in accordance with par. NR 205.07(1)(f), Wis. Adm. Code. At a minimum, the permittee shall record the parameters found in the permit on a daily basis. This includes the total daily volume of sludge hauled. The original log sheets shall be kept by the permittee as described under Section 9.2.5 "Records Retention" in the Standard Requirements. These records shall be made available to the department upon inspection or request.

5.2 Characteristic Reports (Forms 3400-49)

The analytical results from testing of sludges that are landspread shall be reported on the Characteristic Report Form 3400-49. The report form shall be submitted electronically and is due 21 days after the end of the reporting period whether or not waste is landspread in accordance with par. NR 214.18(5)(d), Wis. Adm. Code. For instance, if a parameter is to be sampled quarterly, the monitoring results are due 21 days following the end of each quarter. Following submittal of the electronic Characteristic Report Form 3400-49, this form shall be certified electronically via the "eReport Certify" page by a responsible executive officer, manager, partner or proprietor or duly authorized representative in accordance with par. NR 205.07(1)(g), Wis. Adm. Code. The "eReport Certify" page certifies that the electronic report form is true, accurate, and complete.

Note: Monitoring is only required during periods of active landspreading.

5.3 Annual Land Application Reports (Forms 3400-55)

The annual totals for the landspreading loadings of sludges to field spreading sites shall be submitted electronically on the Land Application Report Form 3400-55 by January 31, each year whether or not waste is landspread in accordance with par. NR 214.18(5)(d), Wis. Adm. Code. Amounts of waste shall be reported as dry weight. Following submittal of the electronic Land Application Report Form 3400-55, this form shall be certified electronically via the 'eReport Certify' page by a responsible executive officer, manager, partner or proprietor or duly authorized representative in accordance with par. NR 205.07(1)(g), Wis. Adm. Code. The 'eReport Certify' page certifies that the electronic report form is true, accurate, and complete.

5.4 Other Methods of Disposal or Distribution Reports (Forms 3400-52)

The permittee may submit electronically the Other Methods of Disposal or Distribution Report Form 3400-52 by January 31, each year when waste is hauled to another facility, landfilled, or incinerated. Following submittal of the electronic Other Methods of Disposal or Distribution Report Form 3400-52, this form shall be certified electronically via the 'eReport Certify' page by a responsible executive officer, manager, partner or proprietor or duly authorized representative in accordance with par. NR 205.07(1)(g), Wis. Adm. Code. The 'eReport Certify' page certifies that the electronic report form is true, accurate, and complete.

Note: This form is not a requirement and is completely voluntary, however, the department recommends that permittees fill this form out when sludges are hauled to another facility, landfilled, or incinerated. This form may be required as part of a conditional approval of a manure storage unit under the s. NR

214.06(1), Wis. Adm. Code “streamlined exemption” to discharge liquid industrial sludge into manure storage units.

6 Industrial Sludge Landspreading Requirements

Landspreading discharges include applying a controlled quantity of sludges uniformly onto, or incorporated into, soil surfaces in Wisconsin to utilize the physical, chemical, and biological abilities of the soil to decompose and treat the pollutants in the wastes.

Changes from Previous Permit:
The department increased sampling frequency for Outfall 001 (Section 6.2.1) and Outfall 002 (Section 6.2.2) from annual to quarterly. Increased sampling frequency ensures representative sample collection and accurate calculation of pollutant loading rates (example: Nitrogen pounds/acre/crop year). The daily log chart has been expanded to include more details than provided in the prior permit. Permittees may design their own daily landspreading log; however, this log must include all information outlined in the chart.

Important note: Monitoring is only required during periods of active landspreading.

6.1 Sampling Point(s)

The discharge shall be limited to landspreading of industrial sludges for the listed sampling point(s) on department approved landspreading sites or by hauling to another permitted facility.

Sampling Point Designation	
Sampling Point Number	**Sampling Point Location, Waste Type/Sample Contents and Treatment Description (as applicable)**
001	The landspreading of industrial sludges containing low concentrations of metals and nondetectable amounts of polychlorinated biphenyl compounds (PCBs) from an industrial, commercial, or agricultural facility to department approved landspreading sites. The permittee shall specify representative sample collection procedures (location, methods, etc.) in the management plan.
002	The landspreading of industrial sludges containing high concentrations of metals and/or detectable amounts of polychlorinated biphenyl compounds (PCBs) from an industrial, commercial, or agricultural facility to department approved landspreading sites. The permittee shall specify representative sample collection procedures (location, methods, etc.) in the management plan.

