

CHAPTER 1.12 – WET Limit Compliance Schedules

This chapter is intended to help staff make decisions regarding appropriate time frames and requirements for WET limit compliance schedules in WPDES permits.

NOTICE: This document is intended solely as guidance, and does not contain any mandatory requirements except where requirements found in statute or administrative rule are referenced. This guidance does not establish or affect legal rights or obligations, and is not finally determinative of any of the issues addressed. This guidance does not create any rights enforceable by any party in litigation with the State of Wisconsin or the Department of Natural Resources. Any regulatory decisions made by the Department of Natural Resources in any matter addressed by this guidance will be made by applying the governing statutes and administrative rules to the relevant facts.

Standard WET Limit Compliance Schedule

Whole effluent toxicity (WET) limits are established in a permit according to s. NR 106.08, Wis. Adm. Code, whenever representative, facility-specific WET data demonstrate that the effluent is or may be discharged at a level that will cause, have the potential to cause, or contribute to an excursion of a water quality standard. The Department evaluates all surface water dischargers to determine the need for WET limits and monitoring at the time of permit reissuance - see Chapter 1.3 for more discussion of WET reasonable potential and how the WDNR determines whether a WET limit is necessary in each situation (<http://dnr.wi.gov/topic/wastewater/WETguidance.html>).

When a new WET limit is required for the first time in a WPDES permit, it may be necessary to include a compliance schedule in order to give the permittee time to take the actions necessary to come into compliance with the new limit. Standard WET limit compliance schedules require that a Toxicity Reduction Evaluation (TRE) be completed, which is necessary to determine what is causing toxicity and what actions are needed to remove it and achieve compliance with the new limit. (See Chapter 2.2 for a more complete discussion of TREs.) A TRE compliance schedule should be given in most cases where representative WET data suggests that severe or repeated toxicity is present in the effluent.

A TRE compliance schedule may not be appropriate, however, in cases where limited WET data is available or where toxicity has not occurred for some time. Chapter 1.3 (Table 1) recommends when a TRE compliance schedule may need to accompany a new WET limit, based on the number of representative WET data available and the number of WET failures that have occurred. In cases where data is limited or toxicity has appeared infrequently, more frequent monitoring is recommended instead of a TRE, in order to determine whether toxicity reappears over time. Standard language in WPDES permits (see Chapter 1.14) requires that a TRE be completed if WET failures occur during the permit term.

In cases where a TRE compliance schedule is required, regular permit-required WET monitoring is usually postponed until after the compliance schedule is completed and the limit has become effective. TREs typically include toxicity screening using the most sensitive species (based on historical data), so regular permit-required, compliance-type WET tests are not necessary in addition to that screening during the compliance schedule period. Only the monitoring which accompanies the limit type should be postponed. (For example, if a chronic WET limit is given, chronic monitoring starts at the end of the compliance schedule, but acute WET monitoring begins at reissuance.) Monitoring should be required after the compliance schedule is completed and for the remainder of the permit term in order to demonstrate compliance with the WET limit.

The following is an example of typical TRE compliance schedule language and suggested dates for completion of each step. A schedule such as this is usually given when a permittee needs time to complete a full toxicity reduction evaluation. This includes time to investigate the source(s) of toxicity and to choose the best method for removing toxicity after the source has been identified. This schedule allows about 3 years from permit issuance to complete a TRE and meet the limit. Required steps or dates due should be adjusted if the permittee has already completed some of the work described.

Standard Compliance Schedule Dates

Required Action	Date Due
Submit part one of a Toxicity Reduction Evaluation (TRE) plan describing procedures to be used to identify the source(s) responsible for the effluent toxicity.	(1-3 months from permit issuance)
Implement part one of the TRE plan, make a reasonable attempt to identify the source(s) of the toxicity, and submit a report to the Department presenting the results of the evaluation.	(1 -1.5 yrs from permit issuance)
Submit part two of the TRE Plan describing actions to be taken to reduce or eliminate the toxicity identified in part one of the TRE and the dates by which those actions will be implemented.	(~1 month from the end of step 2)
Submit a progress report identifying the actions taken to date to implement part two of the TRE plan.	(about 1/2 way through part 2)
Complete all actions identified in the TRE plan and achieve compliance with the effluent toxicity limitation.	(1 -1.5 yrs from the end of step 2)

