

FACT SHEET
WPDES GENERAL PERMIT NO. WI-0057681-04
HYDROSTATIC TEST WATER AND WATER SUPPLY SYSTEM WATER
March 2007

This fact sheet includes the following:

- A brief explanation of general WPDES permits (GPs)
- A description of operations and discharges covered under this general permit for hydrostatic test water and water supply system water
- An explanation and rationale for permit requirements and summary of changes from the previous permit is provided sequentially by permit section number. Substantive changes to requirements for discharges from hydrostatic testing discharges have been limited to a new monitoring progression for nonrecurring discharge events and discharges to groundwater. Substantive requirements for discharges of water supply system water have not changed. Provisions in the previous permit which are no longer relevant or out of date have not been retained or have been updated. Requirements for discharge of hydrostatic test water and water supply water to surface water and groundwater respectively have been identified in separate permit sections instead of being combined as in the previous permit. The format of the general permit has also been adjusted to be consistent with current individual WPDES permits. Key permit requirements are copied into the fact sheet for convenience since final GPs are not available on the internet after public notice.
- Administrative codes referenced in the fact sheet and GP may be accessed on the internet at <http://www.legis.state.wi.us/rsb/code.htm>.

GENERAL PERMIT COVERAGE

GPs are designed to cover discharges from a class of facilities, industries or activities that are similar in nature described further at <http://dnr.wi.gov/org/water/wm/WW/PMTTYPES.HTM#general>. A list of current WI GPs is also available on the internet at <http://www.dnr.state.wi.us/org/water/wm/ww/gpindex/gpinfo.htm>. When a GP is issued, all facilities meeting its requirements may be covered by the GP. For facilities that are eligible for coverage under a GP, the Department typically sends a cover letter and a copy of the permit to the facility. The cover letter includes the Department's determination that a facility's discharge is covered under the GP. Other alternatives to a cover letter to each facility are used for some GPs such as outside washing of vehicles when management practices are key requirements. A facility may need to be covered under more than one GP, depending on the different types of wastestreams that a facility discharges. However, a facility that requires an individual permit for any part of its discharge may have all discharges covered under an individual permit.

DESCRIPTION OF OPERATIONS COVERED UNDER THIS GP

This permit is applicable to facilities discharging hydrostatic test water, water supply system water, and other similar waters. Another GP applies to discharges resulting from treatment and conditioning of potable water (WI-0046540) (i.e.; from iron filters, demineralizers, lime softeners, alum coagulation units, etc.). A short duration discharge GP (WI-0059137) may also be used to cover some discharges as may be determined to be appropriate. Discharges of some wastewater containing petroleum from tanks prior to hydrotesting may be covered by the Petroleum Contaminated Water GP (WI-0046531) which is intended to regulate petroleum contaminated water from fueling areas and petroleum storage tank farms.

Hydrostatic Test Water

Hydrostatic test water would include water that is used to hydrostatically pressure test pipelines, tanks or other vessels. Discharges from the testing of new tanks and pipes may contain small amounts of oil added by the manufacturer to prevent corrosion prior to product use. Treatment for oil and grease is typically not necessary to remove these low levels of oil. However, discharges from the testing of tanks and pipelines that previously contained liquid petroleum products is likely to contain levels of oil and grease that require treatment. When oxygen scavenging compounds, such as sodium

sulfite (or other reducing agents) are used to protect against corrosion, aeration of the test water is necessary prior to discharge to surface water to prevent low dissolved oxygen (DO) and an oxygen demand. Hydrostatic testing related to water supply systems (watermains, storage tanks or towers, etc.) is covered under requirements in this GP for water supply water, as indicated below.

Water Supply System Water

Discharges of water supply system wastewater include a wide variety of discharges associated with maintaining a potable water supply.

Water Supply System Water

Discharges of water supply system water from draining or flushing of water systems includes routinely scheduled opening of fire hydrants to flush out water lines and less frequent draining of water towers or tanks prior to cleaning or hydrostatic testing of watermains. Discharges of such typical water supply system water do not contain a net addition of chlorine and will not require treatment. Flushing of water supply distribution systems will likely contain TSS and although the concentration of TSS may be high initially, the average for the short period of discharge is not expected to be significant and treatment is not typically necessary. Discharges that are considered similar to water supply system waters include water that contains only innocuous additives at a rate and quantity necessary to provide a safe drinking water supply. Examples would include discharges from dynamometers and water meter testing.