6.2 Monitoring Requirements and Limitations

The permittee shall meet the limitations and monitoring requirements in this section based on sub. NR 214.18(5), Wis. Adm. Code. Monitoring is only required during periods of active landspreading.
Note: Monitoring is only required during periods of active landspreading

6.2.1 Sampling Point (Outfall) 001 – Industrial Sludges with Low Metals

Monitoring Requirements and Effluent Limitations					
Parameter	**Limit Type**	**Limit and Units**	**Sample Frequency**	**Sample Type**	**Notes**
Sludge Hauled		Tons/day	Daily	Total Daily	Record in a Daily Log. See Section 5.1
Solids, Total		Percent	Quarterly	Grab Comp	See Sections 6.3 and 6.4
Nitrogen, Total Kjeldahl		Percent	Quarterly	Grab Comp	See Sections 6.3, 6.4, and 6.9.2
Chloride		Percent	Quarterly	Grab Comp	See Sections 6.3, 6.4 and 6.9.1
Phosphorus, Total		Percent	Quarterly	Grab Comp	See Sections 6.3 and 6.4

Monitoring Requirements and Effluent Limitations					
Parameter	**Limit Type**	**Limit and Units**	**Sample Frequency**	**Sample Type**	**Notes**
Phosphorus, Water Extractable		% of Total P	Quarterly	Grab Comp	See Sections 6.3 and 6.4
Nitrogen, Ammonia (NH_3-N) Total		Percent	Quarterly	Grab Comp	See Sections 6.3 and 6.4
Nitrogen, Organic Total		Percent	Quarterly	Grab Comp	See Sections 6.3 and 6.4
Potassium, Total Recoverable		Percent	Quarterly	Grab Comp	See Sections 6.3 and 6.4
pH Field		s.u.	Quarterly	Grab	See Sections 6.4 and 6.9.5
Lead, Dry Wt.		mg/kg	Once	Grab Comp	See Sections 6.4 and 6.5
Zinc, Dry Wt.		mg/kg	Once	Grab Comp	See Sections 6.4 and 6.5
Copper, Dry Wt.		mg/kg	Once	Grab Comp	See Sections 6.4 and 6.5
Nickel, Dry Wt.		mg/kg	Once	Grab Comp	See Sections 6.4 and 6.5
Cadmium, Dry Wt.		mg/kg	Once	Grab Comp	See Sections 6.4 and 6.5
PCB, Total Dry Wt.		mg/kg	Once	Grab Comp	See Sections 6.4 and 6.5

6.2.2 Sampling Point (Outfall) 002 – Industrial Sludges with High Metals

Monitoring Requirements and Effluent Limitations					
Parameter	**Limit Type**	**Limit and Units**	**Sample Frequency**	**Sample Type**	**Notes**
Sludge Hauled		Tons/day	Daily	Total Daily	Record in a Daily Log. See Section 5.1
Solids, Total		Percent	Quarterly	Grab Comp	See Sections 6.3 and 6.4
Nitrogen, Total Kjeldahl		Percent	Quarterly	Grab Comp	See Sections 6.3, 6.4, and 6.9.2
Chloride		Percent	Quarterly	Grab Comp	See Sections 6.3, 6.4 and 6.9.1
Phosphorus, Total		Percent	Quarterly	Grab Comp	See Sections 6.3 and 6.4
Phosphorus, Water Extractable		% of Total P	Quarterly	Grab Comp	See Sections 6.3 and 6.4
Nitrogen, Ammonia (NH_3-N) Total		Percent	Quarterly	Grab Comp	See Sections 6.3 and 6.4
Nitrogen, Organic Total		Percent	Quarterly	Grab Comp	See Sections 6.3 and 6.4
Potassium, Total Recoverable		Percent	Quarterly	Grab Comp	See Sections 6.3 and 6.4

Monitoring Requirements and Effluent Limitations					
Parameter	**Limit Type**	**Limit and Units**	**Sample Frequency**	**Sample Type**	**Notes**
pH Field		s.u.	Quarterly	Grab	See Sections 6.4 and 6.9.5
Lead, Dry Wt.		mg/kg	Quarterly	Grab Comp	See Sections 6.3, 6.4, 6.6, 6.7, 6.8 and 6.9.3
Zinc, Dry Wt.		mg/kg	Quarterly	Grab Comp	See Sections 6.3, 6.4, 6.6, 6.7, 6.8 and 6.9.3
Copper, Dry Wt.		mg/kg	Quarterly	Grab Comp	See Sections 6.3, 6.4, 6.6, 6.7, 6.8 and 6.9.3
Nickel, Dry Wt.		mg/kg	Quarterly	Grab Comp	See Sections 6.3, 6.4, 6.6, 6.7, 6.8 and 6.9.3
Cadmium, Dry Wt.		mg/kg	Quarterly	Grab Comp	See Sections 6.3, 6.4, 6.6, 6.7, 6.8, 6.9.3 and 6.9.4
PCB, Total Dry Wt.		mg/kg	Annual	Grab Comp	See Sections 6.3, 6.4, 6.6, and 6.9.6

Daily Log – Monitoring Requirements and Limitations

All discharge and monitoring activity shall be documented on log sheets. Originals of the log sheets shall be kept by the permittee as described under "Records Retention" in the Standard Requirements section, and if requested, made available to the department.

