

Permit Fact Sheet

1 General Information

Permit Number:	WI-0049514-03-0
Permittee Name:	Waste Management Omega Hills Landfill
Address:	N96 W12730 County Line Rd
City/State/Zip:	Germantown WI 53022
Discharge Location:	East Bank of Nor-X-Way Channel; 1.8 miles from confluence with the Menomonee River. Latitude: 43°11'56"N; Longitude: 88°4'40"W
Receiving Water:	Nor-X-Way Channel (Tributary to the Menomonee River)
StreamFlow (Q _{7,10}):	0 cfs
Stream Classification:	Warm Water Forage Fish Community, not classified as a public water supply

2 Facility Description

Approximately 0.1 MGD of contaminated groundwater from the closed Omega Hills Landfill site is pumped from extraction wells thru an air stripper to a sedimentation basin for stormwater (on the NW portion of the site) which discharges to Nor-X-Way Channel (a tributary to the Menomonee River). A location diagram and water flow diagram are attached in the permit application for reference.

Groundwater monitoring has indicated impacts to area groundwater. Predominantly fine grained soils in the area are interspersed with sand and gravel layers which serve as migration pathways for some VOCs to migrate laterally away from the site and vertically to the underlying fractured Niagra dolomite bedrock. Principal VOCs at the site include 1,1-Dichloroethane, cis-1,2-Dichloroethylene, Vinyl Chloride and Ethylbenzene.

Source control groundwater remediation consists of a downgradient groundwater extraction system. Extraction wells on the east side extend to bedrock while wells on the south side are screened in the glacial overburden. Sources of contaminated groundwater approved for discharge have been characterized in the application for permit reissuance.

A new extraction well, EX10 has recently been installed along the southern perimeter of the property and connected to the current South Side Extraction System (EX1, EX3, EX5, EX7, EX9). EX10 was approved as part of the original South Side Extraction System, but was not previously installed. Expected flow rate for EX10 will be between 1500 and 3000 gallons per day. Water from EX10 screened across the same sand formation as the existing EX wells. The quality of the additional water should be consistent with the water currently going to the air stripper for treatment. The additional discharge will minimally affect the volume of water discharged to the Nor-X-Way Channel (approximately 3%) and should not affect the water quality.

Additional sources of contaminated groundwater may be proposed to be treated and discharged under this permit in accordance with the detailed requirements of the standard requirement for "Planned Changes" by submitting a report containing groundwater characterization and volume information and predicted treatability data and effects on effluent quality and the capability to meet permit limits. Upon review of the report, the Dept. will determine whether the proposed added discharge is acceptable and whether a permit modification is needed.

Sample Point Designation		
Sample Point Number	Discharge Flow, Units, and Averaging Period	Sample Point Location, WasteType/sample Contents and Treatment Description (as applicable)

Sample Point Designation		
Sample Point Number	Discharge Flow, Units, and Averaging Period	Sample Point Location, Waste Type/sample Contents and Treatment Description (as applicable)
701	N/A	Influent contaminated groundwater to the air stripper
101	N/A	Treated groundwater after air stripping
001	0.0704 MGD, Average daily flow 2009-2014.	Combined treated groundwater and stormwater sampled after the stormwater basin on the northwestern portion of the site prior to discharge to the Menomonee River via NOR-X-WAY CHANNEL

3 Influent - Proposed Monitoring

3.1 Sample Point Number: 701- Influent to air stripper

Monitoring Requirements and Limitations					
Parameter	Limit Type	Limit and Units	Sample Frequency	Sample Type	Notes
Acrolein		ug/L	1/6 Months	Grab	
Acrylonitrile		ug/L	1/6 Months	Grab	
Benzene		ug/L	1/6 Months	Grab	
Bromoform		ug/L	1/6 Months	Grab	
Carbon tetrachloride		ug/L	1/6 Months	Grab	
Chlorobenzene		ug/L	1/6 Months	Grab	
Chlorodibromo-methane		ug/L	1/6 Months	Grab	
Chloroethane		ug/L	1/6 Months	Grab	
2-Chloroethyl vinyl ether		ug/L	1/6 Months	Grab	
Chloroform		ug/L	1/6 Months	Grab	
Dichlorobromo-methane (bromo-dichloromethane)		ug/L	1/6 Months	Grab	
1,1-Dichloro- ethane		ug/L	1/6 Months	Grab	
1,2-Dichloro- ethane		ug/L	1/6 Months	Grab	
1,1-Dichloro-ethylene		ug/L	1/6 Months	Grab	
1,2-trans Dichloroethylene		ug/L	1/6 Months	Grab	

Monitoring Requirements and Limitations					
Parameter	Limit Type	Limit and Units	Sample Frequency	Sample Type	Notes
1,2-Dichloropropane		ug/L	1/6 Months	Grab	
1,3-cis Dichloropropylene		ug/L	1/6 Months	Grab	
1,3-trans Dichloropropylene		ug/L	1/6 Months	Grab	
Ethylbenzene		ug/L	1/6 Months	Grab	
Methyl bromide		ug/L	1/6 Months	Grab	
Chloromethane		ug/L	1/6 Months	Grab	
Methylene chloride		ug/L	1/6 Months	Grab	
1,1,2,2-Tetrachloroethane		ug/L	1/6 Months	Grab	
Tetrachloroethylene		ug/L	1/6 Months	Grab	
Toluene		ug/L	1/6 Months	Grab	
1,1,1-Trichloroethane		ug/L	1/6 Months	Grab	
1,1,2-Trichloroethane		ug/L	1/6 Months	Grab	
Trichloro- ethylene		ug/L	1/6 Months	Grab	
Vinyl chloride		ug/L	1/6 Months	Grab	

3.1.1 Changes from Previous Permit:

Monitoring frequency for all parameters above has been reduced from quarterly to once per six months.

3.1.2 Explanation of Limits and Monitoring Requirements

VOC monitoring of the influent is included to determine the efficiency of the air stripper. Sampling occurrences should be coincident with effluent monitoring. Effluent concentrations are consistent over time, warranting a reduction in monitoring frequency.

