PERMIT FACT SHEET

General Information

Permit Number:	WI-0046566-07-0
Permit Name:	Contaminated Groundwater from Remedial Action Operations
Permittee:	Point source dischargers in the state of Wisconsin
Discharge Location:	Land surface or surface waters in the state of Wisconsin
Receiving Water:	Surface water or groundwater in the state of Wisconsin

WPDES Permit Program Background

Wisconsin Statutes and regulations require a Wisconsin Pollutant Discharge Elimination System (WPDES) permit for the discharge of any pollutant through a point source into any waters of the state which includes surface waters and groundwater. WPDES permit are issued by the Department of Natural Resources (department) consistent with applicable federal requirements. These permits contain requirements that include pollutant discharge limitations, monitoring and reporting or record keeping requirements, best management practices and other provisions to reduce, eliminate, or minimize the risk of pollutants impacting human health and water quality.

A WPDES permit is an allowance for a facility to discharge a specified amount of a pollutant into the waters of the state under specific conditions. There are two basic types of WPDES permits:

- Individual permit. An individual permit is a permit specifically tailored to an individual facility. Once a facility submits a complete application(s), the department develops a draft permit for that particular facility based on the information contained in the permit application (e.g., type of activity, nature of discharge, receiving water quality). After a public participation process, the department may issue the permit to the facility for a specific time period (not to exceed five years) with a requirement that the facility reapply 180 days prior to the expiration date. Public notices are posted for each individual permit application and proposed individual permit permittee.
- General Permit. A general permit covers a group or category of dischargers with similar qualities within a designated area of the state under one WPDES permit. A general permit provides coverage to several dischargers. To obtain coverage under a general permit for a discharge of pollutants, an owner or operator must submit a notice of intent (NOI) requesting general permit coverage. General permits have an effective term of 5 years from the date of issuance. If a permittee submitted a complete and timely NOI to be covered by the general permit and the department approves coverage, the discharge of pollutants is then subject to all conditions of the general permit and these terms or conditions shall continue to apply until the effective date of the reissued general permit. Public notices are issued for the general permit and not for the permittee covered under the general permit. A person may apply for general permit coverage at the time a general permit is issued or a person may apply during the term of the permit.

General Permit Objective

This general permit was created to properly manage discharges of treated groundwater from remedial action operations to waters of the state to protect public health and water quality of groundwater and surface water within the state of Wisconsin.

General Permit Description

This general permit is applicable to point source discharges of treated wastewater from the remediation of contaminated groundwater or soil to waters of the state. In most cases, the discharges covered by this permit will be intermittent in nature. However, other discharges will be long term to control plume migration or to remove contaminants from aquifers. The following is a description of each category covered under the permit:

Remedial Action Operation Discharges

This category covers the discharges from pump and treat systems with the intention to remediate or restore the groundwater or soil at a site. The contaminated groundwater will be pumped through an extraction system and then sent to a treatment system (if necessary) prior to being discharged to surface water or groundwater that is not impacted by the remediation project contaminants. Common treatment processes include portable clarifiers, oil/water separators, air strippers, granular activated carbon vessels, and media filters. Examples of remediation projects that may be regulated by this general permit include: leaking underground storage tanks, hazardous substance spills, industrial spills, buried containers of hazardous substances, closed landfills, dry cleaning operations, and many other remediation projects.

Infiltration or Injection of Substance or Remedial Material

This category covers the infiltration or injection of a substance or remedial material with purpose to enhance the remediation of in-situ contaminants in soil or groundwater. Generally, this remediation involves the injection of a strong chemical oxidant such as hydrogen peroxide, ozone gas, potassium permanganate, persulfates, oxygen gas and many others. Injection of a substance or a remedial material through a well or drillhole solely for the purpose of waste disposal is prohibited. In those cases where well injection solely for the purposes of waste disposal would be necessary to achieve the objectives of a remediation effort, approval issued by the Drinking and Groundwater (DG) program shall be obtained pursuant to s. NR 815.07 to meet the requirements of ss. NR 140.28(5) and 812.05, Wis. Adm. Code. If a preventive action level (PAL) or enforcement standard (ES) for any infiltrated or injected substance or remedial material listed in ch. NR 140, Wis. Adm. Code, will be attained or exceeded in groundwater at any point of standards application, a temporary exemption under s. NR 140.28(5), Wis. Adm. Code, is required. If a substance or remedial material that is not currently listed in ch. NR 140, Wis. Adm. Code, is to be infiltrated or injected, a temporary exemption under s. NR 140.28(5), Wis. Adm. Code, is required. Exemption requests must be sent to the Remediation and Redevelopment (R&R) Program. Information on the submittal, review and approval process for infiltration and injection requests can be found R&R Program website here: http://dnr.wi.gov/topic/Brownfields/Pubs.html.

Cleaning or Decontamination Wastewaters

Occasionally, air-stripping towers or activated carbon treatment units may become clogged from the growth of micro-organisms. This is especially true when there are nitrogen and phosphorus nutrients in the water. The oxygen rich, warm and wet environment in the treatment unit provides favorable conditions for bacteria or fungi to grow. As the treatment unit becomes clogged, the treatment capacity decreases until low amounts of water will flow through the unit. Then it must be cleaned to restore treatment efficiency. Additionally, after the completion of a remediation project, treatment units will need to be cleaned or decontaminated prior to being reused for another project. Typically, acids, bases or biocides, such as chlorine, are used to clean out of the treatment system. The recommended cleaning system would be to clean the treatment unit when it is out of service, and then capture the cleaning wastewater for acceptable off-site disposal, such as a sanitary sewer. However, the cleaning wastewater may be discharged under this permit.

Pit/Trench Dewatering

Construction trenches or pits are dug for the installation or replacement of utilities (i.e. sanitary sewer, lift station, watermain, storm sewer, electrical lines, gas lines, and etc.), the placement of foundations or footings for buildings, or other construction digging activities. During excavation, high groundwater maybe encountered or stormwater may have accumulated in the trenches or pits. Therefore, dewatering systems are placed in the trenches, pits, or low areas to pump and convey the water away from the construction site so construction can continue. Dewatering wells may be placed in the ground prior to excavation to lower the groundwater table to an appropriate level. However, during dewatering of the pit/trench, contaminated groundwater may be encountered or intercepted from a nearby or unidentified contamination site. In such cases, applicants must apply for this permit. Additionally, applicants must contact and notify the R&R program of these sites and cleanup.

Agri-Chemical Remediation Wastewaters

Common agricultural practices call for the use of chemical pesticides or fertilizers in growing crops. However, there may be spills or releases of current, banned, cancelled or suspended chemical pesticides or fertilizers that contaminate the groundwater or soil and require remediation. Generally, the contaminated groundwater or soil is landspread or sprayed back on agricultural fields for treatment.

According to the Memorandum of Understanding (MOU) between Department of Agriculture, Trade and Consumer Protection (DATCP) and DNR concerning hazardous substance discharges dated April 12, 2005, a responsible party must notify the DATCP Bureau of Agrichemical Management prior to landspreading, discharging, or disposing of any agricultural chemical contaminated wastewater generated by a remedial action at a discharge site, or any other pesticide containing wastewater that cannot be used as a product. DATCP will subsequently notify the DNR Bureau of Water Quality to determine if the activity is subject to coverage under this permit, or whether an individual WPDES permit is necessary.

General Permit Summary

This general permit establishes applicability criteria, obtaining permit coverage requirements, discharge management plan requirements, monitoring and reporting requirements, land treatment requirements, and standard requirements for discharges of treated groundwater from remedial action operations. The permit requirements are provided to protect human health and protect and maintain the physical, chemical and biological integrity of the waters of the state by eliminating or minimizing the discharge of pollutants.

Fact Sheet Organization

This fact sheet highlights changes in permit conditions that the department proposes to make when reissuing the Contaminated Groundwater from Remedial Action Operations WPDES permit. This fact sheet compares conditions in the previous general permit to those in the reissued permit. The previous permit remains in effect until the permit is reissued. The tables that follow were taken from the permit and are numbered in this fact sheet as they are numbered in the permit. Shaded text and cells within tables indicate permit conditions that are new or different from those found in the previous permit.

1 Applicability Criteria

According to s. NR 205.08(2), Wis. Adm. Code, the department may include applicability criteria in general permits.