Disinfection Water from Water Supply Wells, Water Towers and Distribution Systems

Discharges resulting from the testing, flushing and disinfection of new or existing wells, and the draining of water storage tanks, towers and distribution pipes after disinfection contain chlorine at concentrations greatly exceeding the typical levels found in potable water supplies. These waters have a net addition of chlorine and require treatment for chlorine removal prior to discharge to surface waters. A relatively low number of planned discharge events for disinfection water are expected in a year (if any) for maintaining a potable water supply. Maintenance on potable water storage tanks or towers resulting in a disinfection event is typically every 5 years or as needed. New wells are not installed frequently and existing wells are reconditioned infrequently (ie, for example every 10 to 15 years as needed). Potable water supply wells include public water supply wells and private high capacity potable water supply wells (high capacity defined as 70 gpm for one well or a total of 70 gpm for wells on a property). For reference, the level of activity on new or reconditioning of public water supply wells has been approximately 100 per year or so and less than 75 or so new high capacity potable private wells per year based on the number of required plan approvals for these activities issued by the Department's Bureau of Water Supply. Water supply approvals for new public water supply wells or rehabilitation of existing wells with additives of concern will include requirements for discharge of well development water, as appropriate (as dechlorination, neutralization, and/or discharge to POTW if appropriate as specified in NR 811, Wis. Adm. Code). The number of breaks in water distribution system lines varies but not all such events require disinfection of the affected segment of water line. For further reference, some municipalities have up to date internet sites that provide detailed information on activities related to maintaining water supplies.

Water Supply Pigging Operations Wastewater

Water supply pigging operations involve mechanically scouring segments of water lines. Pigging operations generate wastewater with high levels of suspended solids (i.e., inert solids) which cannot be discharged to surface water under this permit unless effluent limitations for TSS (40 mg/L) are met. Significant treatment for suspended solids will be required for discharge to surface water to be a viable option. If discharge to groundwater is an available or desired option, attention to appropriate management of generated solids is an obvious necessity. Water supply pigging operations have not been reported to occur on a frequent basis.

EXPLANATION OF PERMIT REQUIREMENTS AND CHANGES FROM PREVIOUS PERMIT

An explanation and rationale for permit requirements and summary of changes from the previous permit are provided below sequentially by permit section number, as indicated above.

1 Applicability Criteria

1.1 Activities Covered

This permit applies to discharges meeting the following conditions:

- Discharges of hydrostatic test water from pipelines, watermains, tanks or other vessels.
- Discharges of water supply system water resulting from the draining or flushing of water systems.
- Discharges of other similar wastewaters.

Changes from Previous Permit:

There are no substantive changes to activities covered in the previous permit although the description of hydrostatic test water lists watermains and other vessels in addition to pipelines and tanks.

1.2 Activities Not Covered

This permit does not apply to discharges that meet any of the following conditions:

- Discharges to a wetland where the Department has determined that the discharge of pollutants will not meet the wetland protection requirements of ch. NR 103, Wis. Adm. Code;
- Discharges directly to an outstanding resource water as defined in s. NR 102.10, Wis. Adm. Code, or discharges that would lower the water quality of downstream outstanding resource waters;
- Discharges directly to an exceptional resource water as defined in s. NR 102.11, Wis. Adm. Code, or discharges that would lower the water quality of downstream exceptional water resources;
- Discharges containing substances that will exceed the surface water quality standards and effluent limitations determined according to chs. NR 102, NR 105, NR 106, and NR 207, Wis. Adm. Code, or will exceed the groundwater quality standards in ch. NR 140, Wis. Adm. Code.

Changes from Previous Permit:

Activities not covered listed above are retained from the previous GP and other similar GPs and either may not be permitted, require more information (for example, a water quality standards for wetlands information request form at http://dnr.wi.gov/org/water/wm/ww/applications/wetlands_nr103.pdf to determine wetland impacts) or require the oversight of an individual WPDES permit.

The applicability criteria relating to the 21 bioaccumulators not being present in the discharge has not been retained. Dischargers eligible for this general permit would not be adding bioaccumulators to a discharge. Consideration for pollutants of concern including bioaccumulators is evaluated in the eligibility requirement that no substances be discharged that would exceed surface water or groundwater standards.

The applicability criteria for water supply pigging operations restricting discharge to surface waters unless appropriate treatment to remove solids is employed has been moved to the requirements for discharge of water supply water to surface water. Discharges indirectly to groundwater remain as a discharge alternative.

The applicability criteria for restricting eligibility of water treated with biocides except for compounds added at a rate necessary to provide a safe drinking water supply has not been retained. All additives will be evaluated and must be approved by the Department prior to use for hydrostatic test water which will ensure that biocides and other compounds of concern are not used unless effective treatment is provided for pollutant removal. Required additives to water supplies to provide safe drinking water have been and will continue to be regulated by the Department's Water Supply Program and not this permit.

2 Requirements for All Discharges

Requirements for all discharges in permit section 2 appear below.

2.1 Reporting Monitoring Results

Reporting of monitoring results is required annually unless specified as quarterly or monthly in a letter from the Department or other appropriate notification. Monitoring results obtained during the specified reporting period (monthly or quarterly but not less than annually) shall be summarized and reported on a Department Wastewater Discharge Monitoring Report or other reporting form or system approved by the Department (including the electronic Discharge Monitoring Report (eDMR) system when available for General WPDES permits). This report is to be returned to the Department no later than the date indicated on the form (typically the 15th day of the month following the end of the specified reporting period of monthly, quarterly or annually). When submitting a Department paper Discharge Monitoring Report form, the original (and one copy if required on the DMR form) shall be submitted to the return address printed on the form. A copy of the Wastewater Discharge Monitoring Report Form submitted or an electronic file of the report shall be retained.