4 Inplant - Proposed Monitoring and Limitations

4.1 Sample Point Number: 101- Treated Ground Water After Air Stripping

Monitoring Requirements and Limitations					
Parameter	Limit Type	Limit and Units	Sample Frequency	Sample Type	Notes
Acrolein		ug/L	1/6 Months	Grab	

Monitoring Requirements and Limitations

Parameter	Limit Type	Limit and Units	Sample Frequency	Sample Type	Notes
Acrylonitrile		ug/L	1/6 Months	Grab	
Benzene		ug/L	1/6 Months	Grab	
Bromoform		ug/L	1/6 Months	Grab	
Carbon tetrachloride		ug/L	1/6 Months	Grab	
Chlorobenzene		ug/L	1/6 Months	Grab	
Chlorodibromo-methane		ug/L	1/6 Months	Grab	
Chloroethane		ug/L	1/6 Months	Grab	
2-Chloroethyl vinyl ether		ug/L	1/6 Months	Grab	
Chloroform		ug/L	1/6 Months	Grab	
Dichlorobromo-methane (bromo-dichloromethane)		ug/L	1/6 Months	Grab	
1,1-Dichloro- ethane		ug/L	1/6 Months	Grab	
1,2-Dichloro- ethane		ug/L	1/6 Months	Grab	
1,1-Dichloro-ethylene		ug/L	1/6 Months	Grab	
1,2-trans Dichloroethylene		ug/L	1/6 Months	Grab	
1,2-Dichloropropane		ug/L	1/6 Months	Grab	
1,3-cis Dichloropropylene		ug/L	1/6 Months	Grab	
Ethylbenzene		ug/L	1/6 Months	Grab	
Methyl bromide		ug/L	1/6 Months	Grab	
Chloromethane		ug/L	1/6 Months	Grab	
Methylene chloride		ug/L	1/6 Months	Grab	
1,1,2,2-Tetrachloro-ethane		ppb	1/6 Months	Grab	
Tetrachloroethylene		ug/L	1/6 Months	Grab	
Toluene		ug/L	1/6 Months	Grab	
1,1,1-Trichloro-ethane		ug/L	1/6 Months	Grab	

Monitoring Requirements and Limitations					
Parameter	Limit Type	Limit and Units	Sample Frequency	Sample Type	Notes
1,1,2-Trichloro-ethane		ug/L	1/6 Months	Grab	
Trichloro- ethylene		ug/L	1/6 Months	Grab	
Vinyl chloride		ug/L	1/6 Months	Grab	
Iron, Total Recoverable		ug/L	1/6 Months	Grab	
1,3-trans Dichloropropylene		ug/L	1/6 Months	Grab	

4.1.1 Changes from Previous Permit:

Monitoring frequency for all parameters above has been reduced from quarterly to once per six months.

4.1.2 Explanation of Limits and Monitoring Requirements

Monitoring for VOCs has been retained from the previous permit to document the efficiency of the air stripper and to provide data on the discharge of treated contaminated water to the stormwater basin which discharges to NOR-X-WAY Channel. Iron monitoring is included to document levels of discharge of iron to the stormwater basin.

5 Surface Water - Proposed Monitoring and Limitations

5.1 Sample Point Number:001- Menomonee River via Nor- X-Way Channel

Monitoring Requirements and Limitations					
Parameter	Limit Type	Limit and Units	Sample Frequency	Sample Type	Notes
Flow Rate		MGD	Daily	Continuous	
Suspended Solids, Total	Daily Max	40 mg/L	1/ 6 Months	Grab	
pH Field	Daily Max	9.0 su	1/ 6 Months	Grab	
pH Field	Daily Min	6.0 su	1/ 6 Months	Grab	
BOD5, Total		mg/L	1/ 6 Months	Grab	
Arsenic, Total Recoverable		ug/L	1/ 6 Months	Grab	
Iron, Total Recoverable	Quarterly Avg	1.0 mg/L	1/ 6 Months	Grab	
1,1-Dichloro- ethane		ug/L	1/ 6 Months	Grab	
1,2-Dichloro- ethane		ug/L	1/ 6 Months	Grab	
Trichloro- ethylene		ug/L	1/ 6 Months	Grab	

Monitoring Requirements and Limitations

Parameter	Limit Type	Limit and Units	Sample Frequency	Sample Type	Notes
1,2-Dichloro- ethene		ug/L	1/ 6 Months	Grab	
Vinyl chloride		ug/L	1/ 6 Months	Grab	
Acrolein		ug/L	1/ 6 Months	Grab	
Acrylonitrile		ug/L	1/ 6 Months	Grab	
Benzene		ug/L	1/ 6 Months	Grab	
Bromoform		ug/L	1/ 6 Months	Grab	
Carbon tetrachloride		ug/L	1/ 6 Months	Grab	
Chlorobenzene		ug/L	1/ 6 Months	Grab	
Chlorodibromo- methane		ug/L	1/ 6 Months	Grab	
Chloroethane		ug/L	1/ 6 Months	Grab	
2-Chloroethyl vinyl ether		ug/L	1/ 6 Months	Grab	
Chloroform		ug/L	1/ 6 Months	Grab	
Dichlorobromo- methane (bromo- dichloromethane)		ug/L	1/ 6 Months	Grab	
1,1-Dichloro- ethylene		ug/L	1/ 6 Months	Grab	
1,2-trans Dichloroethylene		ug/L	1/ 6 Months	Grab	
1,2-Dichloropropane		ug/L	1/ 6 Months	Grab	
1,3-cis Dichloropropylene		ug/L	1/ 6 Months	Grab	
1,3-trans Dichloropropylene		ug/L	1/ 6 Months	Grab	
Ethylbenzene		ug/L	1/ 6 Months	Grab	
Methyl bromide		ug/L	1/ 6 Months	Grab	
Chloromethane		ug/L	1/ 6 Months	Grab	
Methylene chloride		ug/L	1/ 6 Months	Grab	
1,1,2,2-Tetrachloro- ethane		ug/L	1/ 6 Months	Grab	
Tetrachloroethylene		ug/L	1/ 6 Months	Grab	

Monitoring Requirements and Limitations					
Parameter	Limit Type	Limit and Units	Sample Frequency	Sample Type	Notes
Toluene		ug/L	1/ 6 Months	Grab	
1,1,1-Trichloroethane		ug/L	1/ 6 Months	Grab	
1,1,2-Trichloroethane		ug/L	1/ 6 Months	Grab	
Xylene		ug/L	1/ 6 Months	Grab	
Chronic WET		rTUc	See Listed Qtr(s)	Grab	WET testing is required once per year in the calendar quarters specified below. Samples for WET testing shall be collected after the stormwater basin unless otherwise approved by the Department.
BHC, alpha		ng/L	Quarterly	Grab	
BHC, beta		ng/L	Quarterly	Grab	
BHC, delta		ng/L	Quarterly	Grab	
BHC, gamma (Lindane)		ng/L	Quarterly	Grab	
BHC, Technical Grade	Monthly Avg	8.6 ng/L	Quarterly	Grab	Limit is effective January 1, 2019. See BHC footnote and Compliance Schedule.
BHC, Technical Grade	Monthly Avg	6.9E-6 lbs/day	Quarterly	Grab	Limit is effective January 1, 2019. See BHC footnote and Compliance Schedule.
Priority Pollutant Scan			Annual	Grab	As specified in ch. NR 215.03(1-6), Wis. Adm. Code (excluding asbestos).