Changes from Previous Permit

- The discharges covered in Section 1.1 has been expanded to clearly define all applicable discharges under this permit. The following discharges were added to the discharges covered under Section 1.1:
    - Discharges of a substance or remedial material through an infiltration or injection system designed to enhance the remediation of in-situ contaminants in soil or groundwater;
    - Discharges of cleaning or decontamination wastewaters from the cleaning of treatment equipment following a groundwater remediation project;
    - Discharges of treated wastewater from the dewatering of construction trenches or pits where contaminated groundwater is encountered or intercepted;
    - Landspreading or spray irrigation of any agricultural chemical contaminated wastewater or any other pesticide or fertilizer containing wastewater that cannot be used as a product and that has no detrimental effect on soils, vegetation or groundwater to department approved sites; and
- The discharges not covered in Section 1.2 has been expanded to clearly define all discharges not applicable under this permit. The following discharges were added to the discharges not covered under Section 1.2:
    - Landspreading or spray irrigation of water contaminated with agricultural chemicals generated by a remedial action at a discharge site that is managed as a pesticide or fertilizer product and subsequently used consistent with pesticide product label directions, or according to normal nutrient management practices for fertilizer products.
    - Discharges containing municipal, domestic, or process wastewater;
    - Discharges to a publicly-owned treatment works (POTW);
    - Discharges containing water treatment additives where the additive use is not approved in writing by the department;
    - Discharges that result in the significant lowering of water quality in fish and aquatic life waters identified in s. NR 102.13, Wis. Adm. Code, Great Lakes system waters, and variance waters identified within ss. NR 104.05 through 104.10, Wis. Adm. Code;
    - Increased discharges to fish and aquatic life waters identified in s. NR 102.13, Wis. Adm. Code, Great Lakes system waters, and variance waters identified within ss. NR 104.05 through 104.10, Wis. Adm. Code;
    - Discharges that will adversely impact endangered and threatened species, including causing an incidental take, 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;
    - Discharges that will adversely affect any historic property that is listed property, or on the inventory or on the list of locally designated historic places under s. 44.45, Wis. Stats., unless the department determines that the discharges will not have an adverse effect on any historic property pursuant to s. 44.40 (3), Wis. Stats; and

- Discharges from and/or to properties within tribal lands. The Tribe or U.S. EPA regulates discharges from or to tribal lands (land owned by or held in trust for the tribes and land within recognized reservation boundaries).

1.1 Activities Covered

This general permit is applicable to discharges of treated wastewater from groundwater remediation projects or other similar wastewaters that are discharged directly to surface waters or indirectly to groundwaters via seepage. The department may require other similar discharges to meet the requirements of this general permit if the department finds that the general discharge in question is innocuous.

1.2 Activities Not Covered

According to 40 CFR 122.28(4)(ii), general permits may exclude specified sources from coverage. Below is an explanation for all discharges not covered under the general permit.

Agri-Chemical Contaminated Wastewaters Considered Products: According to the MOU between DATCP and DNR concerning hazardous substance discharges dated April 12, 2005, notification of DNR and WPDES permit coverage is not required for landspreading water contaminated with agricultural chemicals that is managed as a pesticide or fertilizer product and subsequently used consistent with pesticide product label directions, or according to normal nutrient management practices for fertilizer products. This paragraph applies to rinsates, accumulated rainwater and product spills recovered from spill containment systems under chs. ATCP 29, 32 or 33, Wis. Adm. Code, and subsequently used as an agricultural chemical product consistent with pesticide product label directions, or according to normal nutrient management practices for fertilizer products, provided the product is managed in compliance with state and federal pesticide law. This paragraph also applies to pumped, contaminated groundwater when used as an agricultural chemical product consistent with pesticide product label directions, or according to normal nutrient management practices for fertilizer products, provided that DATCP has issued a landspreading permit to the responsible party. This paragraph does not apply to pesticide mixtures that cannot be used consistent with pesticide product label directions because they contain concentrations of pesticides with differing allowable use sites that exceed federal cross-contamination standards for pesticides under Pesticide Registration Notice 96-8 issued by the USEPA on October 31, 1996. Further, this paragraph does not allow direct discharge of contaminated waters to land adjacent to spill containment systems without authorization under a WPDES permit.

Municipal, Domestic, or Process Wastewater: Any discharge containing municipal, domestic or process wastewaters as described in chs. NR 210, and NR 221 to NR 297, Wis. Adm. Code, are not authorized under this permit.

Publicly-Owned Treatment Works: Any portion of wastewater directed to a public-owned treatment works (POTW) is not covered under this general permit. Rather, this general permit applies only to direct discharges to waters of the State (i.e. discharges to storm sewers or other conveyances to a surface water, or seepage to the groundwater).

Unapproved Water Treatment Additives: The discharge shall not contain a water treatment additive where the additive use is not approved in writing by department. Many additives are toxic at certain rates to fish and aquatic life and require approval by the department prior to initiating use. Facilities discharging wastewater with unapproved additive will be in violation of this permit.

Waters Classified as a Public Water Supply: Discharges to public water supply sources listed in ch. NR 104, Wis. Adm. Code, such as Lake Superior, Lake Michigan and Lake Winnebago, are not authorized under this general permit. These waters have more restrictive water quality criteria.

Regulation of discharges to water supply sources requires an individual permit which provides the oversight and discharge limitations necessary to protect these drinking water sources.

Wetlands: Discharges covered under this permit shall meet the wetland protection requirements of ch. NR 103, Wis. Adm. Code, and shall not adversely impact wetlands in accordance with s. NR 106.61(1)(b), Wis. Adm. Code. For discharges that impact wetlands, a facility will need to submit information that allows the department to determine if a discharge meets code requirements.

Outstanding and Exceptional Resource Waters: Discharges to outstanding and exceptional resource waters in ch. NR 102, Wis. Adm. Code, or discharges that would lower the water quality of downstream outstanding and exceptional water resources are not authorized by this permit as specified in s. NR 106.61(1)(c), Wis. Adm. Code. Regulation of discharges to outstanding and exceptional resource waters requires an individual permit which provides the oversight, monitoring and discharge limitations necessary to protect these types of receiving waters. The permittee can use the surface water data viewer (http://dnrmaps.wi.gov/sl/?Viewer=SWDV) to identify the outstanding and exceptional resource waters in the county that the discharge will occur.

Significant Lowering of Water Quality: In a case where a proposed discharge would result in the significant lowering of water quality in fish and aquatic life waters identified in s. NR 102.13, Wis. Adm. Code, Great Lakes system waters, and variance waters identified within ss. NR 104.05 through 104.10, Wis. Adm. Code, the discharge would not be authorized under this permit. The department requires that the applicant apply for coverage under an individual permit. The discharge will then be evaluated by the department under the antidegradation requirements of ch. NR 207, Wis. Adm. Code. The department may suggest that applicants evaluate a variety of options to ensure no significant lowering of water quality occurs in the receiving water. Options include improved wastewater treatment effectiveness, wastewater reuse, directing the discharge to a seepage area, an alternate discharge location, process changes to reduce the pollutant discharge level, pollutant prevention activities, etc.

Increased Discharges: According to s. NR 207.02(6)(a), Wis. Adm. Code, an "Increased discharge" means any change in concentration, level or loading of a substance which would exceed an effluent limitation specified in a current WPDES permit. If a facility proposes an increased discharge to fish and aquatic life waters identified in s. NR 102.13, Wis. Adm. Code, Great Lakes system waters, and variance waters identified within ss. NR 104.05 through 104.10, Wis. Adm. Code, the discharge is not authorized under this permit. An evaluation of the proposed increased discharge would need to be conducted in accordance with the antidegradation requirements of ch. NR 207, Wis. Adm. Code. Regulation of increased discharges require the oversight, monitoring and discharge limitations of an individual permit as effluent limitations in a general permit cannot be modified for an individual discharger.

Endangered and Threatened Resources: 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. If the permittee has reason to believe that endangered and threatened resources will be impacted, then further Wisconsin Natural Heritage Inventory (NHI) screening should be conducted by the permittee. Please contact the ER Review Program if you need information about whether a proposed project may impact rare species or other sensitive resources.

Historical Properties: Discharges that will adversely affect any historic property that is listed property, or on the inventory or on the list of locally designated historic places under s. 44.45, Wis. Stats., are not eligible for this permit, unless the department determines that the discharges will not have an adverse effect on any historic property pursuant to s. 44.40(3), Wis. Stats. The department is

required by law to review the project for historic preservation compliance. Please contact the DNR Archaeologist with any questions.

Discharges within Tribal Lands: The department does not 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 discharge and would issue a discharge permit.

Surface Water Standards and Groundwater Standards: The discharges from facilities eligible for this permit shall not have a reasonable potential to exceed any applicable surface water or groundwater standards. This also includes any other applicable surface water quality standards downstream of the discharge (i.e. tribal or other states). Facilities with discharges that have a reasonable potential (as specified in ch. NR 106, Wis. Adm. Code) to violate any applicable surface water quality standards or ch. NR 140, Wis. Adm. Code, groundwater quality standards would normally require the increased oversight, monitoring and water quality limitations found in a site-specific individual permit.

2 Obtaining Permit Coverage

Changes from Previous Permit

None as this is a new section.

2.1 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). Therefore, 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.

Note: 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. The department is in the process of developing and requiring electronic submissions of NOIs to discharge under this general permit. Once the NOIs are online, paper copies will be no longer accepted. The department will post this update on our general permit webpage.