The permittee shall report exceedances of any limits for each parameter regardless of monitoring frequency (refer to the standard requirement (5.7) for noncompliance reporting). For example, monthly, weekly, and/or daily limits shall be met even when only monitoring once per month. The permittee may monitor more frequently than required for any parameter.

2.2 Dikes and Berms

Dikes or berms constructed as part of a treatment facility shall be designed to have no above ground leakage through or over the outer surface of such dikes or berms.

Changes from Previous Permit:

The previous requirement for annual reporting of required monitoring results by February 15th of the following year has been revised (in permit section 2.1) to indicate that reporting will be annually by the date indicated on the monitoring form unless a reporting period of quarterly or monthly is required by a letter or other appropriate notification. More frequent reporting than annually is expected to be specified for discharges when current data is needed before the end of the year or to account for increasing use of advances in information technology (wastewater database capability to generate paper Discharge Monitoring Report Forms for individual facilities covered by General WPDES permits or future anticipated capability for reporting data electronically via the internet using the eDMR system). Although use of eDMR reporting for general permits is not imminent, it could occur during the term of the permit. When paper DMR forms are produced by the Department, one copy and the original must be submitted to the address indicated on the form.

The requirement above for dikes and berms has been retained from the previous permits and other similar GPs. Except for controlled flow through a discharge structure, there shall be no overflow or above ground leakage of treatment pond dikes or berms to maintain the integrity of the containment area.

The previous permit requirement for not allowing biocide additives is no longer listed separately but will be evaluated prior to approving additive use for hydrostatic test water that is not part of a water supply system in permit sections 3.1.8 for discharges to surface water and 4.1.6 for discharges indirectly to groundwater.

The previous permit requirement for obtaining all other necessary permits and approvals has been moved to the standard requirements in permit section 5.

The requirement for treatment of oily wastewater from pipelines or tanks containing petroleum products has been moved to permit sections 3.1.6 and 4.1.5 for hydrostatic testing discharges to surface water and indirectly to groundwater, respectively.

3 Surface Water Discharge Requirements

3.1 Monitoring Requirements and Effluent Limitations for Hydrostatic Test Water Discharged to Surface Water

Discharges to surface waters of hydrostatic test water that are not part of a water supply system shall meet the requirements in permit section 3.1 including the effluent limitations and monitoring requirements specified in Table 3.1. Monitoring during a specified sample period is only required when hydrostatic test water is discharged. Samples representative of the discharge shall be taken at each outfall following treatment (if applicable) and prior to discharge to surface waters.

Table 3.1- Discharge of Hydrostatic Test Water to Surface Water

Monitoring Requirements and Effluent Limitations					
Parameter	Limit Type	Limit and Units	Sample Frequency	Sample Type	Notes
Flow Rate		gpd	Weekly or Monthly as specified in 3.1.1	Estimate	See 3.1.2
Suspended Solids, Total	Daily Max	40 mg/L	Weekly or Monthly as specified in 3.1.1	Grab	
pH	Daily Min	s.u.	Monthly	Grab	
pH	Daily Max	s.u.	Monthly	Grab	
Oil and Grease	Daily Max	15 mg/L	Weekly or Monthly as specified in 3.1.1	Grab	See 3.1.4 and 3.1.5
Dissolved Oxygen for Cold Water Fisheries	Daily Min	6.0 mg/L	Weekly or Monthly as specified in 3.1.1	Grab	See 3.1.6 and 3.1.7
Dissolved Oxygen for Non Cold Water Fisheries	Daily Min	5.0 mg/L	Weekly or Monthly as specified in 3.1.1	Grab	See 3.1.6 and 3.1.7
Water Treatment Additives			Monthly	Record of Addition	See 3.1.8

Changes from Previous Permit:

The first paragraph above table 3.1 has been amended to clarify that requirements for discharges from hydrostatic testing related to water supplies (watermains, storage tanks or towers, etc.) are not included in this permit section for hydrostatic test water but are included in permit sections for discharge of water supply water (3.2 and 4.2).

The monitoring frequency for the parameters in Table 3.1 in the previous permit was monthly. Monthly monitoring has been retained for discharges from recurring hydrostatic testing as defined below. For nonrecurring hydrostatic testing discharge events, the monitoring frequency for flow rate, total suspended solids, oil and grease (when required) and dissolved oxygen (when required) has been changed from monthly to a progression weekly for first four calendar weeks and monthly thereafter depending on the duration of the discharge.

The permit language requiring treatment of discharges of hydrostatic test water from tanks and pipelines that have previously been used for liquid petroleum products for oil and grease removal prior to discharge has been revised to specify use of appropriate treatment technology which may include but not be limited to an oil water separator instead of requiring an oil water separator only.

Explanation of Limits and Requirements:

Limits in permit Table 3.1 are retained from the previous permit and are based on best professional judgment or water quality standards as follows:

The limit for Tss of 40 mg/L daily maximum is based on best professional judgment of levels of suspended solids achievable for typical solids treatment technologies for this type of discharge.

The limit for oil and grease of 15 mg/L daily maximum is based on best professional judgment of the capability of properly designed and functioning oil water separator or other appropriate oily wastewater treatment technologies.