5.1.1 Changes from Previous Permit

Phosphorus: Total Phosphorus monitoring is no longer required.

Chloride: Biannual monitoring for chloride is no longer required.

Zinc: Total Recoverable Zinc monitoring is reduced from 1/6 months to annually (as part of the priority pollutant scan).

1,1-Dichloroethane: The monthly average limit of 5µ/L is no longer needed in the permit.

1,2-Dichloroethane: The monthly average limit of 5µ/L is no longer needed in the permit.

Trichloroethylene: The monthly average limit of 5µ/L is no longer needed in the permit.

1,2-Dichloroethane: The monthly average limit of 5µ/L is no longer needed in the permit.

Vinyl Chloride: The monthly average limit of 2µ/L for Vinyl Chloride is no longer in effect.

Nitrogen: Weekly average limits and monitoring for Total Ammonia Nitrogen (NH₃-N) are no longer required.

Acute WET: No Acute WET testing is required.

BHC: Quarterly monitoring is required for BHC types alpha, beta, delta, and gamma. Monthly average mass and concentration limits for Technical Grade BHC will take effect on January 1, 2019.

Monitoring frequency for all other parameters excluding flow rate, WET testing, and BHC metabolites have been reduced to once per 6 months.

5.1.2 Explanation of Limits and Monitoring Requirements

See the Water Quality Based Limitations for Waste Management-Omega Hills Landfill (WPDES Permit # WI-0049514) by Jim Schmidt dated January 18, 2013.

Phosphorus: Monitoring for phosphorus is no longer required because the reported mean effluent concentration (0.009mg/L) is less than 1/5 of the limit (0.075mg/L).

Chloride: Monitoring for chlorides is no longer required because the mean effluent concentration (66.6mg/L) is less than 1/5 of the Chronic Toxicity Limit (79mg/L).

Zinc: Monitoring for zinc is now only required annually as part of the priority pollutant scan because the mean effluent concentration (2.42mg/L) is well below 1/5 of the effluent limit (46.25mg/L) based on chronic toxicity.

1,1-Dichloroethane, 1,2-Dichloroethane, Trichloroethylene, and 1,2-Dichloroethane: No limit for these substances is required because there were no detects in the effluent. Semiannual grab samples are still required.

Vinyl Chloride: This limit is no longer necessary because vinyl chloride was not detected in the discharge. Grab sampling is still required at a frequency of once per six months.

Ammonia Nitrogen: Monitoring and permit limits for ammonia are no longer required because the P99 values are less than the limits based on the new standards.

Acute WET: Based upon previous test results and point totals generated by the WET Checklist (see WQBEL Report), no acute WET testing is required.

Chronic WET: Based upon point totals generated by the WET Checklist (see WQBEL Report), chronic WET testing is required 3 times during the permit period. Chronic tests shall be conducted once every specified year in rotating quarters in order to collect seasonal information about the discharge. Tests are required during the following quarters:

- January 1 to March 31, 2015; April 1 to June 30, 2017; and July 1 to September 30, 2019

Chronic WET testing shall continue after the permit expiration date (until the permit is reissued) in accordance with the WET requirements specified for the fourth calendar year of this permit. For example, the next test would be required in October 1 to December 31, 2019.

Cyanide: A single detect of 14 ug/L averaged in with seven non-detects (averaged as zero), gives a mean Cyanide concentration of 1.75 ug/L. Since this value is less than 1/5 of the calculated weekly average limit (2.29 ug/L) there is no longer a need to include the Cyanide limit.

4,4'-DDE: The detection of 4,4'-DDE rarely, if ever, occurs in the discharge of treated wastewater. The only detection occurred in May of 2009 and may not be representative of current discharge. Monitoring for this parameter will continue as part of the annual priority pollutant scan.

BHC-Technical Grade: The limit for this parameter represents the sum of alpha-, beta-, delta-, and gamma- BHC and is required because the reported mean effluent concentration exceeds 1/5 of the limit based on human cancer criterion.

Arsenic: Monitoring is retained because it is factored into the cumulative cancer risk per s. NR 106.06(8).

6 Compliance Schedules

6.1 BHC Technical Grade

This compliance schedule requires the permittee to achieve compliance by the specified date

Required Action	Due Date
Report on Effluent Discharges: Submit a report on effluent discharges of BHC Technical Grade with conclusions regarding compliance.	01/01/2017
Action Plan: Submit an action plan for complying with the effluent limitation. If construction is required, include plans and specifications with the submittal.	06/01/2017
Initiate Actions: Initiate actions identified in the plan.	10/01/2018
Complete Actions: Complete actions necessary to achieve compliance with the effluent limitations.	01/01/2019

6.2 Explanation of Compliance Schedules

The Permit may include a schedule for compliance with new effluent limits in accordance with s. NR 106.117(2).

BHC Technical Grade: The effluent limitations for BHC Technical Grade become effective on January 1, 2019 as specified in the Schedules of Compliance Section.

The Permittee may request that the Department make a determination of the need for a limit. If the Department determines that effluent limitations are unnecessary the Department shall notify the permittee that the limitations will not become effective. The monitoring requirements for BHC Technical Grade shall be reduced to annual monitoring and the compliance schedule shall be discontinued at that time. This action shall take place without public notice thereof.

If, after reviewing the data, the Department determines that effluent limitations for BHC Technical Grade are necessary, the requirement to meet the effluent limitations according to the Schedules of Compliance will not be removed nor will the monitoring frequency be reduced.