Parameters	**Limit**	**Units**	**Sample Frequency**	**Sample Type**
Landspreading Date	-	Date	Daily	Log
Landspreading Start Time	-	Time	Daily	Log
DNR Site Number(s)	-	Number	Daily	Log
Amount Applied	-	Tons or Pounds	Daily	Log
Acres Applied	-	Acres	Daily	Log
Application Rate	-	Tons/Acre/Day or Pounds/Acre/Day	Daily	Calculated
Incorporation Time	-	Time	Daily	Log
Incorporation Date	-	Date	Daily	Log

Annual Report - Requirements and Limitations The Annual Land Application Report (Form 3400-55) is due by January 31st of each year for the previous calendar year.				
Parameters	**Limit**	**Units**	**Reporting Frequency**	**Sample Type**
DNR Site Number(s)	-	Number	-	-
Acres Landspread	-	Acres	Annual	-
Total Amount Per Site	-	Tons or Pounds	Annual	Total Annual
Total Kjeldahl Nitrogen per Site	165, or alternate approved in writing	Pounds/Acre/Year	Annual	Calculated
Total Chloride per Site	340	Pounds/Acre per 2 Years	Annual	Calculated

6.3 Sampling

Grab composite samples for all required parameters, except pH, shall be collected prior to landspreading which are representative of industrial sludge being discharged. “Grab Composite” means a combination of individual grab samples of equal volume taken at approximately equal intervals not exceeding one hour over a three-hour period in accordance with sub. NR 218.04(11), Wis. Adm. Code.

Note: Monitoring is only required during periods of active landspreading.

6.4 Initial Test Screening

Applicants shall conduct an initial test screening of the industrial sludge for all parameters listed in Section 6.2.1. The test results shall be submitted with the Notice of Intent.

This initial testing will help the department determine if requirements in Section 6.5 – 6.8 apply to the industrial sludge.

6.5 Industrial Sludge with Low Metals

Ch. NR 204, Wis. Adm. Code, is used as guidance for including high-quality concentrations for metals in the permit. While ch. NR 204, Wis. Adm. Code, is applicable to sludge from municipal wastewater treatment systems, the basis for its high-quality concentrations is more current than that for ch. NR 214, Wis. Adm. Code. When industrial sludge is less than or equal to 1/3 of the high-quality concentrations for metals concentration and nondetectable amounts of PCBs, the industrial sludge is equivalent to high quality in ch. NR 204, Wis. Adm. Code. Additionally, the metals and PCB concentrations would not restrict the rate of sludge spreading from year to year. Therefore, permittees with high quality industrial sludge are required to follow the monitoring requirements in section 6.2.1 for Outfall 001 but are not required to monitor annually for metal and PCB concentrations. Also, permittees are exempt from the cumulative loading limits for metals found in Sections 6.9.3 and 6.9.4 and PCB requirements in Section 6.9.6.

If a permittee changes any industrial processes or treatment process such as raw materials or chemicals during the permit term, the permittee shall retest for metals and PCBs and report the results to the department. The results shall be reported on the Characteristic Report (Form 3400-49) in the comments section for that monitoring quarter.

6.6 Industrial Sludge with High Metals

The 1/3 of the high-quality concentration was used to provide a margin of safety. The margin of safety accounts for any uncertainty in the data and analysis and a degree of protection. Therefore, permittees

with industrial sludge containing metals that exceed 1/3 of the high-quality concentrations based on Table 3 in sub. NR 204.07(5), Wis. Adm. Code, or contains detectable amounts of PCBs shall follow monitoring in Section 6.2.2 for Outfall 002. Permittees shall follow the cumulative loading limits for metals found in Sections 6.9.3 and 6.9.4 and PCB requirements in Section 6.9.6. If a permittee changes any industrial processes or treatment process such as raw materials or chemicals during the permit term, the permittee shall retest for metals and PCBs and report the results to the department. The results shall be reported on the Characteristic Report (Form 3400-49) in the comments section for that monitoring quarter.

6.7 Metals that Exceed High Quality Concentrations

Permittees with industrial sludge containing metals that exceed the high-quality concentrations in Table 3 of sub. NR 204.07(5), Wis. Adm. Code, are not applicable to this permit and must apply for an individual WPDES permit. These industrial sludges require more frequent monitoring and supervision. However, this permit can be used in the interim until an individual WPDES permit is issued or modified to include the landspreading discharge. Permittees shall follow the monitoring requirements provided in Section 6.2.2. Permittees shall follow the cumulative loading limits for metals found in Sections 6.9.3 and 6.9.4.

6.8 Metals that Exceed Ceiling Concentrations (Prohibited)

The permittee is prohibited from landspreading if the industrial sludge exceeds the metal ceiling concentrations in Table 1 of sub. NR 204.07(5), Wis. Adm. Code. Disposal options when sludge ceiling concentrations are exceeded include: retesting, mixing with another sludge or other material and demonstration of compliance with Table 2, landfilling or incinerating. The ceiling concentrations are based on levels that would have the potential to cause contamination of lands, groundwater, or harm to public health, be harmful for commercial or agricultural use, or be deleterious to animal or plant life.

6.9 Landspreading Limitations

The following landspreading limitations are based on s. NR 214.18(4), Wis. Adm. Code. The permittee shall comply with these industrial sludge landspreading limitations of the permit and the approved management plan.

6.9.1 Chloride Requirements for Industrial Sludge

Industrial sludge may contain varying concentrations of chloride. High concentrations of chloride can reduce yields in crops and possibly cause toxicity. It is important to follow the approved landspreading management plan when landspreading high chloride wastes. The total pounds of chloride applied may not exceed 340 pounds per acre per two-year period. The most recent annual total solids sample shall be used in the calculation of chloride loading for pounds.