Limits for dissolved oxygen (DO) are based on water quality standards for DO for types of receiving waters identified.

Limits for pH of 6.0 s.u. minimum and 9.0 s.u. maximum are based on surface water quality standards.

Water treatment additives will not be approved which result in discharge of pollutants at levels of concern as discussed in 3.1.8 below.

Monitoring requirements and other key requirements are also retained from the previous permit except as listed under changes above. These permit requirements are listed below (in smaller font) with the same numbering as in the permit with explanation added if there are changes from the previous permit or as needed.

3.1.1 Sample Frequency for Flow, Tss, Oil and Grease and Dissolved Oxygen

The sample frequency for flow rate and total suspended solids and the sample frequency when required for oil and grease and dissolved oxygen shall be as follows:

Discharges from Recurring Hydrostatic Testing with Dedicated Treatment and Outfall

Permittees with recurring discharges of hydrostatic test water which are similar in nature and which are associated with normal business activities at a single site and which operate dedicated wastewater treatment equipment with a dedicated outfall shall monitor monthly.

Nonrecurring Discharges of Hydrostatic Test Water

Permittees with nonrecurring or intermittent discharges of hydrostatic test water (testing of pipelines, pipeline segments, tanks and other vessels) at differing locations or the same location and which do not operate dedicated treatment equipment with a dedicated outfall shall be monitored as follows:

- On the first day of discharge from a hydrostatic testing event (to meet requirements for the first calendar week).
- If discharge continues at an outfall beyond the first calendar week, the sampling frequency shall be weekly for calendar weeks two through four.
- If the discharge continues beyond four calendar weeks, the sampling frequency shall be one time per calendar month thereafter and as long as there is some discharge during the calendar month.

The monitoring frequency for the parameters (in Table 3.1) in the previous permit was monthly. The permit language above has been added to better account for consistent monitoring of nonrecurring discharge events for hydrostatic testing while keeping the monthly monitoring frequency the same for recurring discharges as defined above. Since many discharges are of short duration or limited frequency, it is not expected that monitoring will be significantly increased from the frequencies specified in accordance with the previous permit. In the previous permit the Dept. could by letter require weekly or daily monitoring of hydrostatic testing discharges instead of monthly, as determined to be appropriate. For nonrecurring hydrostatic testing discharge events, the monitoring frequency for flow rate, total suspended solids, oil and grease (when required) and dissolved oxygen (when required) has been changed from monthly to weekly for the first four calendar weeks (including the first day of discharge for the first calendar week) and to monthly thereafter depending on the duration of the discharge. This progression of frequency will be minimal for discharge events of short duration and if discharge occurs for more than a month, requirements will be equivalent to those of routine discharges discussed below.

Monthly monitoring has been retained for discharges from recurring hydrostatic testing. Discharges from recurring hydrostatic testing (industrial products, tank farms, etc.) from normal business activities at a single site with a dedicated treatment system and a dedicated outfall are expected to have established treatment demonstrated to comply with permit limits and less potential for variability. Recurring discharge does not imply continuous but at some typical frequency based on business activity.

The monitoring frequency for pH has been retained at monthly during periods of discharge and not included with the other parameters above since variability in pH is not typically expected.

3.1.2 Flow Estimate

Estimate means a reasonable approximation of the average daily flow based on a water balance, an uncalibrated weir, calculations from the velocity and cross section of the discharge, intake water meter readings, discharge water meter readings, or any other method approved by the Department.

The permit language above has been retained from the previous permit and is consistent with other similar GPs. For hydrostatic testing the total volume of the pipeline, tank or vessel tested is typically known.

3.1.3 Grab Sample

A grab sample means a single sample taken at one moment of time or a combination of several smaller samples of equal volume taken in less than a two minute period.

The permit language above has been retained from the previous permit and is consistent with other similar GPs.

3.1.4 Oil and Grease Monitoring

Oil and grease monitoring is only required for discharges of hydrostatic test water from tanks, vessels and pipelines that have previously contained petroleum products.

The permit language above has been retained from the previous permit since oil and grease is not expected in levels of concern when hydrostatic testing is not related to petroleum products.

3.1.5 Treatment of Petroleum Contaminated Hydrotest Water

Discharges of hydrostatic test water from tanks and pipelines that were previously used for and contain residues of liquid petroleum products shall be treated for oil and grease removal prior to discharge (treatment technology may include, but not be limited, to an oil/water separator). This requirement does not apply to tanks and pipelines that were previously used for vapor fuels, unless treatment is necessary to meet permit limits.

For existing tanks or pipelines used for liquid petroleum products, the hydrostatic test water is expected to contain significant concentrations of oil and grease requiring treatment. The permit language above has been retained from the previous permit except the treatment required has been changed to specify use of appropriate treatment technology which may include but not be limited to an adequately sized, designed and functioning oil water separator instead of requiring an oil water separator only. This is based on observations of field staff and literature indicating 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. Testing of pipelines and tanks that were previously used for vapor fuels such as natural gas is not expected to contain significant levels of oil and grease and treatment is needed when the facility cannot meet permit limits.