2.2 Incomplete NOI

In accordance with s. 283.37(6), Wis. Stats., the department may require the owner or operator to submit information regarding any discharge. Therefore, the department may require an applicant to submit data necessary to complete any deficient NOI, any additional data other than that requested in the NOI or a new complete NOI where the deficiencies are extensive or the appropriate form has not been used.

2.3 Granting of Coverage

In accordance with s. NR 205.08(3), Wis. Adm. Code, following receipt of a complete NOI, the department shall issue a determination on whether a discharger is covered by a general permit. Additionally, general permits shall specify whether a discharger that has submitted a complete and timely notice of intent to be covered in accordance with the general permit and that is eligible for coverage under the permit, is authorized to discharge in accordance with the permit upon receipt of notification of inclusion by the department pursuant to 40 CFR 122.28(b)(2)(iv). Therefore, the permit requires that the applicant receive a coverage letter from the department prior to commencing discharge to the waters of the state. Upon receipt of the coverage letter, the applicant is hereby granted coverage and authorized to discharge to the waters of the state under the general permit. If the applicant has not received a coverage letter from the department, they are not permitted to discharge.

Note: 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.

3 Discharge Management Plan

Changes from Previous Permit

The discharge management plan section has been expanded from the previous permit and is included in its own section. This section now includes a requirement to operate consistent with the discharge management plan, instructions for submitting a discharge management plan and minimum content of the plan.

3.1 Operate Consistent with an Approved Discharge Management Plan

The permittee shall at all times properly operate and maintain all facilities and systems of treatment and control which are installed or used by the permittee to achieve compliance with the conditions of the permit in accordance with s. NR 205.07(1)(j), Wis. Adm. Code. Therefore, to evaluate this condition the department requires the permittee to properly operate and manage all discharge activities consistent with and in compliance with a department approved discharge management plan. The discharge management plan shall be consistent with the requirements of the permit.

3.2 Submittal of the Discharge Management Plan

According to s. 283.37(6), Wis. Stats., the department may require the owner or operator to submit information regarding any discharge. Therefore, the department requires the permittee to submit a discharge management plan to the department for approval at the time the NOI is submitted. The department coverage letter will explicitly indicate approval of the BMP plan. Permittees shall notify the department when the BMP plan is amended to determine if the amendment requires department approval.

3.3 Discharge Management Plan Content

The discharge management plan shall, at a minimum, describe the information provided in the permit under this section. The information provided in the discharge management plan will help the department determine and track compliance with the requirements in the permit. Additionally, the information will help the permittee properly operate and manage all discharge activities.

4 Surface Water Discharge Requirements

The requirements of this section apply only to surface water discharges. Surface water discharges means any discernible, confined and discrete conveyance system including but not limited to any pipe, ditch, channel, tunnel, conduit, swale or storm sewer that will carry wastewater to creeks, streams, ponds, marshes, bays, reservoirs, rivers, lakes, or other surface water within the state of Wisconsin.

4.1 Sampling Point(s)

In accordance with s. NR 218.07, Wis. Adm. Code, the location of sampling points shall be as specified in an applicable permit. The discharge(s) shall be limited to the waste type(s) designated for the listed sampling point(s).

Sampling Point Designation	
Sampling Point Number	**Sampling Point Location, WasteType/Sample Contents and Treatment Description (as applicable)**
001	**Discharges from the remediation or treatment of groundwaters contaminated with petroleum products and/or volatile organic compounds shall be sampled after treatment (if necessary) and prior to discharge to surface water via Outfall 001. The samples taken shall be representative of the discharge that consists solely of the treated effluent before mixing with any other water.**

4.2 Monitoring Requirements and Effluent Limitations

According to s. NR 205.08(2), Wis. Adm. Code, the department may include monitoring requirements and effluent limitations in general permits. Additionally, samples shall be taken at the frequencies specified in the WPDES permit authorizing discharge pursuant to s. NR 218.10, Wis. Adm. Code. The permittee shall comply with the following monitoring requirements and limitations.

4.2.1 Sampling Point (Outfall) 001 – Surface Water Discharge

Monitoring Requirements and Effluent Limitations					
Parameter	**Limit Type**	**Limit and Units**	**Sample Frequency**	**Sample Type**	**Notes**
Flow Rate		**gpd**	**Daily**	**Estimated**	
pH	**Daily Min**	**6.0 su**	**Weekly**	**Grab**	
pH	**Daily Max**	**9.0 su**	**Weekly**	**Grab**	
Oil & Grease (Hexane)	**Daily Max**	**10 mg/L**	**Weekly**	**Grab**	
Suspended Solids, Total	**Daily Max**	**40 mg/L**	**Weekly**	**Grab**	
Chorine, Total Residual	**Daily Max**	**19 µg/L**	**Weekly**	**Grab**	
Other Pollutants at Concentration of Concern	**TBD**	**TBD**	**Weekly**	**TBD**	

Changes from Previous Permit

- The permit combines the sampling parameters for remediation of petroleum product contamination and volatile organic contaminants under the Section 4.2.1.1 for surface water discharges.
- The permit includes a definition for surface water discharge under Section 4.
- Sampling Points and descriptions have been added to the permit under Section 4.1.

- Section 4.2.1 were added to the permit to define monitoring frequencies for surface water discharges.
- Effluent limitations and monitoring for pH has been added to the permit for Section 4.2.1.
- Sections on grab sample, composite sample and total BETX have been moved to the standard definitions under Appendix A.
- Section 4.2.1.2 has been added to the permit to define the sampling frequency for most contaminated groundwater projects.
- Effluent limits and monitoring for total suspended solids and total residual chlorine have been added to the permit based on certain operations covered.
- Sections on PAH Group of Ten, benzo(a)pyrene, and naphthalene have been added/revised from the previous permit in Sections 4.2.1.1.2-4.2.1.1.4.
- Requirements for the discharges to impaired surface waters & surface waters with total maximum daily load allocations have been revised and moved to Section 4.3
- The section on water treatment additives has been moved to Section 4.4 and revised to current information on the policy and regulations on water treatment additives for surface water discharges.
- Section 4.5 has been added to the permit with regard to surface water quality narrative standards.

Explanation of Monitoring Requirements and Effluent Limitations

Flow Rate: In accordance with 40 CFR 122.44(i)(1), to assure compliance with permit limitations, monitoring is required for the volume of effluent discharged from each outfall. Therefore, the permittee is required to estimate the flow rate each day there is a discharge. The definition of "estimated" is provide in Appendix A of the permit.

pH Monitoring: The pH is limited to the range of 6.0 to 9.0 standard units, with no change greater than 0.5 units outside the estimated natural seasonal maximum and minimum. This is consistent with the water quality standards pH range for waters classified for fish and aquatic life as defined in ch. NR 102.04(c), Wis. Adm. Code. Any wastewater with a pH outside the range of 6.0 to 9.0 s.u. shall not be discharged directly to surface waters. The pH of the water can be treated through the uses of the following treatment options:

- For high or low pH water can be mixed with other water to bring the mixed water pH to within the 6.0 to 9.0 acceptable range.
- For low pH, the water can be treated with soda ash (sodium carbonate) or any other department approved chemical. The permittee should follow the instructions provided with the chemicals for the optimum dosage rates.
- For high pH, the water can be treated with hydrochloric acid, sodium bisulfate or any other department approved chemical. The permittee should follow the instructions provided with the chemicals for the optimum dosage rates.

Oil & Grease Monitoring: Discharges covered by this permit are expected to contain significant concentrations of oil and grease requiring treatment. Based on observations of field staff and literature indicates that depending on the level of contamination of water to be treated, other types of oily wastewater treatment besides an oil water separator may be acceptable to meet permit limits. Another type of treatment may also be needed to supplement an oil water separator to meet permit limits, such as oil absorbent filtration systems.

The limit for oil & grease of 10 mg/L daily maximum is achievable by application of best practicable control technology currently available for these types of discharges. This established effluent limitation is based on the ability of simple oil/water separator equipment to easily remove oil and grease from the

discharge to concentrations below 10 mg/l. This determination was based on best professional judgment in accordance with s. NR 220.21, Wis. Adm. Code. Chapter NR 219, Wis. Adm. Code, specifies that the Freon Oil & Grease test method is no longer approved and shall not be used. Permittees shall either use the hexane extractable material (HEM) or silica gel treated HEM test methods as provided in ch. NR 219, Wis. Adm. Code. The sample frequency for oil & grease shall follow the monitoring frequencies stated for each discharge type.

Total Suspended Solids (TSS): The limit for TSS of 40 mg/L daily maximum is achievable by application of best practicable control technology currently available for these types of discharges. This established effluent limitation is based on the average of the best performance of the treatment technologies used for these similar types of discharges. This determination was based on best professional judgment in accordance with s. NR 220.21, Wis. Adm. Code.