6.9.2 Nitrogen Requirements for Industrial Sludge

The total pounds of nitrogen applied per acre per year shall be limited to the nitrogen needs of the cover crop (based on a reliable reference such as: *A2809 Nutrient Application Guidelines for Field, Vegetable and Fruit Crops in Wisconsin*, from University of Wisconsin-Extension, minus any other nitrogen, including fertilizer or manure, added to the landspreading site in accordance with sub. NR 214.18(4)(d), Wis. Adm. Code. The most recent annual total solids sample shall be used in the calculation of Total Kjeldahl Nitrogen (TKN) loading for pounds.

Nitrogen applied can be calculated on the basis of plant available nitrogen, as long as the release of nitrogen from the organic material is credited to future years. The permit requires the monitoring for TKN. TKN accounts for those forms of nitrogen that are readily available for plant uptake. The total pounds of nitrogen applied per acre per year shall not exceed 165 pounds of total nitrogen per acre per year (based on the nitrogen uptake of the most common cover crop - field corn) minus any other nitrogen, including fertilizer or manure, added to the application site. The department may specify or accept an alternate nitrogen loading amount for other cover crop nitrogen needs in the management plan approval.

6.9.3 Metals Requirements for Industrial Sludge

The cumulative amount of cadmium, copper, lead, nickel, and zinc spread on any site may not exceed the cumulative amounts specified in the permit. The maximum cumulative loading of cadmium, copper, lead, nickel, and zinc are based on Table 4 in ch. NR 214.18(4)(g), Wis. Adm. Code.

6.9.4 Cadmium Requirements for Industrial Sludge

No more than 0.45 pounds per acre of cadmium may be spread annually on land used for production of food chain crops in accordance with par. NR 214.18(4)(f), Wis. Adm. Code. As defined in sub. NR 214.03(15), Wis. Adm. Code, "Food-chain crop" means a crop grown for human consumption or pasture, forage, and feed grains for animals whose products are consumed by humans. Tobacco is considered a crop grown for human consumption.

6.9.5 Soil pH

The pH of the sludge and soil mixture shall be 6.5 or higher at the time the sludge is spread, except that the soil pH may be less than 6.5 if the average sludge cadmium (over the previous four quarters) concentration is 2 mg/kg (dry weight) or less in accordance with par. NR 214.18(4)(e), Wis. Adm. Code.

6.9.6 PCB Requirements for Industrial Sludge

The landspreading of sludge containing PCBs will be approved by the department on a case-by-case basis. Applicants with sludge containing PCBs shall submit sludge PCB testing results with the request for coverage document. The department will then determine if PCB monitoring and limitations are warranted. If approved by the department in writing, sludge containing concentrations of PCBs equal to or greater than 10 mg/kg (dry weight) shall be incorporated into the soil when applied to land used for producing animal feed, including pasture crops for animals raised for the purpose of producing milk. The department may allow surface application of the sludge if it is assured that the PCB content is less than 0.2 mg/kg (actual weight) in animal feed or less than 1.5 mg/kg (fat basis) in milk from animals consuming the feed in accordance with par. NR 214.18(4)(h), Wis. Adm. Code.

6.9.6.1 Monitoring and Calculating PCB Concentrations in Sludge

The methods of analysis for substances contained in discharges shall be those specified in ch. NR 219, Wis. Adm. Code and the WPDES permit in accordance with s. NR 214.09, Wis. Adm. Code.

7 Management Plan

The landspreading requirements are based on par. NR 214.18(6)(c), Wis. Adm. Code. The permittee shall comply with these management plan requirements in the permit.

Changes from Previous Permit:
Section 7.4 ("Management Plan Amendments") details submittal requirements if permittees desire to change operations specified in the previously approved management plan.

7.1 Operate Consistent with an Approved Management Plan

All landspreading sites used for treatment of industrial sludges shall be operated in accordance with a department approved management plan. The management plan shall be consistent with the requirements of this permit and ss. NR 214.05 and NR 214.18 Wis. Adm. Code. A copy of the management plan shall be retained by the permittee and shall be made available upon department inspection. If operational changes are needed affecting the character, quality, or quantity of the industrial sludges landspread, the management plan shall be amended by submitting a written request to the department for approval.

7.2 Submittal of the Management Plan

If a landspreading management plan has not been approved by the department prior to the reissuance of this permit, then the permittee shall submit a management plan to the department for approval not more than 60 days from the date of reissuance of this permit or from the date that coverage under this permit was granted, whichever is later. When coverage is granted under this permit, if the department determines that a previously approved management plan must be amended to comply with the conditions of this permit and par. NR 214.18(6)(c), Wis. Adm. Code, the permittee shall submit an amended landspreading management plan to the department not more than 60 days from the date that coverage under this permit was granted. Management plans shall be submitted to department staff identified in the letter of determination under this permit.