3.1.6 Oxygen Scavengers and Chemical Dechlorination

When oxygen scavenging compounds (e.g. sodium sulfite) are used or chemical dechlorination is employed, the discharge shall be aerated prior to discharge to surface waters.

The permit language above has been retained from the previous permit since aeration is necessary to ensure achieving required DO levels when oxygen scavenging compounds are used.

3.1.7 Dissolved Oxygen Monitoring

Dissolved oxygen monitoring is only required for discharges when oxygen scavenging compounds have been used.

The permit language above has been retained from the previous permit since DO levels are not expected to be of concern when oxygen scavenging compounds are not used. Aeration could be by cascade aeration, aerated tank or other means depending on the wastewater dissolved oxygen levels.

3.1.8 Approval of Water Treatment Additives for Surface Water Discharge

Permittees shall not place water treatment additives in hydrostatic test water that is not part of a water supply system unless the water treatment additive use is approved, in writing, by the Department. Whenever the quantity of a discharge containing additives is increased or the concentration of a water treatment additive is increased, the permittee shall obtain a separate written approval from the Department. The permittee shall maintain records of the monthly water treatment additive use including the additive name, manufacturer, and daily maximum amount used and such usage shall be reported as required by this permit.

The permittee shall provide the following information regarding water treatment additives to receive Department approval:

- the commercial name of the additive and Material Safety Data Sheet (MSDS);
- the proposed frequency of use;

- the amount or concentration to be used;
- the anticipated discharge concentration; and
- Aquatic toxicity information, consisting of at least one 48-hour LC₅₀ or EC₅₀ value for Daphnia magna or Ceriodaphnia dubia, and at least one 96-hour LC₅₀ or EC₅₀ value for either fathead minnow, rainbow trout, or bluegill. The Department will only consider toxicity information on the whole product, not just the active ingredient or component of a product.

The permit language above only allows use of water treatment additives for hydrostatic test water (that is not part of a water supply system) discharged to surface water that have been reviewed and approved in writing by the Department. Facilities are required to submit information specified above on the proposed additive use rate, discharge concentration and aquatic toxicity information for determination if it is allowable without negatively impacting aquatic life. Changing the types or quantity of additives proposed to be discharged must also be approved by the Department in writing to prevent changes in the wastewater discharge characteristics that could impact aquatic life.

Additives use typically may be for corrosion control or to prevent deposition of scale forming materials. If use of dyes is proposed information submitted on toxicity and color impacts on a receiving water will be evaluated. Most biocides would not be approved for use in hydrostatic testing (not related to water supply systems), but if chlorine (or halogens which can be considered biocides) addition was proposed, approval would not be granted unless dechlorination would be provided to remove chlorine. Coordination by appropriate staff would be necessary for any approvals that may be needed for addition of chemicals regulated for aquatic nuisance control. Facilities are required to maintain records of monthly additive use and report usage to verify appropriate use rates.

3.1.9 Floating Solids and Foam

There shall be no discharge of floating solids or visible foam in other than trace amounts.

The permit language above has been retained from the previous permit and is consistent with other similar GPs and individual WPDES permits for surface water discharges.

3.1.10 Erosion Control

Discharge rates and locations shall be controlled to prevent erosion and the addition of sediment or turbidity to the receiving water.

The permit language above has been retained from the previous permit and is consistent with other similar GPs to ensure erosion control for surface water discharges.

3.2 Monitoring Requirements and Effluent Limitations for Water Supply System Water Discharged to Surface Water

Permittees that discharge water supply system water to surface water shall meet the requirements in permit section 3.2 including effluent limits in Table 3.2 and the monitoring provisions contained in sections 3.2.2 and 3.2.3. Samples of any discharge of water supply system water regulated by this permit shall be representative of the discharge and shall be collected following treatment (if applicable) and prior to discharge to surface waters.

Table 3.2 – Discharge of Water Supply System Water to Surface Water

Monitoring Requirements and Effluent Limitations					
Parameter	Limit Type	Limit and Units	Sample Frequency See 3.2.1, 3.2.2 and 3.2.3	Sample Type	Notes
Flow Rate		gpd	See 3.2.1	Estimate	See 3.2.5
Suspended Solids, Total	Daily Max	40 mg/L		Grab	
pH	Daily Min	6.0 s.u.		Grab	
pH	Daily Max	9.0 s.u.		Grab	

Monitoring Requirements and Effluent Limitations					
Parameter	Limit Type	Limit and Units	Sample Frequency See 3.2.1, 3.2.2 and 3.2.3	Sample Type	Notes
Dissolved Oxygen for Cold Water Fisheries	Daily Min	6.0 mg/L		Grab	See 3.2.2
Dissolved Oxygen for Non Cold Water Fisheries	Daily Min	5.0 mg/L		Grab	See 3.2.2

Changes from Previous Permit:

A condition has been added to require that records be made available to the Department upon request that are used and maintained on water supply discharges to report to government agencies or to plan, schedule and document practices and activities resulting in discharges.

Explanation of Limits and Requirements:

Limits in permit Table 3.2 are retained from the previous permit based on best professional judgment or water quality standards as follows:

A limit for Tss of 40 mg/L daily maximum is based on best professional judgment of levels of TSS achievable for typical solids treatment technologies for these types of discharges.