For wastewaters treated for suspended solids removal prior to discharge to surface waters, permit effluent limits for suspended solids are achievable through the use of the following treatment options:

- Simple gravity separation (settling) treatment technology. Examples include baffled clarifiers, temporary settling basins like sandbags or straw bales, ditch checks, and settling tanks or ponds. Over time, the settling equipment will fill up with settled solids, resulting in decreased volume and residence time for wastewater and ultimately, ineffective solids treatment. Therefore, captured solids shall be removed from solids separation equipment or facilities as needed to maintain treatment unit hydraulic capacity and prevent carry-over of solids.
- Simple filtration treatment technology. Examples include filter socks, dewatering bags, silt fences, and portable filtration units like multi-bag filters. Over time, filtration equipment will accumulate with solids resulting in decreased solids holding capacity and decreased discharge through the equipment. Therefore, captured solids shall be removed from filtration equipment or filtration equipment should be replaced as needed to maintain solids treatment and prevent failure.

Total Residual Chorine: The chlorine limitation of 19 µg/L is based on water quality criteria found in ch. NR 105, Wis. Adm. Code. When chlorine is present and discharge is to a surface water of the state, the discharge shall be naturally or chemically dechlorinated prior to discharge to surface waters. Methods of chlorine treatment include, but are not limited to the following:

- Induced Dissipation - Dissipation with a spray chamber, diffuser, duck bill, packed tower, aerator, or other similar device.
- Natural Dissipation - Allowing the water to sit in a holding structure in direct sunlight prior to discharge to surface waters to allow chlorine to dissipate to acceptable levels. The actual amount of retention time necessary will need to be verified by analysis.
- Chemical Reduction - A treatment system consisting of a holding tank and chemical addition. Sulfur compounds (e.g. dechlorination compounds include sulfur dioxide, sodium metabisulfite, sodium bisulfite, sodium sulfite, and sodium thiosulfate) can be used to reduce chlorine levels. Other treatment may include dechlorination mats or bags.
- Seepage Discharge - If the chlorine concentration is too high to dissipate in a reasonable time for portions of the discharge, these portions may be segregated out and discharged to groundwater via seepage. Proper erosion control methods should be followed. All water should percolate before reaching another body of water.

Total Recoverable Lead: The permit contains limits for total recoverable lead based on the number of gasoline remediation projects detecting significant amounts of lead in the wastewater. The permittee can analyze for total lead or total recoverable lead to show compliance with the permit limit. The 50 µg/L daily maximum lead limit and 14 µg/L weekly average limit is achievable by application of best available

control technology economically achievable for these types of discharges. These limits are based on water quality standards in ch. NR 105, Wis. Adm. Code. This determination was based on best professional judgment in accordance with s. NR 220.21, Wis. Adm. Code. Experience to date has indicated that the form of lead in gasoline, tetra ethyl lead, is strongly attached to fine sediment particles that may be removed from the aquifer by pumping. Therefore, removal of fine sediment particles may be needed to control total recoverable lead in discharges from leaded gasoline remediation projects.

Total BETX: Total BETX (benzene, ethylbenzene, toluene, and xylenes) shall include a summation of the following individual compounds: benzene, ethylbenzene, toluene and total xylenes. The sample frequency for Total BETX shall follow the monitoring frequencies stated for each discharge type. The limit for Total BETX of 750 µg/L as a monthly average is achievable by application of best available control technology economically achievable for these types of discharges. This established effluent limitation is based on the ability of simple carbon adsorption treatment or air strippers to easily remove of these volatile organic compounds from the discharge to concentrations below 750 µg/l. This determination was based on best professional judgment in accordance with s. NR 220.21, Wis. Adm. Code.

PAHs: The polycyclic aromatic hydrocarbons (PAHs) shall include a summation of the following ten individual compounds: benzo(a)anthracene, benzo(b)fluoranthene, benzo(g,h,i)perylene, benzo(k)fluoranthene, chrysene, dibenzo(a,h)anthracene, fluoranthene, indeno(1,2,3-cd)pyrene, phenanthrene, and pyrene. The sample frequency for PAHs shall follow the monitoring frequencies stated for each discharge type. The regulation of PAHs in WPDES permits are based on department released guidance entitled "PAH Group of 10 Calculation of Concentration Using Toxicity Equivalent Factors" (3400-2015-01), which is available at http://dnr.wi.gov/water/egadSearch.aspx.

The limit for PAHs of 0.1 µg/L as a monthly average is achievable by application of best available control technology economically achievable for these types of discharges. This established effluent limitation is based on the ability of simple oil/water separators equipment and carbon adsorption treatment to easily remove PAHs from the discharge to concentrations below 0.1 µg/l. This determination was based on best professional judgment in accordance with s. NR 220.21, Wis. Adm. Code.

Benzo(a)pyrene: The PAH compound benzo(a)pyrene is regulated separately as it has the most toxicological data. Compliance with monthly average benzo(a)pyrene limit can be demonstrated by using EPA method 610 or other approved method and reporting no detect, or by reporting a detected amount equal to or less than 0.1 µg/L. The limit for benzo(a)pyrene of 0.1 µg/L as a monthly average is achievable by application of best available control technology economically achievable for these types of discharges. This established effluent limitation is based on the ability of simple carbon adsorption treatment to easily remove benzo(a)pyrene from the discharge to concentrations below 0.1 µg/l. This determination was based on best professional judgment in accordance with s. NR 220.21, Wis. Adm. Code.

Naphthalene: The PAH compound naphthalene is regulated separately with a 70 µg/L as a monthly average by application of best available control technology economically achievable for these types of discharges. This established effluent limitation is based on the ability of simple air stripping technology to easily remove naphthalene from the discharge to concentrations below 70 µg/l. This determination was based on best professional judgment in accordance with s. NR 220.21, Wis. Adm. Code.

4.2.1.1 Other Pollutants at Concentration of Concern

The permittee is required to monitor for those pollutants at a concentration of 1/5 of the effluent limit in Table 1 of the permit as determined from the analysis of the detected contaminants at the site. The effluent limitations, limit type, and sample type for the detected substances are listed in Table 1 of the permit. Permittees shall provide a list of detected substances for monitoring in the discharge management plan. Table 1of the permit contains

pollutants that are found in most contaminated groundwaters. The effluent limits are based on surface water quality criteria provided in ch. NR 105, Wis. Adm. Code.

4.2.1.1.1 Daily Maximum and Weekly Average Lead Limits

The calculation for daily maximum and weekly average limitations total recoverable lead are based on Table 2 and Table 6 in s. NR 105.06, Wis. Adm. Code. The permittee shall determine the daily maximum lead limit using the effluent hardness and the weekly average lead limit using receiving water hardness. The department had to make this permit applicable to all discharges, therefore, the department assumed no dilution or mixing in the receiving water. Thus, the effluent limit would equal the water quality criterion determined from the equation. Monitoring for effluent hardness is only required when lead monitoring is required.

4.2.1.1.2 PAH Group of Ten

In accordance with s. NR 205.07(1)(p)3., Wis. Adm. Code, additional test procedures may be specified in the permit on a case−by−case basis. Therefore, permittees shall use EPA test method 610 or other EPA approved method to test for the PAH compounds. Permittees shall demonstrate compliance with the monthly average PAH group limit by reporting no detection of any of these PAH compounds, or by reporting the sum of the PAH group detected amounts equal to or less than 0.1 µg/L. See Appendix C of the permit for the calculation of the concentration of the PAH group of 10 compounds.

4.2.1.1.3 Benzo(a)pyrene

In accordance with s. NR 205.07(1)(p)3., Wis. Adm. Code, additional test procedures may be specified in the permit on a case−by−case basis. Therefore, permittees shall use EPA test method 610 or other EPA approved method to test for benzo(a)pyrene. Permittees shall demonstrate compliance with monthly average benzo(a)pyrene limit by reporting no detection of benzo(a)pyrene, or by reporting a detected amount equal to or less than 0.1 µg/L.

4.2.1.1.4 Naphthalene

In accordance with s. NR 205.07(1)(p)3., Wis. Adm. Code, additional test procedures may be specified in the permit on a case−by−case basis. Therefore, permittees shall use EPA test method 610 or other EPA approved method to test for naphthalene. Permittees shall demonstrate compliance with monthly average naphthalene limit by reporting no detection of naphthalene, or by reporting a detected amount equal to or less than 70 µg/L.

4.2.1.2 Sampling Frequency During Operation

In accordance with s. NR 205.066, Wis. Adm. Code, the department shall determine on a case-by-case basis the monitoring frequency to be required for each effluent limitation in a permit. Since many discharges are of short duration or limited frequency, the monitoring frequencies and reductions provided in the permit would allow for the most representative sampling of the discharge events.

4.2.1.3 Total Suspended Solids (TSS) Monitoring

In accordance with 40 CFR 122.28(a)(4), general permits must clearly identify the applicable conditions for each category or subcategory of dischargers covered by the permit. Therefore, total suspended solids monitoring and limitations are only required at sites where there is a discharge of equipment cleaning wastewaters, or when groundwater is pumped from construction pits or trenches.