7.3 Management Plan Content

To ensure consistency, the management plan shall address the information specified in s. NR 214.18, Wis. Adm. Code and include:

- List all department approved storage structures and the procedures for regular inspection and maintenance of each storage structure;
- Representative sample collection procedures;
- Type of transporting and spreading vehicle(s);
- Contingency plans for periods of adverse weather;
- Spill mitigation and notification procedures;
- Landspreading standard operating procedures to ensure uniform landspreading of industrial sludge on department-approved areas;
- DNR approval forms (3400-122) and maps that identify site limitations pursuant to par. NR 214.18(4)(a), Wis. Adm. Code;
- Full description of calculations used to determine appropriate application rates and loadings delivered to landspreading sites;
- Tracking of other sources or nitrogen (examples: commercial fertilizer and manure);
- Odor control and nuisance abatement;

- Daily record keeping and records retention;
- Reporting procedures for timely submittal and certification of Characteristic Reports (forms 3400-49) and Annual Land Application Reports (forms 3400-55); and
- Other information determined relevant to protect public health and the Waters of the State (reference s. NR 214.18(6)(c), Wis. Adm. Code).

7.4 Management Plan Amendments

Following management plan approval by the department, the permittee must operate in conformance with the approved management plan. If the permittee wishes to operate differently than specified in the approved plan, then a written request shall be submitted to the department for approval to amend the management plan.

8 Operational Requirements

The operations requirements are included by reference from ss. NR 214.18(3), (4), and (6), Wis. Adm. Code, in the permit. The permittee must comply with all these requirements.

9 STANDARD REQUIREMENTS

The "Standard Requirements" are a group of permit conditions from ss. NR 205.07(1), 205.07(3), and 205.08, Wis. Adm. Code, that apply to all industrial wastewater pollutant dischargers, including requirements related to the department's rights to enter and inspect facilities, the permittee's responsibility to inform the department of changes at a facility, sampling procedures and other general conditions typically associated with a WPDES GP. These requirements are included by reference into the permit. The permittee shall comply with all of these requirements, except for par. NR 205.07(1)(n), Wis. Adm. Code which does not apply to facilities covered under GPs.

General Conditions for General Permits

According to s. NR 205.08(2), Wis. Adm. Code, the department may include general conditions in general permits. The general conditions for general permits are included by reference from 40 CFR Parts 122.28(b)(2)(i), 122.61(b) and 122.64(c), and s. NR 205.07(1)(i), Wis. Adm. Code.

Changes from Previous Permit:

SR Section 9.1.3 ("Permit Coverage Terminations"): This permit now contains requirements on the electronic Notice of Termination (eNOT) form. Pursuant to 40 CFR 122.64 and 40 CFR 127.11(b) the department requires electronic submittal of a Notice of Termination via the online Water Permits System to terminate coverage under a WPDES general permit.

SR Section 9.2.7 ("Proper Operation and Maintenance") and SR Section 9.2.19 ("Severability") have been added to this permit to maintain consistency with the general permit standard requirements found in other WPDES general permits.

The "General Conditions for Industrial Discharges" section in the prior permit has been removed and the following sub-sections are now included in Section 9 ("General Conditions for WPDES Permits"): "Spill Reporting", "Planned Changes", and "Duty to Halt or Reduce Activity".

SR Sections 9.2.11-9.2.12: The permit now explains sampling and testing procedures as well as the requirement for testing performed by a certified or registered laboratory with exclusions.

SR Section 9.2.13: The permit now explains requirements when effluent limits in the permit are less than the limit of detection (LOD) or the limit of quantitation (LOQ).

10 Summary of Reports Due

A summary of reports due has been added for informational purposes for permittees and to be consistent with individual WPDES permits.

Attachments:

A. Definitions
B. Industrial Sludge Management Plan Outline

Prepared by:
Stephen Warrner, WDNR Wastewater Specialist, Bureau of Water Quality
Leila Jenkins, WDNR Wastewater Specialist, Bureau of Water Quality

Date: 05/01/2024

Attachment A – Definitions

The definitions of terms used in this general permit are based on their applicability to the type of operations and activity covered under this general permit. The definitions of these terms are included by reference from department guidance, 40 CFR 122.2 and chs. NR 200, NR 205, NR 211, NR 214 and NR 218, Wis. Adm. Code. Definitions not specifically outlined in this section can be found in Wisconsin Administrative Code, Wisconsin Statutes, or 40 CFR. Each term is provided with its code reference. If the terms below are found to be inconsistent with the definition in code, permittees shall refer to the code definition.

Annual Sampling Frequency

Annual sampling frequency means sampling the discharge once per calendar year (January 1st – December 31st). If there is no discharge during a calendar year, the permittee shall state this on the discharge monitoring report form.

Bedrock

Bedrock means rock that is exposed at the earth's surface or underlies soil material and is encountered when weathered in−place consolidated material, larger than 2 mm in size, is greater than 50% by volume. *(s. NR 214.03(3), Wis. Adm. Code)*

By-product Solids

By−product solids means waste materials from the animal product or food processing industry including, but not limited to remains of butchered animals, paunch manure and vegetable es, cuttings, peelings and actively fermenting sweet corn silage. *(s. NR 214.03 (4), Wis. Adm. Code)*

Community Public Water Supply System

Community public water supply system means a water supply system having at least 15 service connections used by year−round residents or regularly serving at least 25 year−round residents. Any water supply system serving 7 or more homes, 10 or more mobile homes, 10 or more apartment units, or 10 or more condominium units shall be considered a community public water supply system unless information is available to indicate that 25 year−round residents will not be served.*(s. NR 214.03(6), Wis. Adm. Code)*

Daily Sampling Frequency

Daily sampling frequency means sampling the discharge once in a 24-hour day. If there is no discharge during a day, the permittee shall state this on the discharge monitoring report form.