Limits for dissolved oxygen (DO) are based on water quality standards for DO for types of receiving waters identified.

Limits for pH of 6 s.u. minimum and 9.0 s.u. maximum are based on surface water quality standards for all receiving waters.

Monitoring provisions and other key requirements are also retained from the previous permit except as listed under changes above. These permit requirements are listed below (in smaller font) with the same numbering as in the permit with explanation added if there are changes from the previous permit or as needed.

3.2.1 Records for Discharges of Water Supply System Water

Records of flow rates and volume of water discharged that are also reported to other government agencies (including the Wisconsin Public Service Commission) and other information the permittee uses to plan, schedule, implement and document practices and activities associated with these discharges shall be made available to the Department upon request.

The above permit language retains the provisions from the previous permit that limits remain in effect but monitoring of water supply water is not required for the most frequent typical discharges from flushing water mains and draining of water storage tanks or reservoirs and hydrostatic testing of water mains and similar water discharges. The requirement has been added as specified above that records must be made available to the Department upon request that are used and maintained on water supply discharges to report to government agencies or to plan, schedule and document practices and activities resulting in discharges. This will allow the Department to access appropriate records and information when needed for these routine discharges of water supply water or if activities of concern are observed or reported. The capability to require monitoring for disinfection discharges in 3.2.2 below and water supply pigging operations in 3.2.3 below is also retained from the previous permit as explained below which would result in reporting of monitoring results on discharge monitoring report forms.

3.2.2 Requirements for Discharge from Well, Water Tower, and Distribution System Disinfection

Discharges of disinfection water from well, water tower, and distribution systems shall be treated for chlorine removal prior to discharge to surface waters. The chlorine concentration in the discharge shall not exceed the chlorine level normally present in the drinking water supply. When chemical dechlorination is used to remove chlorine, the discharge shall be aerated prior to discharge to surface waters. The Department may, by

letter, require monitoring for total residual chlorine and dissolved oxygen to determine compliance with this requirement, at a monitoring frequency equal to but not greater than that necessary to obtain a representative sample of discharges from the permittee's system. Grab samples shall be collected when monitoring for chlorine.

The above permit language retains requirements from the previous permit requiring treatment of disinfection discharges for chlorine removal prior to discharge to surface waters. Discharges resulting from the testing, flushing and disinfection of new or existing wells and the draining of water towers and tanks and distribution pipes after disinfection contain a net addition of chlorine at concentrations greatly exceeding the typical levels found in potable water supplies.

Methods of chlorine treatment could include but not be limited to the following:

Induced Dissipation - Dissipation in a spray chamber, packed tower or other similar device.

Natural Dissipation - Allowing the water to sit for a few days prior to drainage to allow dissipation of chlorine to acceptable levels.

The actual amount of 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 sulphur dioxide, sodium metabisulfite, sodium bisulfite, sodium sulfite, and sodium thiosulfate) can be used to reduce chlorine levels.

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.

When chemical dechlorination is used, the water must be aerated prior to discharge to surface waters to prevent the potential for low dissolved oxygen or an oxygen demand.

As in the previous permit, the Dept. may by letter require monitoring of disinfection events for chlorine and dissolved oxygen (when dechlorinating) when needed to verify that chlorine removal practices are being implemented or if concerns are reported or observed, to obtain representative data. The monitoring frequency will be as often as needed but not greater than that necessary to obtain representative data characterizing discharges from disinfection events.

3.2.3 Requirements for Discharges from Water Supply Pigging Operations

Discharges of wastewater from water supply pigging operations shall be treated for suspended solids removal to meet permit limits in Table 3.2. If determined to be necessary, the Department may, by letter, require monitoring for total suspended solids to determine compliance with this requirement, at a monitoring frequency equal to but not greater than that necessary to obtain a representative sample of discharges from the permittees pigging operations.

The above permit language retains requirements for treatment for suspended solids to meet the 40 mg/L Tss daily maximum limit and no discharge of visible foam or floating solids. This would require significant treatment for suspended solids removal. As in the previous permit, the Dept. may by letter require monitoring of pigging events when needed or if concerns are reported or observed to obtain representative data. The monitoring frequency will be as often as needed but not greater than that necessary to obtain representative data characterizing discharges from pigging operations.

3.2.4 Discharge Monitoring Report Forms

Discharge monitoring reports are not required to be submitted except as may be required under monitoring provisions above for discharges from disinfection events (3.2.2) or water supply pigging operations (3.2.3).

3.2.5 Flow Estimate

Estimate means a reasonable approximation of the average daily flow based on a water balance, an uncalibrated weir, calculations from the velocity and cross section of the discharge, intake water meter readings, discharge water meter readings, or any other method approved by the Department.

3.2.6 Grab Sample

A grab sample means a single sample taken at one moment of time or a combination of several smaller samples of equal volume taken in less than a two minute period.

3.2.7 Floating Solids and Foam

There shall be no discharge of floating solids or visible foam in other than trace amounts.

3.2.8 Erosion Control

Discharge rates and locations shall be controlled to prevent erosion and the addition of sediment or turbidity to the receiving water.