7 Attachments:

Substantial Compliance Determination

Water Quality Based Effluent Limits

Public Notice

8 Proposed Expiration Date:

November 30, 2019

Prepared By:

Jacob Zimmerman
Wastewater Engineer

Date: 8/4/2014

cc: SER, Tim Thompson (ecc)
Waste Management Omega Hills Landfill (ecc)

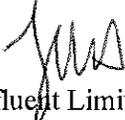
Substantial Compliance Determination

Permittee Name: Waste Management Omega Hills Landfill		Permit Number: 0049514-03-0
	Compliance?	Comments
Discharge Limits	Yes	
Sampling/testing requirements	Yes	
Groundwater standards	Yes	
Reporting requirements	Yes	
Compliance schedules	NA	
Management plan	NA	
Other:	NA	
Enforcement Considerations	None	
In substantial compliance?	Yes Comments: Signature: Jacob Zimmerman Date: 8/18/14 Concurrence: Timothy Thompson Date: 10/15/2014	

CORRESPONDENCE / MEMORANDUM**State of Wisconsin**

DATE: January 18, 2013 FILE REF: 3200

TO: Nile Ostenso – WQ/3

FROM: Jim Schmidt – WQ/3 

SUBJECT: Water Quality-Based Effluent Limitations for Waste Management – Omega Hills Landfill (WPDES Permit # WI-0049514)

This is in response to your request for an evaluation of water quality-based effluent limitations using chs. NR 102, 105, 106, 207, and 217 of the Wisconsin Administrative Code (where applicable), for Waste Management's discharge to the Nor-X-Way channel below the Omega Hills landfill. The Nor-X-Way channel is a tributary to the Menomonee River in the Milwaukee River basin. The evaluation of the permit recommendations is discussed in more detail in the attached report. Based on our review, the following recommendations are made on a chemical-specific basis:

<u>Substance</u>	<u>Effluent Limitations</u>
Total Suspended Solids	40 mg/L daily maximum
pH	6.0 – 9.0 s.u. daily range
Total Recoverable Iron	1.0 mg/L quarterly average
4,4'-DDE	0.011 ng/L and 8.8×10^{-9} pounds per day monthly average
BHC – technical grade	8.6 ng/L and 6.9×10^{-6} pounds per day monthly average (3)
Cyanide	Monitoring only, once per quarter (2)
1,1-Dichloroethane	5.0 ug/L monthly average (1)
1,2- Dichloroethane	5.0 ug/L monthly average (1)
Trichloroethylene	5.0 ug/L monthly average (1)
1,2-Dichloroethene	5.0 ug/L monthly average (1)(4)

Footnotes:

- (1) The indicated limit is either technology-based or represents Best Professional Judgment. Since the substance was not detected in the effluent, it is at the discretion of the permit drafter whether or not the limit needs to remain in the permit.
- (2) Cyanide shall be reported as either “free cyanide” or as “cyanide amenable to chlorination” to be consistent with the most stringent water quality criterion.
- (3) BHC – technical grade represents the sum of alpha-, beta-, gamma-, and delta-BHC.
- (4) Substance may also be known as 1,2-Dichloroethylene.

Ammonia limits are no longer needed in the permit. Phosphorus and ammonia monitoring may be discontinued due to low effluent concentrations and mass loading rates.

Along with the chemical-specific recommendations mentioned above, chronic whole effluent toxicity testing is recommended for this permittee. Accordingly, following the guidance provided in the most recent version of the Department's Whole Effluent Toxicity Program Guidance Document, chronic whole effluent toxicity test batteries are recommended three times during the term of the permit in rotating quarters. Please consult the attached report regarding relevant monitoring conditions that relate to this discharge.

If there are any questions or comments, please contact me at (608) 267-7658 or via e-mail at jamesw.schmidt@wisconsin.gov.

Attachment

cc: Tim Thompson – South District / Milwaukee

**Water Quality-Based Effluent Limitations for
Waste Management – Omega Hills Landfill
WPDES Permit # WI-0049514**

**Prepared by:
Jim Schmidt - WY/3**

Existing Permit Limitations (WPDES Permit # WI-0049514-02, issued August 1, 2003):

Outfall 001 – Combined treated groundwater and stormwater

<u>Substance</u>	<u>Effluent Limitations</u>
Total Suspended Solids	40 mg/L daily maximum (1)
pH	6.0 – 9.0 s.u. daily range (2)
Total Recoverable Iron	1.0 mg/L quarterly average (1)
1,1-Dichloroethane	5.0 ug/L monthly average (1)
1,2- Dichloroethane	5.0 ug/L monthly average (1)
Trichloroethylene	5.0 ug/L monthly average (1)
1,2-Dichloroethene	5.0 ug/L monthly average (1)(3)
Vinyl Chloride	2.0 ug/L monthly average (2)(4)
Ammonia (as N):	
May – October	0.6 mg/L weekly average (2)
November – April	2.6 mg/L weekly average (2)

- (1) – The indicated limit is considered to be either technology-based or represents Best Professional Judgment (BPJ).
- (2) – The indicated limit is considered to be water quality – based, according to the water quality standards available at the time of the previous permit reissuance. The vinyl chloride limit represents prevention of significant lowering of water quality, based on antidegradation rules in effect when the permit was first issued.
- (3) – Substance may also be known as 1,2-Dichloroethylene.
- (4) – Substance may also be known as Chloroethene or Chloroethylene.

No changes are recommended and no evaluation is done for TSS, pH and iron. No water quality standards are available for TSS and iron, and the pH limits are unchanged in ch. NR 102. The permit also requires quarterly monitoring (no numerical limits) for twenty-six volatile organic compounds, many of which are on the EPA priority pollutant list. The list includes the following substances and compounds:

Quarterly Monitoring:

Acrolein	Acrylonitrile	Benzene
Bromoform	Carbon tetrachloride	Chlorobenzene
Chlorodibromomethane	Chloroethane	2-Chloroethyl vinyl ether
Chloroform	Dichlorobromomethane	1,1-Dichloroethylene
1,2-trans-dichloroethylene	1,2-Dichloropropane	1,3-cis-dichloropropylene
1,3-trans-dichloropropylene	Ethylbenzene	Methyl bromide
Chloromethane	Methylene chloride	1,1,2,2-Tetrachloroethane
Tetrachloroethylene	Toluene	1,1,1-Trichloroethane
1,1,2-Trichloroethane	Xylene	

In addition, twice annual monitoring (no numerical limits) was required for several additional

parameters, including BOD5, total phosphorus, chloride, total recoverable arsenic, and total recoverable zinc.

The permit requires annual monitoring (no numerical limits) of the remaining substances on the EPA priority pollutant list that were not listed above, except for asbestos. Because of the large list of substances this includes, the individual substances and compounds are not listed here.

Effluent results for all of these substances are listed or summarized later in this report.

Information for Permit Reissuance Evaluation:

Receiving Water Information

Name: Nor-X-Way Channel (WBIC = 18350)

Classification: Warmwater forage fish community, not classified as a public water supply

Since the Menomonee River has a different classification, it is also considered in this evaluation.

Name: Menomonee River

Classification: Warmwater sportfish community, not classified as a public water supply

NOTE: For bioaccumulative chemicals of concern (BCCs), criteria are based on a classification as a coldwater community and public water supply since this permittee is located in the Great Lakes basin. However, no BCCs were detected in the discharge.