This version of the compliance schedule is available in the “picklist” when drafting a permit in the System for Wastewater Applications, Monitoring, and Permits (SWAMP). When including a TRE compliance schedule for a WET limit in a permit, staff should give specific dates for each step in the schedule rather than using a narrative such as, "6 months beyond permit issuance." Guidance in Chapter 2.2 includes guidance for permittees and labs regarding how to complete each step of the standard TRE compliance schedule.

Reasons for Deviating From the Standard Compliance Schedule

As suggested above, TRE compliance schedules usually allow about 3 years to find and fix toxicity problems. Most successful TREs include removal, reduction, substitution, or pretreatment of the source(s) and can usually be completed during a 3 year schedule. According to s. NR 106.117, Wis. Adm. Code, a WPDES permit limit compliance schedule cannot exceed 5 years in length, except when performing a study to alter a secondary value, therefore a WET limit compliance schedule cannot extend beyond 5 years.

Although most TREs can be completed in 3 years, it may be necessary to deviate from the standard schedule in some circumstances. Construction of a whole new treatment system or another major action are possible justifications for lengthening the time allowed by the compliance schedule. Conversely, a permittee may not need the full 3 years if they have already completed some parts of the TRE prior to permit reissuance (e.g., they’ve identified the source and only need time to remove it). Other circumstances may exist which call for a longer or shorter schedule, but it is important to insure that there is enough time (ideally, at least 1 year) between the end of the TRE and the end of the permit, to allow time for WET monitoring. It is necessary to conduct WET monitoring after the compliance schedule is complete in order to demonstrate compliance with the WET limit before the permit is reissued.

The following are some examples of reasons why staff may want to modify the standard TRE compliance schedule that appears in SWAMP. There may be other reasons which are not discussed here. Reasons for changing standard compliance schedule language should be explained in fact sheets, so that others can tell why decisions were made, and shared with the Biomonitoring Coordinator (Kari.Fleming@wisconsin.gov; 608-267-7663).

Major Modification or Construction of a New WWTP. Construction of a whole new treatment system or some other major action are possible justifications for lengthening the time allowed by the compliance schedule. In some cases, especially when staff have good reason to believe that past toxicity will be resolved by new treatment processes, it may be acceptable to leave out the compliance schedule altogether (e.g., a WET limit compliance schedule may be unnecessary in addition to a compliance schedule for new facility construction). If a compliance schedule is not given for these reasons, the WET limit should be made effective and monitoring should start as soon as the upgrade is complete. When determining

the correct amount of WET monitoring to assign after the completed upgrade, the WET Checklist (described in Chapter 1.3) should be completed based on WET data and toxicity potential as it exists at the time of permit issuance, since it is necessary for the permittee to demonstrate that the upgrade has reduced that potential.

Staff should remember that toxicity can be caused by many factors and an upgrade that removes more solids or BOD₅ may not necessarily improve the treatment or removal of substances causing effluent toxicity. If it is unclear whether an upgrade will resolve toxicity problems, it may be wise to require TRE studies prior to the upgrade to more clearly understand the cause. It is usually easier to judge whether treatment upgrades will better treat effluent toxicity when the cause of toxicity is known. If staff suspect that the upgrade will resolve past toxicity problems, but do not know this for sure, another option may be a WET limit and/or TRE “trigger” (see discussion below).

Chloride Source Reduction and WET Compliance Schedules. Special allowances may be given in situations where chloride is shown to be the sole cause of whole effluent toxicity. In some situations, it may be necessary to allow time to make this demonstration. More discussion and example schedules for these situations are given in Chapter 2.10.

Intermittent Discharges. The standard 3 year compliance schedule may not be appropriate if a discharge is intermittent or seasonal. In these cases, time allowed for each step may need to be adjusted to account for shorter discharge periods. Since these discharges occur for fewer days in a given year, more time may be needed between compliance schedule steps, in order to allow the permittee time to conduct toxicity investigations. For example, if an intermittent discharge only occurs for < 6 months of the year, it may be necessary to allow up to 2 calendar years for the completion of the first step, so that the permittee has enough time to collect samples, perform toxicity identification work, and confirm any findings.