Permit language above for flow estimates, grab samples, floating solids and foam and erosion control have been retained from the previous permit and consistent with other similar GPs.

4 Groundwater Discharge Requirements

4.1 Monitoring Requirements and Effluent Limitations for Hydrostatic Test Water Discharged to Groundwater

Discharges of hydrostatic test water that are not part of a water supply system to seepage and indirectly to groundwater shall meet the requirements in permit section 4.1, including the effluent limitations and monitoring requirements specified in Table 4.1. Monitoring during a specified sample period is only required when hydrostatic test water is discharged. Samples representative of the discharge shall be taken at each outfall following treatment (if applicable) and prior to discharge indirectly to groundwater.

Table 4.1 – Discharge of Hydrostatic Test Water to Groundwater

Monitoring Requirements and Effluent Limitations					
Parameter	Limit Type	Limit and Units	Sample Frequency	Sample Type	Notes
Flow Rate		gpd	Weekly or Monthly as specified in 4.1.1	Estimate	See 4.1.2
Oil and Grease	Daily Max	15 mg/L	Weekly or Monthly as specified in 4.1.1	Grab	See 4.1.4 and 4.1.5
Water Treatment Additives			Monthly	Record of Addition	See 4.1.6

Changes from Previous Permit:

Previous permit monitoring requirements (in Table 4.1) for discharges of hydrostatic test water to groundwater have been increased from quarterly to monthly for recurring discharges and from quarterly to weekly for the first four calendar weeks and monthly thereafter for nonrecurring discharges to account for current practice in complex cases and to be consistent with surface water discharges.

Explanation of Limits and Requirements:

Limits in permit Table 4.1 are retained from the previous permit based on best professional judgment or water quality standards as follows:

The limit for Oil and Grease of 15 mg/L daily maximum is based on best professional judgment of the capability of properly designed and functioning oil water separator or other appropriate oily wastewater treatment technologies.

Water treatment additives will not be approved which result in discharge of pollutants at levels of concern as discussed in 4.1.6 below.

Monitoring requirements and other key requirements are also retained from the previous permit except as listed under changes above. These permit requirements are listed below (in smaller font) with the same numbering as in the permit with explanation added if there are changes from the previous permit or as needed.

4.1.1 Sample Frequency for Flow and Oil and Grease

The sample frequency for flow rate and oil and grease (when required) shall be as follows:

Discharges from Recurring Hydrostatic Testing with Dedicated Treatment and Outfall

Permittees with recurring discharges of hydrostatic test water which are similar in nature and which are associated with normal business activities at a single site and which operate dedicated wastewater treatment equipment with a dedicated outfall shall monitor monthly.

Nonrecurring Discharges of Hydrostatic Test Water

Permittees with nonrecurring or intermittent discharges of hydrostatic test water (testing of pipelines, pipeline segments, tanks and other vessels) at differing locations or the same location and which do not operate dedicated treatment equipment with a dedicated outfall shall be monitored as follows:

- On the first day of discharge from a hydrostatic testing event (to meet requirements for the first calendar week).
- If discharge continues at an outfall beyond the first calendar week, the sampling frequency shall be weekly for calendar weeks two through four.
- If the discharge continues beyond four calendar weeks, the sampling frequency shall be one time per calendar month thereafter and as long as there is some discharge during the calendar month.

Previous permit monitoring requirements for discharges of hydrostatic test water to groundwater have been increased from quarterly to monthly in Table 4.1 for recurring discharges and from quarterly to weekly for the first four calendar weeks and monthly thereafter for nonrecurring discharges to account for current practice in complex cases and to be consistent with surface water discharges. The permit language above is consistent with surface water discharge requirements for hydrostatic test water which are explained in detail in 3.1.1 above for recurring and nonrecurring discharge events. Since many discharges are of short duration or limited frequency, it is not expected that monitoring will be significantly increased from the frequencies specified in accordance with the previous permit.

4.1.2 Flow Estimate

Estimate means a reasonable approximation of the average daily flow based on a water balance, an uncalibrated weir, calculations from the velocity and cross section of the discharge, intake water meter readings, discharge water meter readings, or any other method approved by the Department.

4.1.3 Grab Sample

A grab sample means a single sample taken at one moment of time or a combination of several smaller samples of equal volume taken in less than a two minute period.

Permit language above for flow estimates and grab samples are retained from the previous permit and are consistent with requirements in other similar GPs.

4.1.4 Oil and Grease Monitoring

Oil and grease monitoring is only required for discharges of hydrostatic test water from tanks, vessels and pipelines that have previously contained petroleum products.

4.1.5 Treatment of Petroleum Contaminated Hydrotest Water

Discharges of hydrostatic test water from tanks and pipelines that were previously used for and contain residues of liquid petroleum products shall be treated for oil and grease removal prior to discharge (treatment technology may include, but not be limited, to an oil/water separator). This requirement does not apply to tanks and pipelines that were previously used for vapor fuels, unless treatment is necessary to meet permit limits.