Department
Department, when used without qualification, means the department of natural resources.*(s. NR 214.03(8), Wis. Adm. Code)*

Detrimental Effect
Detrimental effect means contamination of the lands or waters of the state, or making the same injurious to public health, harmful for commercial or agricultural use, or deleterious to animal or plant life. *(s. NR 214.03(10), Wis. Adm. Code)*

Domestic Wastewater
Domestic wastewater means the type of wastewater normally discharged from plumbing facilities in private dwellings or commercial domestic establishments and includes, but is not limited to, sanitary, bath, laundry, dishwashing, garbage disposal and cleaning wastewaters. *(s. NR 205.03(14), Wis. Adm. Code)*

Dry Weight
Dry weight means the weight of the sample, excluding the weight of the water in the sample. *(40 CFR 761.3*)

Environmental Pollution
Environmental pollution means the contaminating or rendering unclean or impure the air, land, or waters of the state, or making the same injurious to public health, harmful for commercial or recreational use, or deleterious to fish, bird, animal, or plant life. *(s. NR 283.01(6m)*

Floodplain
Floodplain means the land which has been or may be covered by flood water during the regional flood as specified under *s. NR 116.03(16).*

Floodway
Floodway means the portion of a river or stream required to carry the regional flood as specified under *s. NR 116.03(22)*.

Groundwater
Groundwater means the portion of subsurface water which is within the zone of saturation and includes but is not limited to perched water tables, shallow regional groundwater tables, and aquifers or zones that are seasonally, periodically, or permanently saturated. *(s. NR 205.03(17), Wis. Adm. Code)*

Groundwater Monitoring
Groundwater monitoring means measuring the groundwater level and analyzing samples of water taken from the ground. *(s. NR 214.03(17), Wis. Adm. Code)*

Hazardous Waste
Hazardous waste means a hazardous waste as defined in *s. NR 661.0003, Wis. Adm. Code.*

Hydraulic Application Rate
Hydraulic application rate means the volume of liquid waste evenly spread over a designated acreage of the land treatment system divided by a period of time as specified in the WPDES permit. The rate is calculated by dividing the volume discharged during the waste loading period by the acreage of land loaded and then dividing by the total time in the load/rest cycle. *(s.NR 214.03(19), Wis. Adm. Code*

Incinerator

Incinerator means a processing facility designed and operated for controlled burning of solid wastes primarily to achieve volume and weight reduction or to change waste characteristics. Incinerator does not include a facility that uses solid waste as a supplemental fuel where less than 30% of the heat input to the facility is derived from such supplemental fuel. *(s. NR 500.03(108), Wis. Adm. Code)*

Industrial Liquid Waste

Liquid waste means process wastewater and waste liquid products, including silage leachate, whey, whey permeate, whey filtrate, contact cooling water, cooling or boiler water containing water treatment additives, and wash water generated in industrial, commercial, and agricultural operations which result in a point source discharge to a land treatment system. *(s. NR 214.03(27), Wis. Adm. Code)*

Infiltration Rate

Infiltration rate means the rate of liquid movement through the soil surface into the ground. *(s. NR 214.03(21), Wis. Adm. Code*

Incorporation

Incorporation means the mixing of a waste with topsoil by injecting, discing, moldboard plowing, chisel plowing or rotary tilling to a minimum depth of 4 inches. *(s. NR 214.03(22), Wis. Adm. Code)*

Injection

Injection means the subsurface placement of liquid sludge to a depth of 4 to 12 inches. *(Referenced from s. 204.03(32), Wis. Adm. Code).* Note: There is no ch. NR 214, Wis. Adm. Code definition for "injection." The term injection is referenced under the definition of "incorporation" *(s. NR 214.03(22), Wis. Adm. Code).*

Landfill

Landfill means a land disposal facility, not classified as a landspreading facility or surface impoundment facility, where solid waste is disposed on land by utilizing the principles of engineering to confine the solid waste to the smallest practical area, to reduce it to the smallest practical volume, and to cover it with a layer of earth or other approved material as required. *(s. NR 500.03(120), Wis. Adm. Code)*

Land Treatment System

Land treatment system means a system that utilizes the physical, chemical, and biological abilities of the soil to decompose pollutants in the wastes. Land treatment systems include: (a) Absorption or seepage pond systems, (b) Ridge and furrow systems, (c) Spray irrigation systems, (d) Overland flow systems, (e) Subsurface absorption field systems, (f) Landspreading systems for liquid wastes or organic by-product solids, (g) Sludge spreading systems, and (h) Any other land area receiving liquid wastes, by-product solids or sludge discharges. *(s. NR 214.03(24), Wis. Adm. Code)*

Landspreading System

Landspreading system means a system where a controlled quantity of liquid waste or by−product solid is uniformly applied onto, or incorporated into, the soil surface of designated sites by means of a vehicle with a spreader bar, spray gun or subsurface injector. The wastes are to be applied for the benefit of the vegetative cover. Landspreading systems also include those systems where liquid wastes are occasionally applied through temporary irrigation piping at a frequency similar to that of application by vehicles.*(s. NR 214.03(26), Wis. Adm. Code)*