Flows – Nor-X-Way Channel:

Since this is considered to be an intermittent stream, all background flows are zero. Effluent limits are equal to the warmwater forage fish criteria.

Flows – Menomonee River (reference site = Milwaukee / Waukesha county line):

7Q10 = 2.0 cfs

7Q2 = 5.4 cfs

Estimated Harmonic Mean Flow = 9.2 cfs

% of Flow used to calculate limits = 25 (default)

Source of background concentration data = Not needed for Nor-X-Way Channel since there is no background flow. For the Menomonee River, background data for cadmium, chloride, and hardness come from the Menomonee River in Wauwatosa. Although this site is downstream of the outfall, it is considered to be representative of background conditions based on comparison with other sites as well as the fact the flow from Omega Hills is fairly small compared to the river flow. For the remaining substances, data come from a nearby stream, namely the Milwaukee River at Estabrook Park (nearest site with data).

Background results used in limit calculations (data through October 31, 2010):

<u>Substance</u>	<u>Mean Result</u>	<u>Substance</u>	<u>Mean Result</u>
Cadmium	0.0452 ug/L	Chloride	114.5 mg/L
Beryllium	0.0133 ug/L	Chromium	1.45 ug/L
Nickel	3.04 ug/L	Selenium	1.09 ug/L
Silver	0.0087 ug/L	Zinc	5.86 ug/L
Hardness	211 PPM		

Effluent Information

Actual Flow (8/1/2003 – present):

Peak daily =	0.1601 MGD (9/8/2005)
Peak 7-day average =	0.1246 MGD (6/21 – 6/27/2004)
Peak 30-day average =	0.1211 MGD (6/12 – 7/11/2004)
Peak 365-day average =	0.0959 MGD (11/2/2006 – 11/1/2007)

Acute dilution factor used = Not applicable

Effluent concentration data:

Substances tested: As noted above, all of the substances on the EPA priority pollutant list were required to be tested at least once per year since the 2003 reissuance, along with some other non-priority pollutants. Typically, this resulted in between 8 and 37 reported effluent results between 2003 and 2012. Not all of the substances were detected. The substances that were not detected are assumed not to need water quality-based limits in the reissued permit because there can be no showing of reasonable potential to exceed water quality standards. Only the substances (or compounds) with any detected results are summarized and evaluated here.

Results: The following tables summarize the detected results. Individual results are not listed here because of the sheer number of detected substances, but if needed in the limit recommendations they will be listed and summarized later in this report.

SUMMARY OF EFFLUENT INFORMATION FOR DETECTED SUBSTANCES AT WM -- OMEGA HILLS OUTFALL 001

(Data reported since August 1, 2003 when previous WPDES permit was reissued)

Substance Name	# of Results	# of Detects	Maximum (result and date)	Mean
4,4'-DDE	8	1	0.027 ug/L (5/4/2009)	0.0034 ug/L
Antimony	8	5	0.5 ug/L (twice)	0.19 ug/L
Arsenic	16	16*	6.5 ug/L (5/3/2005)	4.55 ug/L
Delta-BHC	8	4	0.033 ug/L (5/4/2007)	0.01 ug/L
Gamma-BHC (Lindane)	8	4	0.037 ug/L (5/3/2010)	0.011 ug/L
Cadmium	8	2	0.038 ug/L (5/2/2012)	0.0075 ug/L
Chloride	16	16 *	93.8 mg/L (11/8/2007)	66.6 mg/L
Copper	8	2	2.9 ug/L (5/4/2007)	0.5 ug/L
Cyanide	8	1 @	58.4 ug/L (5/4/2007)	7.3 ug/L
Di-n-butyl phthalate	7 #	1	0.3 ug/L (5/1/2008)	0.04 ug/L
Beta-endosulfan	8	1	0.0039 ug/L (5/3/2005)	0.0005 ug/L
Heptachlor	8	1	0.015 ug/L (5/4/2009)	0.002 ug/L
Iron	37	37 *	0.66 mg/L (11/2/2004)	0.24 mg/L
Lead	8	8	0.34 ug/L (5/3/2006)	0.20 ug/L
Nickel	8	8	4.8 ug/L (5/3/2005)	3.36 ug/L
Ammonia	35	29 *	0.66 mg/L (2/12/2007)	0.12 mg/L
pH	37	37	Low = 7.6 s.u. (8/8/2007) High = 9.16 s.u. (5/1/2008)	8.19 s.u.
Phosphorus	16	5	0.028 mg/L (11/3/2011)	0.009 mg/L
Selenium	8	2	0.61 ug/L (5/1/2008)	0.14 ug/L
Total Susp. Solids	37	16	29 mg/L (11/2/2004)	4.13 mg/L
Thallium	7 #	2	0.04 ug/L (5/3/2010)	0.008 ug/L
Zinc	16	11	6.3 ug/L (11/3/2008)	2.42 ug/L

FOOTNOTES from table on previous page:

* - Since eleven or more detected results were reported, 99th upper percentile (or P99) values can also be calculated using the procedure in s. NR 106.05(5). The calculated P99 values are summarized below.

NOTE: No P99 values were calculated for pH using NR 106.05(5), but both the minimum and maximum values are listed because there are standards for both in ch. NR 102.

- In many cases, the reported level of detection (LOD) was much higher in the initial 2005 sample than those reported in subsequent years. Where there are significant differences in LODs, the results with high LODs are excluded from the database (and marked with the pound sign symbol). Non-detected results with "acceptable" LODs are considered to be zero when calculating means.

@ - The single detected cyanide result may be questionable. There was a detected result of 58.4 ug/L and seven non-detects (six of which were at higher LODs than that used for the 58.4 sample result), which makes the 58.4 ug/L result questionable.

P99 SUMMARY

Substance Name	1-day P99	4-day P99	30-day P99
Arsenic	6.93 ug/L	5.65 ug/L	4.93 ug/L
Chloride	103.32 mg/L	83.51 mg/L	72.46 mg/L
Iron	0.80 mg/L	0.48 mg/L	0.31 mg/L
Ammonia	0.75 mg/L	0.41 mg/L	0.20 mg/L
TSS	30.53 mg/L	16.52 mg/L	7.93 mg/L
Zinc	7.86 ug/L	5.64 ug/L	3.42 ug/L

Effluent Limit Summary

Only the detected substances with criteria are addressed in the following tables. Concentrations are in units of ug/L unless noted otherwise.