Permit language above for oil and grease monitoring and treatment of petroleum contaminated hydrocarbons is retained from the previous permit and is identical to those for surface water discharge of hydrotest water (in permit section 3.1) with a detailed explanation of changes for treatment for use of appropriate oily wastewater treatment technology explained in 3.1.5 above.

4.1.6 Approval of Water Treatment Additives for Groundwater Discharge

Permittees shall not place water treatment additives in hydrostatic test water that is not part of a water supply system unless the water treatment additive use is approved, in writing, by the Department. Whenever the quantity of a discharge containing additives is increased or the concentration of a water treatment additive is increased, the permittee shall obtain a separate written approval from the Department. The permittee shall maintain

records of the monthly water treatment additive use including the additive name, manufacturer, and daily maximum amount used and such usage shall be reported as required by this permit.

The permittee shall provide the following information regarding water treatment additives to receive Department approval:

- the commercial name of the additive and the Material Safety Data Sheet (MSDS);
- the proposed frequency of use;
- the amount or concentration to be used; and
- the anticipated discharge concentration

The above permit language is retained from the previous permit which specifies information needed for a Department determination on the whether water treatment additives are approvable. NR 140 Wis. Adm. Code would be used in the Department's determination which may include consulting with other agencies as appropriate if groundwater standards have not been developed for compounds of concern. Facilities are required to maintain records of monthly additive use and report usage to verify appropriate use rates.

4.1.7 Solids Removal

Solids shall be removed from seepage areas, if needed, to maintain the absorptive capacity of the soils and prevent plugging.

The above permit language has been retained from the previous permit. Removal of solids from seepage areas may be needed to insure that these areas can continue to absorb wastewater.

4.2 Requirements for Water Supply System Water Discharged Indirectly to Groundwater

Discharges of water supply system water to seepage and indirectly to groundwater shall meet the requirements in permit section 4.2 reproduced below.

4.2.1 Records for Discharges of Water Supply System Water

Records of flow rates and volume of water discharged that are also reported to other government agencies (including the Wisconsin Public Service Commission) and other information the permittee uses to plan, schedule, implement and document practices and activities associated with these discharges shall be made available to the Department upon request.

4.2.2 Solids Removal

Solids shall be removed from seepage areas, if needed, to maintain the absorptive capacity of the soils and prevent plugging.

Changes from Previous Permit:

The previous permit did not have limits and monitoring requirements. The requirement to make records available for information on discharges of water supply system water to groundwater has been added.

Explanation of Requirements:

The substances typically associated with discharges from maintaining a potable water supply are not expected to impact groundwater, although records and information similar to surface water discharges must be made available to the Department upon request as explained under surface water discharge requirements.

5 Standard Requirements

Changes from Previous Permit:

The standard requirements in permit section 5 have been updated to the extent practical to make the language consistent with individual WPDES permits currently issued by the Department and consistent with other similar general permits. Changes to the previous permit standard requirements listed for convenience are primarily editorial since changes have not been made to the Wis. Adm. Code applying to general permits (ch. NR 205, Wis. Adm. Code see internet site

<http://nxt.legis.state.wi.us/nxt/gateway.dll?f=templates&fn=default.htm&vid=WI:Default&d=code&jd=ch.%20nr%20205>). Some requirements for reporting monitoring results in the previous permit have been moved from the standard requirements to the requirements for all discharges in permit section 2.1. A few applicable standard requirements not appearing in the last version of the permit are shown below by permit condition number for severability and work near surface waters and wetlands.

5.15 Severability

The provisions of this permit are severable, and if any provisions of this permit or the application of any provision of this permit to any circumstance is held invalid, the remainder of this permit shall not be affected thereby.

5.16 Work Near Surface Waters and Wetlands

Any work performed in wetland areas or within areas subject to local floodplain and shoreland regulations must conform to all applicable county or local ordinances. All applicable state permits and/or contracts required by chs. 30, 31 and 87, Wis. Stats. (or Wisconsin Administrative Code adopted under these laws), and applicable federal permits must be obtained as necessary.

6 Summary of Reports Due

Changes from Previous Permit:

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

FOR INFORMATIONAL PURPOSES ONLY

Description	Date	Page
<p>Wastewater Discharge Monitoring Report. Reporting of monitoring results is required annually unless specified as quarterly or monthly in a letter from the Department or other appropriate notification. Monitoring results obtained during the specified reporting period (monthly, quarterly but not less than annually) shall be summarized and reported on a Department Wastewater Discharge Monitoring Report or other reporting form or system approved by the Department (including the electronic Discharge Monitoring Report (edmr) system when available for General WPDES permits). This report is to be returned to the Department no later than the date indicated on the form (typically the 15th day of the month following the end of the specified reporting period of monthly, quarterly or annually).</p> <p><i>(Note: More frequent reporting than annually is expected to be specified for discharges when current data is needed or to account for increasing use of advances in information technology (wastewater database capability to generate paper Discharge Monitoring Report Forms for individual facilities covered by General WPDES permits or future anticipated capability for reporting data electronically via the internet using the eDMR system.)</i></p>	<p>no later than the date indicated on the form</p>	<p>1</p>

Report forms shall be submitted to the address printed on the report form.

Prepared by:

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