Leachate

Leachate means water or other liquid that has percolated through or contacted solid waste or gases generated by solid waste. *(s. NR 500.03 (122), Wis. Adm. Code)*

Liquid Waste

Liquid waste means process wastewater and waste liquid products, including silage leachate, whey, whey permeate, whey filtrate, contact cooling water, cooling or boiler water containing water treatment additives, and wash water generated in industrial, commercial, and agricultural operations which result in a point source discharge to a land treatment system. *(s. NR 214.03(27), Wis. Adm. Code)*

Load/Rest Cycle

Load/rest cycle means a schedule of operation in which a certain volume of waste is loaded on a portion of the treatment system and then that portion is rested to allow the soil to reaerate and the soil micro−organisms to break down the waste material. *(s. NR 214.03(28), Wis. Adm. Code)*

Management Plan

Land application management plan or land management plan is a document that outlines how wastes are stored, transported, and land applied on department approved fields. Management plans are required per *s. NR 214.17(6)(c) and NR 214.18(6)(c), Wis. Adm. Code.*

Municipal Wastewater

Municipal wastewater means the mixture of domestic, process and other wastewater tributary to any given municipal sanitary sewage or treatment system. *(s. NR 205.03(19), Wis. Adm. Code)*

New Source

New source means any point source the construction of which commenced after the effective date of a standard of performance under 33 USC 1316 that is applicable to the point source, *except* if the federal environmental protection agency proposes a standard of performance under 33 USC 1316 that is applicable to a point source and if the standard of performance takes effect within 120 days of the publication of that proposed standard of performance, "new source" means a point source the construction of which commenced after the date of publication of that proposed standard of performance.

Overland Flow System

Overland flow system means a land treatment system in which the applied wastewater flows uniformly down grassy sloped terrain having very low permeability soils and is collected at the bottom of the slope for subsequent discharge. *(s. NR 214.03(30), Wis. Adm. Code)*

Permeability

Permeability means the rate of liquid movement through a porous medium. *(s. NR 214.03(31), Wis. Adm. Code)*

Point Source

"Point source" means either of the following:

(a) A discernible, confined, and discrete conveyance, including but not limited to any pipe, ditch, channel, tunnel, conduit, well, discrete fissure, container, rolling stock, concentrated animal feeding operation, or vessel or other floating craft from which pollutants may be discharged either into the waters of the state or into a publicly owned treatment works except for a conveyance that conveys only storm water. This term does not include agricultural storm water discharges and return flows from irrigated agriculture.

(b) A discernible, confined, and discrete conveyance of storm water for which a permit is required under *s. NR 283.33 (1), Wis. Adm. Code*. This term does not include agricultural storm water discharges and return flows from irrigated agriculture.

Potable Water Supply Well

Potable water supply well means a well supplying water for human consumption, sanitary use, or food product preparation. *(s. NR 214.03(32), Wis. Adm. Code*

Privately-Owned Treatment Works

Privately-owned domestic wastewater treatment work means facilities which treat domestic wastewater, and which are owned and operated by non−municipal entities or enterprises such as mobile home parks, restaurants, hotels, motels, country clubs, etc., which are permitted under ch. 283, Wis. Stats. (*s. NR 206.03(18), Wis. Adm. Code)*

Process Wastewater

Process wastewater means any water which, during manufacturing or processing, comes into direct contact with or results from the production or use of any raw material, intermediate product, finished product, byproduct, or waste product, and is likely to contain in solution or suspension various components of such raw materials or products. *(s. NR 205.03(30), Wis. Adm. Code)*

Publicly Owned Treatment Works

Publicly owned treatment works or POTW means a treatment works which is owned by a municipality and any sewers that convey wastewater to such a treatment works. This definition includes any devices or systems used by a municipality in the storage, treatment, recycling, and reclamation of municipal sewage or liquid industrial wastes. The term also means the municipality or local unit of government which has jurisdiction over the indirect discharges to, and the discharges from, such a treatment works. *(s. NR 211.03(30), Wis. Adm. Code)*

Sludge

Sludge means the accumulated solids generated during the biological, physical, or chemical treatment, coagulation or sedimentation of water or wastewater. *(s. NR 214.03(34), Wis. Adm. Code)*

Soil

Soil means the unconsolidated material that overlies bedrock and has been physically and chemically derived from organic material or bedrock by nature. *(s. NR 214. 03(35), Wis. Adm. Code)*

Storage Structure

Storage structure means either an earthen containment structure or a storage tank used for the storage of wastewater or biological fermentation leachates or a structure constructed for stacking and storage of by-product solids or other material.*(s. NR 213.04(14), Wis. Adm. Code)*

Total Volume

Total Volume means total gallons of waste retained in the storage unit just prior to landspreading.