Triggers. TREs are more difficult to perform when toxicity is less severe or occurs infrequently. Reasonable potential determinations may require that a WET limit be given when only one or a few WET failures have occurred, even if toxicity has not occurred for some time or if toxicity has not always been present in the effluent. In other cases, staff and/or the permittee may suspect that past failures which are driving WET limit recommendations are no longer representative of the current discharge, but there may not be enough conclusive data to leave those failures out of the reasonable potential calculation. Where any of these is the case, staff have a couple of options to consider. One is to extend the WET limit compliance schedule beyond the standard 3 years, in order to allow more time to determine whether toxicity is present in the effluent. Another option is to place a “trigger” in the permit. See Chapter 1.3 for additional discussion of when triggers may be used in permits.

A WET limit trigger may be most appropriate for situations where available toxicity data is dated, questionable, or limited, and staff feel that it is necessary to gather more WET data prior to the imposition of a WET limit or TRE compliance schedule. If a trigger is to be used in the permit, quarterly WET monitoring should be required, at a minimum, for the first twelve months of the permit and WET footnote and TRE compliance schedule language should be modified as shown below.

Trigger Language (to be placed into the WET footnote directly below the “WET Testing Frequency” section):

WET Limit Applicability: If any (*acute/chronic*) WET test completed during the first twelve months of this permit shows positive results, the remaining tests will be waived and the Whole Effluent Toxicity Compliance Schedule (*see p. X*) will be initiated. After the compliance schedule is completed, the (*acute/chronic*) WET limit will become effective and quarterly (*acute/chronic*) monitoring will be required for the remainder of the permit term. If no (*acute/chronic*) tests conducted in the first twelve months of this permit show positive results, the compliance schedule will be waived, the limit will not become effective, and the (*acute/chronic*) monitoring shown above will be required.

Chapter 1.12, Page 3

CHAPTER EFFECTIVE DATE: November 1, 2016

WET compliance schedule language (with changes from the standard compliance schedule **highlighted**)

Required Action	Date Due
Submit part one of a Toxicity Reduction Evaluation (TRE) plan describing procedures to be used to identify the source(s) responsible for the effluent toxicity.	90 days after 1st positive test noted in the 1st year
Implement part one of the TRE plan, make a reasonable attempt to identify the source(s) of the toxicity, and submit a report to the Department presenting the results of the evaluation.	(2 yrs from permit issuance)
Submit part two of the TRE Plan describing actions to be taken to reduce or eliminate the toxicity identified in part one of the TRE and the dates by which those actions will be implemented.	(~1 month from the end of step 2)
Submit a progress report identifying the actions taken to date to implement part two of the TRE plan.	(about 1/2 way through part 2)
Complete all actions identified in the TRE plan and achieve compliance with the effluent toxicity limitation.	(1 -1.5 yrs from the end of step 2)

The permit will also need to include WET monitoring that will be required if the WET limit is not triggered. In most cases, monitoring frequencies can be reduced if no failures occur during the first twelve months (i.e., if the limit is not triggered). Staff may choose to use adjusted point totals from previous Checklist recommendations – removing any points for failed tests – to help determine an appropriate level of monitoring to require.

Reduction in Monitoring After the Successful Completion of a TRE

Permit language may be written to allow a reduction in monitoring, in certain circumstances, after a TRE has been successfully completed. For example, if frequent monitoring (bimonthly or quarterly) is to be included in the permit, permit language may be added which allows monitoring to be reduced after the permittee has submitted at least 12 months of WET data (if no toxicity occurs). It is important to note that when WET limits are given, the minimum monitoring frequency allowed by federal regulations at 40 CFR 122.44(i)(2), is 1x annually. The reduced monitoring frequency should be determined at the time of reissuance and placed in the permit. This reduced frequency may be determined by completing the WET Checklist under the assumption that toxicity is no longer present. WET limits cannot drop out and must remain effective until the next reissuance.