4.2.1.3.1 Solids Removal

In accordance with s. NR 205.07(1)(j), the permittee shall at all times properly operate and maintain all facilities and systems of treatment and control which are installed or used by the permittee to achieve compliance with the conditions of the permit. Therefore, the permittee shall remove captured solids from solids separation equipment or facilities as needed to maintain treatment unit hydraulic capacity and prevent carry-over of solids.

4.2.1.4 Total Residual Chlorine Monitoring

In accordance with 40 CFR 122.28(a)(4), general permits must clearly identify the applicable conditions for each category or subcategory of dischargers covered by the permit. Therefore, total residual chlorine monitoring and limitation are only required at sites where there is a discharge of equipment cleaning wastewaters to surface water. The department recommends a chlorination system that cleans and chlorinates the treatment unit when it is out of service, and then captures the cleaning wastewater for acceptable offsite disposal, such as a sanitary sewer. If the pH is between 6 and 9 s.u. and the biocide is chlorine only, then cleaning wastewater can be discharged under this permit.

4.2.1.4.1 Total Residual Chlorine Reporting and Compliance

In accordance with s. NR 106.07(6)(c)2., Wis. Adm. Code, water quality based effluent limitations that are less than the limit of detection, any effluent result greater than the limit of detection, but less than the limit of quantitation are in compliance with the effluent limitation except when analytically and statistically confirmed. Additionally, the department may specify analyte-specific instructions in a WPDES permit for reporting monitoring results greater than the limit of detection pursuant to s. NR 106.14(3), Wis. Adm. Code. Therefore, total residual chlorine requirements were added in effort to alleviate laboratory and level of detection concerns that may be expressed by permittees. These procedures apply to facilities that will be de-chlorinating their effluent or have outfall structures that will allow for natural dissipation of chlorine.

4.3 Impaired Waters & TMDL Requirements for Surface Water Discharges

4.3.1 Report Discharge to an Impaired Surface Water

Permittees are required to report, on the annual discharge monitoring report, if the permittee has a detectable pollutant of concern discharge to an impaired surface water or a surface water with a State and EPA approved Total Daily Maximum Load (TMDL) allocation. The permittee does not need to report all pollutants of concern only those pollutants for which the receiving water of the discharge is impaired for or has an approved TMDL. If a facility discharges a pollutant of concern to a 303(d)-listed impaired water body, the goal is to minimize the pollutant discharge as much as possible as part of an overall state effort to reduce the pollutant loading to the water body. The department updates the section 303(d) list approximately every two years. The updated list is effective upon approval by EPA. According to s. NR 212.72(9), Wis. Adm. Code, a "Pollutant(s) of concern" means any pollutant discharged that has an applicable technology-based effluent limitation (TBEL), a wasteload allocation from a TMDL or watershed analysis, or is identified as needing a water quality-based effluent limitation (WQBEL) to meet water quality standards.

4.3.2 TMDL Compliance

Permittees discharging a pollutant of concern that is subject to an approved TMDL under this general permit shall meet the requirements of a State and Federally approved TMDL allocation for their discharge location that is in effect on the effective date of this permit. Existing pollutant

discharges covered under this permit are expected to be consistent with the baseline allocation granted to Wisconsin general permit discharges in all State and EPA approved TMDLs in effect on the effective date of this permit.

For this general permit, the most common pollutants of concern may be total suspended solids (TSS) and phosphorus discharges to sediment or phosphorus impaired water bodies. The permittee can use the impaired water search tool (http://dnr.wi.gov/water/impairedSearch.aspx) or the surface water data viewer (SWDV) (http://dnrmaps.wi.gov/sl/?Viewer=SWDV) to identify waters impaired in the county that the discharge will occur.

4.3.3 New or Increased Pollutant Discharge to a 303(d) Listed Impaired Surface Water

Federal Statutes, 40 CFR 122.4, prohibits the issuance of a WPDES permit to a new source or new discharger that will contribute to a violation of a water quality standard in a 303(d)-listed water. Also, an increased discharge of a pollutant of concern that would cause or contribute to a violation of a water quality standard in a 303(d)-listed water is not to be allowed. Therefore, this general permit specifies that a permittee may not establish a new pollutant of concern discharge to a 303(d)-listed impaired water body or significantly increase the discharge of a pollutant of concern to an impaired water body unless the new or increased discharge does not contribute to the receiving water impairment, or the new discharge is consistent with a department finalized TMDL allocation for the impaired water body as determined by the department. The general permit cannot be used if this requirement is not met for a new discharge.

In response to a NOI, the department will evaluate the proposed pollutant discharge amount and receiving water to determine if the above requirement can be met. A variety of options are available to the applicant to reduce the discharge of the pollutant of concern, with the goal of eliminating the pollutant discharge, such as on-site capture or an alternate discharge location.

4.4 Water Treatment Additives for Surface Water Discharges

An additive review is necessary for substances that may enter surface water without receiving wastewater treatment or substances that are used in a treatment process but are not expected to be removed by wastewater treatment and may contribute to effluent toxicity. In the event that the permittee wishes to commence use of a water treatment additive, or increase the usage of the additives greater than indicated in the NOI, the permittee shall submit a request and receive written approval from the department prior to initiating such changes. The permittee shall maintain records of the monthly water treatment additive use including the additive name, manufacturer, and daily maximum amount used.

For each water treatment additive used, the permittee shall submit a copy of the Additive Review Worksheet to the department. Examples of water treatment additives are biocides such as microbicides, fungicides, molluscicdes, etc. and water quality conditioners such as scale and corrosion inhibitors, pH adjustment chemicals, oxygen scavengers, conditioning agents, water softening compounds, etc. The Additive Review Worksheet is not required for additives with active ingredients consisting of chlorine, hypochlorite, sulfuric acid, hydrochloric acid or sodium hydroxide. Also, chemicals used in an industrial process generating wastewater that eventually receives treatment or chemicals added as part of wastewater treatment process (such as ferric chloride, alum or pickle liquor) are not considered water treatment additives and need not require an Additive Review Worksheet. Water treatment additives can vary from innocuous to highly toxic.

On April 23rd, 2015, the department released guidance entitled “Water Quality Review Procedures for Additives” (3400-2015-03), which is available at http://dnr.wi.gov/topic/wastewater/Guidance.html. This guidance document establishes procedures to calculate secondary acute and chronic values for water-applied additives pursuant to s. NR 105.05, Wis. Adm. Code. Secondary acute values are the

concentrations of a pollutant in surface water that protect aquatic life from adverse short-term effects. Therefore, facilities shall submit information regarding the toxicity of a water treatment additive as specified in the permit, so the department can determine if it is allowable and won't negatively impact aquatic life. The department shall also be informed of significant changes in additive usage that would raise the potential for negative impacts on aquatic life or human health. Facilities are required to maintain records of additive use for department inspection. Recording additive use will provide documentation for the facility and the department to verify that the wastewater additive is being used and discharged in accordance with the permit requirements.

4.5 Surface Water Uses and Criteria

In response to EPA direction, surface water narrative criteria pursuant to s. NR 102.04 (1), Wis. Adm. Code, are included in the permit. These criteria shall be followed at all times and under all flow and water level conditions.

5 Groundwater Discharge Requirements

The requirements of this section only apply to groundwater discharges. Groundwater discharge means any wastewater that is allowed to infiltration or seepage into the soil from a permeable surface including but not limiting to any drain field, agricultural field, ditch, swale, depression, trench or pit, adsorption pond, infiltration pond, rain garden, prairie, or vegetative area that may impact groundwater quality.

5.1 Sampling Point(s)

In accordance with s. NR 218.07, Wis. Adm. Code, the location of sampling points shall be as specified in an applicable permit. The discharge(s) shall be limited to the waste type(s) designated for the listed sampling point(s).

Sampling Point Designation	
Sampling Point Number	**Sampling Point Location, WasteType/Sample Contents and Treatment Description (as applicable)**
002	**Discharges from the remediation or treatment of groundwaters contaminated with petroleum products and/or volatile organic compounds shall be sampled after treatment and prior to discharge to groundwater via Outfall 002. The samples taken shall be representative of the discharge that consists solely of the treated effluent before mixing with any other water.**
003	**Infiltration or Injection Water: Infiltration or injection of a substance or remedial material for the purpose of restoring contaminated soil or groundwater. Samples representative of the discharge shall be collected following treatment and prior to discharge to the infiltration system via Outfall 004. A remedial action project that has been granted a temporary exemption by the department in accordance s. NR 140.28(5), Wis. Adm. Code, exempts the permittee from monitoring and reporting under this section.**

5.2 Monitoring Requirements and Effluent Limitations

According to s. NR 205.08(2), Wis. Adm. Code, the department may include monitoring requirements and effluent limitations in general permits. Additionally, samples shall be taken at the frequencies specified in the WPDES permit authorizing discharge pursuant to s. NR 218.10, Wis. Adm. Code. The permittee shall comply with the following monitoring requirements and limitations.