DAILY MAXIMUM LIMITS based on ACUTE TOXICITY CRITERIA

Substance	Crit- erion	Effl. Limit	1/5 of Limit	Effluent Concentrations		
				Mean	P99	Max.
Arsenic	339.80	679.60			6.93	6.5
Cadmium	24.27 *	48.54	9.71	0.0075		0.038
Copper	31.39 *	62.78	12.56	0.5		2.9
Lead	219.99 *	439.98	88.00	0.2		0.34
Nickel	856.77 *	1713.54	342.71	3.36		4.8
Zinc	231.27 *	462.54	92.51	2.42		6.3
Cyanide	45.78	91.56	18.31	7.3		58.4
Chlorides (mg/L)	757	1514	302.8	66.6		93.8

* - Criteria are based on a hardness of 211 PPM. Normally effluent hardness would be used, but since no effluent hardness data were provided the criteria are based on the receiving water hardness.

WEEKLY AVERAGE LIMITS based on CHRONIC TOXICITY CRITERIA

Substance	Crit- erion	Effl. Limit	1/5 of Limit	Effluent Concentrations	
				Mean	P99
Arsenic	152.20	152.20			5.65
Cadmium	3.82 *	3.82	0.76	0.0075	
Copper	19.61 *	19.61	3.92	0.5	
Lead	57.62 *	57.62	11.52	0.2	
Nickel	98.17 *	98.17	19.63	3.36	
Selenium	5.0	5.0	1.0	0.14	
Zinc	231.27 *	231.27	46.25	2.42	
Cyanide	11.47	11.47	2.29	7.3	
Chlorides (mg/L)	395	395	79	66.6	

* - Criteria are based on a receiving water hardness of 211 PPM except for cadmium (175 PPM), where the reference hardness represents the upper end of the range over which chronic toxicity criteria are applied, in Table 4A of ch. NR 105.

MONTHLY AVERAGE LIMITS based on WILDLIFE CRITERIA

<u>Substance</u>	<u>Crit-erion</u>	<u>Effl. Limit</u>	<u>1/5 of Limit</u>	<u>Effluent Concentrations</u>	
				<u>Mean</u>	<u>P99</u>
4,4'-DDE	1.10E-05	1.10E-05	2.20E-06	3.40E-03	

MONTHLY AVERAGE LIMITS based on HUMAN THRESHOLD CRITERIA

<u>Substance</u>	<u>Crit-erion</u>	<u>Effl. Limit</u>	<u>1/5 of Limit</u>	<u>Effluent Concentrations</u>	
				<u>Mean</u>	<u>P99</u>
Antimony	373	373	74.6	0.19	
Cadmium	370	370	74	0.0075	
Lead	140	140	28	0.2	
Nickel	4.30E+04	4.30E+04	8.60E+03	3.36	
Selenium	2600	2600	520	0.14	

In the above tables, E = Exponent of 10, so 1E+03 = 1,000 and 1E-03 = 0.001.

MONTHLY AVERAGE LIMITS based on HUMAN CANCER CRITERIA

<u>Substance</u>	<u>Crit-erion</u>	<u>Effl. Limit</u>	<u>1/5 of Limit</u>	<u>Effluent Concentrations</u>	
				<u>Mean</u>	<u>P99</u>
Arsenic	13.3	13.3		4.55	4.93
Gamma-BHC (Lindane)	0.018	0.018	0.0036	0.01055	
BHC – tech. grade #	0.013	0.013	0.0026	0.0209	

- BHC – technical grade represents the sum of reported or applied concentrations of alpha-, beta-, gamma-, and delta-BHC. The reported mean concentrations of these four parameters at this location are 0.01055 ug/L gamma-BHC (or lindane), 0.01035 ug/L delta-BHC, and no-detects (zero) alpha- and beta-BHC.

CUMULATIVE CANCER RISK EVALUATION

<u>Detected Carcinogen</u>	<u>HCC-Based Effl. Limit</u>	<u>Mean Effl. Conc.</u>	<u>Effl. Conc. / Limit</u>
Arsenic	13.3	4.55	0.3421
BHC – tech. grade	0.013	0.0209	<u>1.6077</u>
Total (must be < 1.0)			1.9498

NOTE: The limit and effluent concentration were not included separately for gamma-BHC in the above table. Although criteria and limits are available for gamma-BHC, since it is included in the BHC-technical grade concentration with a tighter criterion and limit, the relevant concentrations for BHC – technical grade are used alone.

Permit Recommendations:

Permit limits for toxic substances are recommended whenever any of the following occur:

1. Maximum effluent concentration exceeds the limit (only applies to daily maximum unless there are at least 4 consecutive days with data, which isn't the case here).
2. If 11 or more detected results are available in the effluent, the 99th upper percentile (or P99) value exceeds the comparable calculated limit.
3. If fewer than 11 detected results are available, the mean effluent concentration exceeds 1/5 of the calculated limit.

With that in mind, the following permit limits are recommended.

4,4'-DDE: A monthly average limit of 0.011 ng/L is recommended based on the wildlife criterion for

DDT and its metabolites, since the mean effluent concentration was well in excess of 1/5 of the calculated limit. The limit is set equal to the criterion because no dilution is available in the Nor-X-Way Channel. In s. NR 106.07(2), water quality-based effluent limits are required to be expressed in permits as both a concentration and a mass; the mass limit for 4,4'-DDE is 8.8×10^{-9} lbs/day, based on the peak 30-day average flow of 0.0959 MGD and the concentration limit of 0.011 ng/L. It should be noted, however, that the detection of 4,4'-DDE rarely, if ever, occurs in the discharge of treated wastewater, so the permittee may be allowed to demonstrate that this substance is not present in the discharge and the reported detection from May of 2009 is not representative of the current discharge.

Cyanide: A weekly average limit of 11 ug/L is recommended based on the chronic toxicity criterion because the mean effluent concentration exceeds 1/5 of the limit. The limit is set equal to the chronic criterion of 11.47 ug/L because no dilution is available, and the limit is rounded to 11 ug/L because limits are typically rounded off to two significant digits. It is noted that a single effluent concentration of 58.4 ug/L total cyanide drove this permit recommendation, even though all seven remaining results were below the level of detection. This is significant in two ways. First, because of the seven non-detects out of eight total samples, it is possible the detected result (from May of 2007) was in error and is therefore not representative of the current discharge. Second, the effluent result was reported as "total cyanide" while the chronic toxicity criterion is expressed as either "free cyanide" or as "cyanide amenable to chlorination." For comparison purposes, only the NR 105 human threshold criterion (which is not exceeded here) is expressed as "total cyanide." Therefore, instead of including a cyanide limit in the permit, monitoring is recommended for either "free cyanide" or "cyanide amenable to chlorination." Because of the relatively large number of non-detected results, monitoring is recommended at a frequency of once per quarter.