Waters of the State

Waters of the state means those portions of Lake Michigan and Lake Superior within the boundaries of Wisconsin, all lakes, bays, rivers, streams, springs, ponds, wells, impounding reservoirs, marshes, water courses, drainage systems and other surface or groundwater, natural or artificial, public, or private within the state or under its jurisdiction, except those waters which are entirely confined and retained completely upon the property of a person. *(s. NR 205.03(44), Wis. Adm. Code)*

Wetland

Wetland means an area where water is at, near, or above the land surface long enough to be capable of supporting aquatic or hydrophytic vegetation and which has soils indicative of wet conditions. *(s. NR 23.32(1), Wis. Adm. Code)*

Attachment B - Industrial Sludge Management Plan Outline

Chapter NR 214, Wis. Adm. Code, requires permittees that landspread industrial sludge to develop a management plan (reference: par. NR 214.18(6)(c), Wis. Adm. Code). The code requires each industrial sludge generator to submit a management plan for optimizing system performance and demonstrating compliance with the requirements of this chapter. Following approval by the department, the system must be operated in conformance with the management plan. If the facility wishes to operate differently than specified in the approved plan, a written request must be submitted to the department for approval to amend the management plan.

The plan shall specify the following information: sludge volumes and characteristics, description of all site locations, availability of storage, type of transportation and application vehicles, sludge application rates, contingency plans for periods of adverse weather, odor and nuisance abatement, and any other pertinent information.

This document is a suggested management plan outline to assist the permittee with development of a landspreading management plan for their operation. This document is intended solely as a suggested starting point and does not contain any mandatory requirements except where requirements found in statute or administrative rule are referenced. Any regulatory decisions made by the Wisconsin Department of Natural Resources (hereafter "department") in any matter related to a management plan approval will be made by applying the governing statutes and administrative rules to the relevant facts. Each item on the outline shall be adequately discussed in the management plan. If an item is omitted, the owner/operator shall have an explanation as to why the requested information is not relevant.

A. <u>Industrial Source and Handling</u>

1. Describe the industrial processes that generate the industrial sludge(s). List the raw materials used and the products produced.
2. Specify the type of wastewater treatment processes from which the sludge originated (for example aerated lagoons, activated sludge, anaerobic digester, sequencing batch reactor, etc.). List any chemicals used in the wastewater treatment processes.
3. If the sludge is conditioned prior to disposal describe the process used. This could include such things as gravity thickening, mechanical dewatering, chemical treatment, filter bed dewatering, or pH adjustment. List any chemicals used to aid conditioning.

B. <u>Industrial Sludge Characteristics</u>

1. A representative sample of industrial sludge must be analyzed for percent solids, total Kjeldahl nitrogen (TKN), chloride, phosphorus, water extractable phosphorus, ammonia, potassium, and pH field. Representative sample collection procedures should be detailed in the management plan.
2. A representative sample of industrial sludge should be analyzed for zinc, nickel, lead, copper, cadmium, and PCBs. If the industrial processes or treatment process use any raw materials or chemicals containing significant quantities of metals or PCBs, the industrial sludge shall be retested for metals.
3. Include a template sample collection log.

C. <u>Industrial Sludge Storage and Transportation</u>

1. List all department approved storage structures and include all relevant information including outfall number, location, construction information, and capacity.

2. Detail procedures for regular inspection and maintenance of each storage unit.
3. Describe the method of loading the industrial sludge onto the hauling vehicle and describe the type and capacity of the hauling vehicle.
4. State how the total volume hauled will be measured and what kind of records will be kept. Include a template transportation log.
5. Describe contingency plans in case of inclement weather.
6. If a temporary stacking pad is used, the size, shape, material, type of soil under and around the pad and the depth to groundwater and bedrock are to be included. If leachate is generated, the management of this liquid waste must be explained. If a temporary frac tank is used for storage, provide the size, shape, materials of construction, and location of the tank in relation to the factory.

D. <u>Industrial Sludge Landspreading Information and Procedures</u>

1. Include DNR approval forms (3400-122) and maps that identify site limitations pursuant to par. NR 214.17(4)(a), Wis. Adm. Code. This information may be provided in an Appendix.
2. Specify landspreading standard operating procedures (SOPs) to ensure uniform landspreading of sludge on department-approved fields.
3. Specify landspreading SOPs to ensure identification and marking of restricted areas including setbacks (houses, wells, surface water, wetlands, etc.) and restricted soil map units (potential shallow bedrock, shallow groundwater, steep slope, etc.).
4. Include a template daily landspreading log.
5. Include SOPs for routine calibration of landspreading equipment to ensure accurate daily landspreading rates.
6. Include calculations used to determine appropriate nitrogen application rate (pounds/acre/crop year).
7. Specify the total volume of sludge that can be applied to reach the nitrogen needs of the cover crop. Detail tracking procedures to verify other sources of nitrogen (examples: commercial fertilizer and manure) to each field.
8. Explain how the sludge will be incorporated into the soil and tracked on the daily landspreading log. Incorporation can be accomplished through normal agricultural tillage at a timeframe specified in the management plan.
9. Detail procedures for odor control and nuisance abatement.
10. Calculate per acre the loading rate of phosphorus, potassium, and chloride.
11. Detail daily record keeping and records retention procedures.
12. Reporting procedures for timely submittal and certification of Characteristic Reports (forms 3400-49) and Annual Land Application Reports (forms 3400-55).