5.2.1 Sampling Point (Outfall) 002 – Groundwater Discharge

Monitoring Requirements and Effluent Limitations					
Parameter	**Limit Type**	**Limit and Units**	**Sample Frequency**	**Sample Type**	**Notes**
Flow Rate		**gpd**	**Daily**	**Estimated**	
Oil & Grease (Hexane)	**Daily Max**	**10 mg/L**	**Weekly**	**Grab**	
Other Pollutants at Concentration of Concern	**TBD**	**TBD**	**Weekly**	**Grab**	

5.2.2 Sampling Point (Outfall) 003 – Infiltration or Injection Water

Permittees with discharges of infiltration or injection water to groundwater shall comply with following conditions:

Projects with No Temporary Exemption: Historically, the use of a well or drillhole for the underground placement of any "substance" has been prohibited under provisions of Wisconsin's private well code since the 1930's. However, on October 1, 1994, s. NR 812.05, Wis. Adm. Code,

was modified to allow the DNR to approve such placement when it is determined to be necessary for the remediation of soil, groundwater or aquifer contamination. As defined in s. 160.01(8), Wis. Stats., "Substance" means any solid, liquid, semisolid, dissolved solid or gaseous material, naturally occurring or man-made chemical, parameter for measurement of water quality or biological organism which, in its original form, or as a metabolite or a degradation or waste product, may decrease the quality of groundwater." According to s. 283.31 (1), Wis. Stats., the discharge of any pollutant from a point source to the waters of the state is prohibited unless it is done under a WPDES permit issued by the DNR. Well injection or infiltration of a substance or remedial material would be considered a contaminant if otherwise detected in a groundwater or surface water resource constitutes a "discharge" and requires that a WPDES permit be issued.

When a temporary exemption has not been granted for an in-situ remediation project in accordance with s. NR 140.28(5) Wis. Adm. Code, the permittee shall monitor the discharge for all of the compounds listed in Sections 5.2.1and 5.3 unless the department approves a discharge management plan with a reduced list of contaminants for monitoring as specified in Section 4.

Projects Granted a Temporary Exemption: When a remedial action project has been granted a temporary exemption in accordance s. NR 140.28(5), Wis. Adm. Code, the permittee is exempt from monitoring and reporting under this permit and shall follow the terms and conditions of the remedial action plan approval under ch. NR 724, Wis. Adm. Code, and the temporary exemption granted under s. NR 140.28(5), Wis. Adm. Code.

The department believes that the s. NR 140.28(5), Wis. Adm. Code, approval and the remedial action plan approval will adequately regulate the discharge. These approvals will specify detailed limitations and other monitoring requirements for in-situ remediation projects.

Changes from Previous Permit

- The permit combined sections on wastewater infiltration discharges to groundwater not impacted by remediation project contaminants and discharges to enhance the remediation of in-situ contaminants under Section 5.
- The permit includes a definition for groundwater discharge under Section 5.
- Sampling Points and descriptions have been added to the permit under Section 5.1.
- Sections 5.2.1 was added to the permit to define monitoring frequencies for groundwater discharges.
- Section 5.2.2 was added to the permit to define injection/infiltration water discharges.
- Sections on PAH Group of Ten, benzo(a)pyrene, and naphthalene have been added/revised from the previous permit in Sections 5.5-5.7.
- All effluent monitoring requirements were combined under Section 5.3.
- Section 5.4 has been added to the permit to define the sampling frequency for most contaminated groundwater projects.
- Best management practices for groundwater discharges has been added to the permit under Sections 5.8-5.16. Section NR 205.10, Wis. Adm. Code, allows the department to include best management practices to control or abate the discharge of pollutants in WPDES permits if the practices are reasonably necessary to carry out the purposes and intent of ch. 283, Wis. Stats., and the Clean Water Act (CWA). The BMPs are based on similar land treatment activities provided in ch. NR 214, Wis. Adm. Code. These BMPs will help prevent the runoff of the discharge into surface waters and exceedance of any groundwater standards.

- A section on water treatment additives has been add to the permit under Section 5.18 to explain information on the policy and regulations on water treatment additives for groundwater discharges.
- Where to sample section has been revised to Section 5.17.

Explanation of Monitoring Requirements and Effluent Limitations

Flow Rate: In accordance with 40 CFR 122.44(i)(1), to assure compliance with permit limitations, monitoring is required for the volume of effluent discharged from each outfall. Therefore, the permittee is required to estimate the flow rate each day there is a discharge. The definition of "estimated" is provide in Appendix A of the permit.

Oil & Grease Monitoring: Discharges covered by this permit are expected to contain significant concentrations of oil and grease requiring treatment. Based on observations of field staff and literature indicates that depending on the level of contamination of water to be treated, other types of oily wastewater treatment besides an oil water separator may be acceptable to meet permit limits. Another type of treatment may also be needed to supplement an oil water separator to meet permit limits, such as oil absorbent filtration systems.

The limit for oil & grease of 10 mg/L daily maximum is achievable by application of best practicable control technology currently available for these types of discharges. This established effluent limitation is based on the ability of simple oil/water separator equipment to easily remove oil and grease from the discharge to concentrations below 10 mg/l. This determination was based on best professional judgment in accordance with s. NR 220.21, Wis. Adm. Code. Chapter NR 219, Wis. Adm. Code, specifies that the Freon Oil & Grease test method is no longer approved and shall not be used. Permittees shall either use the hexane extractable material (HEM) or silica gel treated HEM test methods as provided in ch. NR 219, Wis. Adm. Code. The sample frequency for oil & grease shall follow the monitoring frequencies stated for each discharge type.

Total BETX: Total BETX (benzene, ethylbenzene, toluene, and xylenes) shall include a summation of the following individual compounds: benzene, ethylbenzene, toluene and total xylenes. The sample frequency for Total BETX shall follow the monitoring frequencies stated for each discharge type. The limit for Total BETX of 750 µg/L monthly average is achievable by application of best available control technology economically achievable for these types of discharges. This established effluent limitation is based on the ability of simple carbon adsorption treatment or air strippers to easily remove volatile organic compounds from the discharge to concentrations below 750 µg/l. This determination was based on best professional judgment in accordance with s. NR 220.21, Wis. Adm. Code. The limits for benzene, ethylbenzene, toluene, and xylenes reflect the groundwater preventive action limits (PAL) in ch. NR 140, Wis. Adm. Code, which are designed to ensure groundwater standards are not exceeded.

PAHs: The polycyclic aromatic hydrocarbons (PAHs) shall include a summation of the following ten individual compounds: benzo(a)anthracene, benzo(b)fluoranthene, benzo(g,h,i)perylene, benzo(k)fluoranthene, chrysene, dibenzo(a,h)anthracene, fluoranthene, indeno(1,2,3-cd)pyrene, phenanthrene, and pyrene. The sample frequency for PAHs shall follow the monitoring frequencies stated for each discharge type. The PAH compounds regulated under the permit are separated into three components. The regulation of PAHs in WPDES permits are based on department released guidance entitled "PAH Group of 10 Calculation of Concentration Using Toxicity Equivalent Factors" (3400-2015-01), which is available at http://dnr.wi.gov/water/egadSearch.aspx.

The limit for PAHs of 0.1 µg/L as a monthly average is achievable by application of best available control technology economically achievable for these types of discharges. This established effluent limitation is based on the ability of simple oil/water separators equipment and carbon adsorption treatment to easily remove PAHs from the discharge to concentrations below 0.1 µg/l. This determination was based on best professional judgment in accordance with s. NR 220.21, Wis. Adm. Code.

The limits for benzo(a)anthracene, benzo(b)fluoranthene, benzo(g,h,i)perylene, benzo(k)fluoranthene, chrysene, dibenzo(a,h)anthracene, fluoranthene, indeno(1,2,3-cd)pyrene, phenanthrene, and pyrene reflect the PALs in ch. NR 140, Wis. Adm. Code, which are designed to ensure groundwater standards are not exceeded. Some of these parameters do not have PALs, therefore, monitoring is only required.

Benzo(a)pyrene: The limit for benzo(a)pyrene reflects the PAL in ch. NR 140, Wis. Adm. Code, which are designed to ensure groundwater standards are not exceeded.

Naphthalene: The limit for naphthalene reflects the PAL in ch. NR 140, Wis. Adm. Code, which are designed to ensure groundwater standards are not exceeded.

5.3 Other Pollutants at Concentration of Concern

Permittees are required to monitor for those substances presented in Sections 5.2.1 at a minimum. Additionally, the permittee is required to monitor for those pollutants at a concentration of 1/5 of the effluent limit in Table 2 of the permit as determined from the analysis of contaminants at the site. The effluent limitations, limit type, and sample type for the detected substances are listed in Table 2 of the permit. Permittees shall provide a list of detected substances for monitoring in the discharge management plan. The effluents limits in Table 5 of the permit are based on groundwater preventive action limits (PALs) in ch. NR 140, Wis. Adm. Code.