BHC – technical grade: A limit is recommended for this parameter, representing the sum of alpha-, beta-, gamma-, and delta-BHC, because the reported mean effluent concentration exceeds 1/5 of the limit based on the human cancer criterion. The limit is further adjusted from the human cancer criterion so that the sum of the detected discharges of all substances with human cancer criteria meets a cumulative cancer risk of 1 in 100,000 population pursuant to s. NR 106.06(8), Wis. Adm. Code. As noted in the cumulative cancer risk table on the previous page, arsenic was also detected with a mean effluent concentration of approximately 34.2% of the limit. No permit limit is recommended because the arsenic P99 is less than its limit, but the mean at 34.2% of the limit is used to adjust the limit for BHC-technical grade. In order to comply with the cumulative cancer risk requirement in NR 106, the monthly average limit of 0.013 ug/L for BHC-technical grade is multiplied by 65.8% (or 100% – 34.2%) and rounded off to 0.0086 ug/L or 8.6 ng/L as a monthly average. A mass limit is also recommended based on the adjusted limit and the peak 30-day average flow of 0.0959 MGD; that mass limit is 6.9×10^{-6} lbs/day after rounding to two significant digits.

Vinyl Chloride: The water quality-based limit of 2 ug/L that was in the previous WPDES permit is no longer necessary because vinyl chloride was not detected in the discharge.

Technology-based or BPJ Limits: Four substances had effluent limits in the previous WPDES permit because those limits were considered to be either technology-based or represented Best Professional Judgment (BPJ) by the permit drafter. The limits were 5 ug/L monthly average each and were applied to 1,1-Dichloroethane, 1,2-Dichloroethane, Trichloroethylene, and 1,2-Dichloroethene. None of those were detected in the effluent, so water quality-based limitations are not needed at this time. It is at the discretion of the permit drafter whether or not those limits need to remain in the permit.

Other Evaluations:

Phosphorus – Technology Based: Wisconsin Administrative Code, ch. NR 217, requires wastewater dischargers that are not subject to NR 210 requirements for municipalities and discharge greater than 60 pounds of Total Phosphorus per month to comply with a Monthly Average limit of 1.0 mg/L (or an approved Alternative Concentration limit) unless a more restrictive WQBEL is applicable. The current permit for Omega Hills contains no technology-based phosphorus limit. The effluent flow and concentration data reported during the previous permit term are summarized in the following table.

Calendar Year	Mean Annual Effluent Flow (MGD)	Annual Average P Concentration (mg/L)	Estimated Annual Total P Loading (lbs/year)
2006	0.0691	0.01	2
2007	0.088	0.0045	1
2008	23.501 MGD / 366 days = 0.064	0.01	2
2009	0.0766	0 (not detected)	0
2010	0.0581	0.032	6
2011	0.0599	0.014	3
2012 (1/1 – 10/31)	0.0868	0.005	1 (so far)

The estimated annual loadings in the past four-plus years have been far below 60 pounds per month or 1720 pounds per year, so the 1 mg/L technology-based monthly average limit is not needed in Omega Hills' permit pursuant to s. NR 217.04(1)(a)1.

Phosphorus – Water Quality Based: Revisions to the administrative rules for phosphorus discharges took effect on December 1, 2010. These revisions require an evaluation of the need for water quality based effluent limits. For the Nor-X-Way Channel, the new rules specify a water quality criterion (WQC) for phosphorus of 0.075 mg/L pursuant to s. NR 102.06(3)(a)14, Wis. Adm. Code. Since the background low flow (7-day, 2-year or 7Q2) is zero, background phosphorus concentrations are not needed to calculate limits, the monthly average limit is equal to the 0.075 mg/L criterion. The reported mean effluent concentration is only 0.009 mg/L. Since this is less than 1/5 of the calculated limit, the limit does not need to be included in the permit pursuant to ch. NR 217. In fact, effluent phosphorus monitoring may be discontinued at the discretion of the permit drafter.

Ammonia: The previous permit contained weekly average ammonia limits of 2.6 mg/L in November – April and 0.6 mg/L in May – October. Water quality criteria for ammonia were revised along with the implementation procedures in 2004, after the previous permit was issued. As a result, it is appropriate to recalculate the ammonia limits and update the determination of the need to include limits in the permit.

Daily Maximum Limits based on Acute Toxicity Criteria (ATC): Daily maximum limitations are based on acute toxicity criteria, which are a function of the effluent pH and the receiving water classification. The effluent pH data reported since 2003 were examined as part of this evaluation. A total of 37 sample results were reported since May of 2003. The maximum reported value was 9.16 su (Standard pH Units) in May of 2008. Since this number exceeds the daily maximum pH limit of 9.0, the 9.0 limit shall be used to calculate the daily maximum ammonia limit. At a pH of 9.0 in waters classified as warmwater forage fish communities, the acute toxicity criterion for ammonia is 1.3 mg/L so the daily maximum limit is 2.6 mg/L. The 1-day effluent P99 value is only 0.75 mg/L, so a daily maximum

ammonia limit is not needed in the reissued permit pursuant to ch. NR 106 because the P99 value is less than the limit.

Weekly Average & Monthly Average Limits based on Chronic Toxicity Criteria (CTC): Weekly average and monthly average limits for Ammonia Nitrogen are based on chronic toxicity criteria. Since minimal ambient data are available and the background low flows are zero, the “default” basin assumed values are used for temperature and pH and the limits are set equal to the criteria. Temperature values are based on ambient temperatures for small warmwater streams in Table 2 of ch. NR 102 (highest temperatures for the indicated range of months), while pH values are based on default values for hardwater streams based on ambient values collected statewide through 2010.

		May – Oct.	Nov. – Apr.
Background Information:	7-Q ₁₀ (cfs)	0	0
	7-Q ₂ (cfs)	0	0
	Ammonia (mg/L)	Not needed	Not needed
	Temperature (°C)	19	9
	pH (su)	8.08	7.99
	% of Flow used	Not needed	Not needed
Criteria mg/L:	4-Day Chronic	3.9	6.1
	30-Day Chronic	1.6	2.4
Effluent Limits mg/L:	Weekly Average	3.9	6.1
	Monthly Average	1.6	2.4

The 4-day and 30-day P99 values for Omega Hills are 0.41 and 0.20 mg/L, respectively. Permit limits are no longer required because the P99 values are less than the limits based on the new standards. Ammonia monitoring is no longer necessary.