5.4 Sampling Frequency During Operation

In accordance with s. NR 205.066, Wis. Adm. Code, the department shall determine on a case-by-case basis the monitoring frequency to be required for each effluent limitation in a permit. Since many discharges are of short duration or limited frequency, the monitoring frequencies and reductions provided in the permit would allow for the most representative sampling of the discharge events.

5.5 PAH Group of Ten

In accordance with s. NR 205.07(1)(p)3., Wis. Adm. Code, additional test procedures may be specified in the permit on a case−by−case basis. Therefore, permittees shall use EPA test method 610 or other EPA approved method to test for the PAH compounds. Permittees shall demonstrate compliance with the monthly average PAH group limit by reporting no detection of any of these PAH compounds, or by reporting the sum of the PAH group detected amounts equal to or less than 0.1 µg/L. See Appendix C for the calculation of the concentration of the PAH group of 10 compounds.

5.6 Benzo(a)pyrene

In accordance with s. NR 205.07(1)(p)3., Wis. Adm. Code, additional test procedures may be specified in the permit on a case−by−case basis. Therefore, permittees shall use EPA test method 610 or other EPA approved method to test for benzo(a)pyrene. Permittees shall demonstrate compliance with monthly average benzo(a)pyrene limit by reporting no detection of benzo(a)pyrene, or by reporting a detected amount equal to or less than 0.02 µg/L.

5.7 Naphthalene

In accordance with s. NR 205.07(1)(p)3., Wis. Adm. Code, additional test procedures may be specified in the permit on a case−by−case basis. Therefore, permittees shall use EPA test method 610 or other EPA approved method to test for naphthalene. Permittees shall demonstrate compliance with monthly average naphthalene limit by reporting no detection of naphthalene, or by reporting a detected amount equal to or less than 10 µg/L.

5.8 Solids Removal

In accordance with s. NR 205.07(1)(j), the permittee shall at all times properly operate and maintain all facilities and systems of treatment and control which are installed or used by the permittee to achieve compliance with the conditions of the permit. Therefore, the permittee shall visually inspect

seepage areas during times of discharge to check that the infiltrative capacity of the soils is sustained. Any accumulated solids shall be removed from seepage areas to maintain the infiltrative capacity of the soils.

5.9 Adequate Design

The permittee shall limit wastewater discharges to absorption or seepage pond systems so that the discharge volume combined with the precipitation from a 10−year frequency, 24−hour duration rainfall event does not reduce the available freeboard to less than one foot below the top of the dike. This condition is based on absorption pond systems in s. NR 214.12(3)(f), Wis. Adm. Code.

5.10 Discharge Location

The permittee shall direct the discharge to grass, soil, gravel areas, or seepage areas to the extent possible and infiltration of the discharge shall be maximized. This condition is based on spray irrigation systems under s. NR 214.14(2)(a), Wis. Adm. Code.

5.11 Discharge Rate

The permittee shall limit the discharge flow rate to a rate that can infiltrate into the soil surface. This condition is based on spray irrigation systems under s. NR 214.14(2)(a), Wis. Adm. Code.

5.12 Runoff Control

The permittee shall limit the discharge flow rate to prevent the runoff of any wastewater from the site. The wastewater may not be discharged during any rainfall events that cause runoff from the site. Uncontaminated storm water may be allowed to drain from the site. This condition is based on spray irrigation systems under s. NR 214.14(3)(f), Wis. Adm. Code.

5.13 Erosion Control

The permittee shall limit the discharge flow rate to prevent erosion when the vegetative cover has not developed sufficiently to anchor the soil and create the filter mat necessary for effective wastewater treatment. This condition is based on overland flow systems under s. NR 214.15(3)(d), Wis. Adm. Code.

5.14 Winter Operations

Winter operation may be allowed as long as the soil surface remains unfrozen. Since treatment efficiency and infiltration decreases in the winter, the department may require storage or additional treatment of the discharge during cold weather. This condition is based on overland flow systems under s. NR 214.15(3)(e), Wis. Adm. Code.

5.15 Groundwater Quality

The concentration of any wastewater parameter that may impact groundwater quality shall be limited at the point of discharge to a value that will minimize the concentration of the substance in the groundwater to the extent technically and economically feasible and prevent exceedance of the preventive action limit (PAL) in the groundwater. This condition is based on overland flow systems under s. NR 214.15(3)(c), Wis. Adm. Code.

5.16 Degradation By-Products

All by-products formed as a result of the remediation process shall be recaptured or further degraded to a point where it does not constitute further risk to either human health or the environment. This condition is based on the guidance given in the memorandum of understanding developed by the remediation and redevelopment program titled “Policy on the Approval of Infiltration Systems and Injection Wells for Soil, Groundwater or Aquifer Remediation” dated May 7, 1996 and updated as of February 2013.

5.17 Groundwater Monitoring

Compliance with the limitations established by this permit shall be demonstrated by sampling wastewater treatment system effluent prior to seepage. However, permittees may discharge to the ground surface at limits higher than the preventive action limits (PALs) presented in this permit if the permittee installs a groundwater monitoring system or utilizes an existing groundwater monitoring system downgradient of infiltration system to demonstrate compliance with this permit. The alternative sampling location must be stated in the discharge management plan and approved by the department in writing. If the groundwater monitoring system is installed or an existing groundwater monitoring system is utilized, then compliance with the PALs applies to any point at which groundwater is monitored.

Note: Any new or modified groundwater monitoring system associated with a wastewater treatment system must follow the requirements in chs. NR 140 and 141, Wis. Adm. Code and is subject to the department's approval pursuant to s. 281.41, Wis. Stats and ch. NR 108, Wis. Adm. Code. The plans and specifications shall be submitted to the Bureau of Water Quality, P.O. Box 7921, Madison, WI 53707-7921.

5.18 Water Treatment Additives for Groundwater Discharges

Permittees shall not place water treatment additives in any discharge that is not a part of a water supply system unless the water treatment additive use is approved, in writing, by the department. An additive review is necessary for substances that may enter groundwater without receiving wastewater treatment or substances that are used in a treatment process but are not expected to be removed by wastewater treatment and may impact groundwater quality. In event that the permittee wishes to commence use of a water treatment additive, or increase the usage of the additives greater than indicated in the NOI, the permittee shall submit a request and receive written approval from the department prior to initiating such changes. The permittee shall maintain records of the monthly water treatment additive use including the additive name, manufacturer, and daily maximum amount used.

For each water treatment additive used, the permittee shall submit (1) the commercial name of the additive and the Material Safety Data Sheet (MSDS), (2) the proposed frequency of use, (3) the amount or concentration to be used and (4) the anticipated discharge concentration Examples of water treatment additives are biocides such as microbicides, fungicides, molluscicdes, etc. and water quality conditioners such as scale and corrosion inhibitors, pH adjustment chemicals, oxygen scavengers, conditioning agents, water softening compounds, etc. An additive review is not required for additives with active ingredients consisting of chlorine, hypochlorite, sulfuric acid, hydrochloric acid or sodium hydroxide. Also, chemicals used in an industrial process generating wastewater that eventually receives treatment or chemicals added as part of a wastewater treatment process (such as ferric chloride, alum or pickle liquor) are not considered water treatment additives and need not require an additive review. Water treatment additives can vary from innocuous to highly toxic.

The language from Section 4.4 of the permit has been modified to be more appropriate for groundwater discharges. The permittee shall submit the above information regarding the water treatment additive as specified in the permit, so the department can determine if it is allowable and won't negatively impact groundwater standards in ch. NR 140, Wis. Adm. Code. The department's determination may include consulting with other agencies as appropriate if groundwater standards have not been developed for compounds of concern.

6 Land Treatment Requirements

6.1 Sampling Point(s)

In accordance with s. NR 218.07, Wis. Adm. Code, the location of sampling points shall be as specified in an applicable permit. The discharge(s) shall be limited to the waste type(s) designated for the listed sampling point(s).

Sampling Point Designation	
Sampling Point Number	**Sampling Point Location, WasteType/Sample Contents and Treatment Description (as applicable)**
004	**Agri-Chemical Contaminated Wastewater: Landspreading or spray irrigation of any agricultural chemical contaminated wastewater generated that cannot be used as a product and that has no detrimental effect on soils, vegetation or groundwater. Samples representative of the discharge to the land application system shall be taken following treatment (if necessary) and prior to land application via Outfall 005 on department approved sites.**

6.2 Monitoring Requirements and Effluent Limitations

According to s. NR 205.08(2), Wis. Adm. Code, the department may include monitoring requirements and effluent limitations in general permits. The permittee shall comply with the following monitoring requirements.

6.2.1 Sampling Point (Outfall) 004 – Agri-Chemical Contaminated WW

Permittees shall follow the requirements provided in Sections 6.2.2 through 6.2.9 and the reporting requirements in Section 6.3.

Changes from Previous Permit

- Sampling Point and description has been added to the permit under Section 6.1.
- Sections 6.2.2-6.2.9 have been added to the permit based on similar land treatment practices from ch. NR 214, Wis. Adm. Code. Section NR 205.10, Wis. Adm. Code, allows the department to include best management practices to control or abate the discharge of pollutants in WPDES permits if the practices are reasonably necessary to carry out the purposes and intent of ch. 283, Wis. Stats., and the Clean Water Act (CWA). The BMPs are based on similar land treatment activities provided in ch. NR 214, Wis. Adm. Code. These BMPs will help prevent the runoff of the discharge into surface waters and exceedance of any groundwater standards.
- Section 6.2.4 for nitrogen loading has been updated based on standard language in individual permits for land treatment systems.
- Section 6.3 was added to the permit to help track compliance of agri-chemical contaminated wastewater discharges.

Explanation of Monitoring Requirements

In accordance with the MOU between DATCP and DNR concerning hazardous substance discharges dated April 12, 2005, a responsible party must notify the DATCP Bureau of Agrichemical Management prior to landspreading, discharging, or disposing of any agricultural chemical contaminated wastewater generated by a remedial action at a discharge site, or any other pesticide containing wastewater that cannot be used as a product. The DATCP will subsequently notify the DNR Bureau of Water Quality to determine if the activity is subject to coverage under this general permit, or whether an individual WPDES permit is necessary. Coverage under this permit is not required for landspreading water

contaminated with agricultural chemicals that is managed as a pesticide or fertilizer product and subsequently used consistent with pesticide product label directions, or according to normal nutrient management practices for fertilizer products.

6.2.2 Discharge Rate

The permittee shall limit the discharge flow rate to a rate that can infiltrate into the soil surface. If runoff occurs, all spreading or spraying shall cease immediately. This condition is based on spray irrigation systems under s. NR 214.14(2)(a), Wis. Adm. Code.

6.2.3 Chloride Loading

The permittee shall limit the total pounds of chloride applied to 340 pounds per acre per 2-year period. This loading limit is based on landspreading systems for liquid wastes and by-product solids in s. NR 214.17(4)(d)7., Wis. Adm. Code.

6.2.4 Nitrogen Loading

The permittee shall limit the total pounds of nitrogen applied per acre per year 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 UW-Ext., http://www.soils.wisc.edu/extension/pubs/A2809.pdf) minus any other nitrogen, including fertilizer or manure, added to the landspreading site. 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. This loading limit is based on landspreading systems for liquid wastes and by-product solids in s. NR 214.17(4)(d)9., Wis. Adm. Code.

6.2.5 Ponding

The permittee shall limit the volume of wastewater landspread or sprayed to prevent ponding, except for temporary conditions following rainfall events. If ponding occurs, all spreading or spraying shall cease immediately. This loading limit is based on landspreading systems for liquid wastes and by-product solids in s. NR 214.17(4)(d)2., Wis. Adm. Code.

6.2.6 Runoff Control

The permittee may not discharge wastewater during any rainfall events that cause runoff from the site. Uncontaminated storm water may be allowed to drain from the site. This condition is based on spray irrigation systems under s. NR 214.14(3)(f), Wis. Adm. Code.

6.2.7 Erosion Control

The permittee shall limit the discharge flow rate to prevent erosion when the vegetative cover has not developed sufficiently to anchor the soil and create the filter mat necessary for effective wastewater treatment. This condition is based on overland flow systems under s. NR 214.15(3)(d), Wis. Adm. Code.

6.2.8 Winter Operations

Winter operation may be allowed as long as the soil surface remains unfrozen. Since treatment efficiency and infiltration decreases in the winter, the department may require storage or additional treatment of the discharge during cold weather. This condition is based on overland flow systems under s. NR 214.15(3)(e), Wis. Adm. Code.

6.2.9 Groundwater Quality

The concentration of any wastewater parameter that may impact groundwater quality shall be limited at the point of discharge to a value that will minimize the concentration of the substance in the groundwater to the extent technically and economically feasible and prevent exceedance of the preventive action limit (PAL) in the groundwater. This loading limit is based on

landspreading systems for liquid wastes and by-product solids in s. NR 214.17(4)(b), Wis. Adm. Code.

6.3 Reporting and Recordkeeping Requirements

6.3.1 Annual Certification Statement:

In accordance with s. NR 205.08(2), general permits may contain reporting requirements. Therefore, the permittee is required to submit a certified letter to the department each year by January 31st. This annual certification statement will allow the department to determine if the requirements of the permit are being followed each year by the permittee for agri-chemical contaminated wastewater discharges.

6.3.2 Discharge Records:

The permittee shall keep and maintain records of all certification statements, discharge activities and the results of the any visual inspections or monitoring and shall be retained for a period of three years pursuant to s. NR 205.07(1)(f), Wis. Adm. Code. Records shall be made available for department inspection and submitted to the department upon request pursuant to ss. NR 205.07(1)(d) and (L), Wis. Adm. Code.

7 Standard Requirements

Both the current permit and new permit provide a Standard Requirements (SR) section that contains conditions and requirements that are, for the most part, applicable to all industrial permittees.

Changes from Previous Permit

Changes to the standard requirements section include:

- SR Section 7.1.1: This section has been moved to the standard requirements. The permit now requires that monitoring results be submitted on an electronic discharge monitoring report (eDMR) instead of a paper annual report. The monitoring forms are due 21 days after the end of the reporting permit.
- SR Section 7.2.1: The permit now explains requirements on how to delegate signature authority for a duly authorized representative.
- SR Section 7.2.2: The permit now explains requirements on how to transfer permit coverage to a new permittee.
- SR Section 7.2.3: The permit now explains requirements on how to terminate permit coverage.
- SR Sections 7.3.1-7.3.2, 7.3.7-7.3.10, 7.3.16, and 7.3.18: These sections are required to be included all WPDES permit issued by the department.
- SR Sections 7.3.11-7.2.13: The permit now explains sampling and testing procedures as well as the requirement for testing performed by a certified or registered laboratory with exclusions.

7.1 Reporting Requirements

According to s. NR 205.08(2), Wis. Adm. Code, the department may include reporting requirements in general permits. The reporting requirements are included by reference from chs. NR 106.07(6)(e), NR 106.14(3), and NR 205.07(1) and (3), Wis. Adm. Code.

7.2 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 ss. NR 205.07(1)(i), Wis. Adm. Code.

7.3 General Conditions for WPDES Permits

The general conditions for WPDES permits are included by reference from chs. NR 205.07(1) and (3), NR 219.037, Wis. Adm. Code, and 33 USC 1251.

8 Summary of Reports Due

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

Appendix A – Definitions

The standard definition section is provided to permittees to help clearly define terms used throughout the permit. The definitions of these terms are included by reference from department guidance, 40 CFR 122.2 and chs. NR 140, NR 200, NR 205, NR 211, 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.

Appendix B – Notice of Intent Form

The contents of the notice of intent (NOI) shall be specified in the general permit and shall require the submission of information necessary for adequate program implementation pursuant to 40 CFR 122.28(b)(2)(ii). The NOI, at a minimum, shall include 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 40 CFR Appendix A to Part 127. Authorized state programs may require regulated entities to submit more data than what is listed in Appendix A. All NOI must be signed and certified in accordance with s. NR 205.07(1)(g), Wis. Adm. Code.

Appendix C – PAH Calculation

The calculation of the concentration for the PAH group of ten compounds in WPDES permits is based on department released guidance entitled "PAH Group of 10 Calculation of Concentration Using Toxicity Equivalent Factors" (3400-2015-01), which is available at http://dnr.wi.gov/water/egadSearch.aspx.

Appendix D – Receiving Water Hardness Values

The mean receiving water hardness values were collected by the department from the period of January 1988 through June 2015 for various surface water throughout the state of Wisconsin. These values can be used to determine the metal limits for surface water discharges. If the hardness is not listed for a certain surface water, the permittee will have to take a representative sample of the receiving water.

Other Changes from Previous Permit

- Section 2 "Requirements for all Discharges" has been removed from the previous permit. This includes sections on treatment of contaminated wastewater, prevent overflow, and inspection and maintenance. The department does not want to require treatment as there may be rare situations where the discharge may meet the limits without treatment.
- Section for chlorine for bacterial control has been moved to Section 4.2.1.4.
- Section for visible foam and floating solids has been removed from the permit as this is covered under the surface water narrative criteria in Section 4.5.
- Section on pH limits and monitoring for discharge to surface water has been removed and included in the surface water discharge requirements under Section 4.2.1.

Prepared by:

Trevor J. Moen
Wastewater Engineer
Bureau of Water Quality

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