Whole Effluent Toxicity Evaluation:

WET testing is used to measure, predict, and control the discharge of toxic materials that may be harmful to aquatic life. In WET tests, organisms are exposed to a series of effluent concentrations for a given time. Acute tests predict the concentration that causes lethality of aquatic organisms during a 48-96 hour exposure. Chronic tests predict the concentration that interferes with the growth or reproduction of test organisms during a seven day exposure.

Acute WET: In order to assure that the discharge from outfall 001 is not acutely toxic to organisms in the receiving water, WET tests must produce a statistically valid LC₅₀ greater than 100% effluent.

Chronic WET: In order to assure that the discharge from outfall 001 is not chronically toxic to organisms in the receiving water, WET tests must produce a statistically valid IC₂₅ greater than the instream waste concentration (IWC). The IWC is an estimate of the proportion of effluent to total volume of water (receiving water + effluent). The IWC is 100% due to the lack of dilution.

Dilution Series: According to the *State of Wisconsin Aquatic Life Toxicity Testing Methods Manual* (s. NR 219.04, Wis. Adm. Code), the default acute dilution series is: 6.25, 12.5, 25, 50, 100%, and the default chronic dilution series is 100, 75, 50, 25, 12.5%. Other dilution series may be chosen by the permittee or

Department staff, but alternate dilution series must be specified in the WPDES permit. For guidance on selecting an alternate dilution series, see Chapter 2.11 of the WET Guidance Document.

Receiving water: According to the *State of Wisconsin Aquatic Life Toxicity Testing Methods Manual* (s. NR 219.04, Wis. Adm. Code) receiving water must be used as the dilution water and primary control in WET tests, unless the use of another dilution water is approved by the Department prior to use. The dilution water used in WET tests conducted on outfall 001 shall be a grab sample collected from the Nor-X-Way Channel upstream/out of the influence of the mixing zone and any other known discharge. The receiving water location must be specified in the WPDES permit.

Historical WET Data: Below is a tabulation of all available WET data for outfall 001.

Date Initiated	Acute Results LC ₅₀ (% survival in 100% effluent)				Chronic Results IC ₂₅					Footnotes
	<i>C. dubia</i>	Fathead minnow	Pass or Fail ?	Use in RPF ?	<i>C. dubia</i>	Fathead Minnow	Algae	Pass or Fail ?	Use in RPF ?	
10/7/03	100	100	Pass	Yes	100	100		Pass	Yes	
8/10/04	100	100	Pass	Yes	100	100		Pass	Yes	
10/11/05	100	100	Pass	Yes	100	100		Pass	Yes	
6/13/06	100	100	Pass	Yes	100	100		Pass	Yes	
1/9/07	100	100	Pass	Yes	100	100		Pass	Yes	

RPF = Reasonable Potential Factor

WET Checklist. Department staff use the WET Checklist when deciding whether WET limits and monitoring are needed. As toxicity potential increases, more points accumulate and more monitoring is needed to insure that toxicity is not occurring. The Checklist recommends acute and chronic WET limits (as needed) based on the Reasonable Potential Factor (RPF), as required by s. NR 106.08, Wis. Adm. Code, and monitoring frequencies based on points accumulated during the Checklist analysis. The completed WET Checklist and monitoring recommendations are summarized in the table below. (For more on the RPF and WET Checklist, see Chapter 1.3 of the WET Guidance Document, at: <http://www.dnr.state.wi.us/org/water/wm/ww/biomon/biomon.htm>).

WHOLE EFFLUENT TOXICITY (WET) CHECKLIST SUMMARY

	ACUTE	CHRONIC
1. INSTREAM WASTE CONC.	1A. Not Applicable TOTAL POINTS = 0	1B. IWC = 100%\$ TOTAL POINTS = 15
2. HISTORICAL DATA	2A. 5 tests used in RPF, all passed; RPF = 0 TOTAL POINTS = 0	2B. 5 tests used in RPF, all passed; RPF = 0 TOTAL POINTS = 0
3. EFFLUENT VARIABILITY	3A. Little variability, no violations or upsets, consistent operations TOTAL POINTS = 0	3B. Same as Acute TOTAL POINTS = 0
4. STREAM CLASSIFICATION	4A. Warmwater forage fish community TOTAL POINTS = 5	4B. Same as Acute TOTAL POINTS = 5

(Continued from previous page)	A C U T E	C H R O N I C
5. CHEMICAL SPECIFIC DATA	5A. No acute criteria-based limits (0 pts). Detected substances with acute criteria but not requiring limits include ammonia, arsenic, cadmium, copper, lead, nickel, zinc, cyanide and chloride (3 pts). Other detected substances include selenium, 4,4'-DDE, antimony, gamma-BHC, delta-BHC, thallium heptachlor, beta-endosulfan, di-n-butyl phthalate, and iron (2 pts). TOTAL POINTS = 5	5B. No chronic criteria-based limits (0 pts). Detected substances with acute criteria but not requiring limits include ammonia, arsenic, cadmium, copper, lead, nickel, selenium, zinc, cyanide and chloride (3 pts). Other detected substances include 4,4'-DDE, antimony, gamma-BHC, delta-BHC, thallium heptachlor, beta-endosulfan, di-n-butyl phthalate, and iron (2 pts). TOTAL POINTS = 5
6. ADDITIVES	6A. No additives used. TOTAL POINTS = 0	6B. Same as Acute. TOTAL POINTS = 0
7. DISCHARGE CATEGORY	7A. Not among listed categories. TOTAL POINTS = 0	7B. Same as Acute TOTAL POINTS = 0
8. WASTEWATER TREATMENT	8A. No treatment required. TOTAL POINTS = 0	8B. Same as Acute TOTAL POINTS = 0
9. DOWNSTREAM IMPACTS	9A. None attributable to discharge. TOTAL POINTS = 0	9B. Same as Acute TOTAL POINTS = 0
TOTAL POINTS	10	25

WET Monitoring and Limit Recommendations: Based on historical WET data and RPF calculations (as required in s. NR 106.08, Wis. Adm. Code), neither acute nor chronic WET limits are required. Based upon the point totals generated by the WET Checklist, other information given above, and Chapter 1.3 of the WET Guidance Document, no acute WET testing is recommended but chronic WET testing is recommended three times during the term of the reissued permit. Tests should be done in rotating quarters, in order to collect seasonal information about this discharge. When including recommended monitoring frequencies in the WPDES permit, staff should specify required quarters (e.g., Jan-Mar, Apr-Jun, Jul-Sep, or Oct-Dec).