WPDES PERMIT

STATE OF WISCONSIN
DEPARTMENT OF NATURAL RESOURCES

PERMIT TO DISCHARGE UNDER THE WISCONSIN POLLUTANT DISCHARGE ELIMINATION SYSTEM

UNITED LIQUID WASTE RECYCLING INC

is permitted, under the authority of Chapter 283, Wisconsin Statutes, to discharge from a facility located at
N2797 State Highway 26, Watertown, WI
to

the Groundwater of the Rock River Basin via Land Application

in accordance with the effluent limitations, monitoring requirements and other conditions set forth in this permit.

The permittee shall not discharge after the date of expiration. If the permittee wishes to continue to discharge after this expiration date an application shall be filed for reissuance of this permit, according to Chapter NR 200, Wis. Adm. Code, at least 180 days prior to the expiration date given below.

State of Wisconsin Department of Natural Resources
For the Secretary

By _____
Russell Rasmussen
Director, Bureau of Watershed Management

_____
Date Permit Signed/Issued

PERMIT TERM: EFFECTIVE DATE - October 01, 2007 **EXPIRATION DATE - September 30, 2012**

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1 Influent Requirements

1.1 Sampling Point(s)

Sampling Point Designation	
Sampling Point Number	**Sampling Point Location, WasteType/Sample Contents and Treatment Description (as applicable)**
702	Beverage Wastewater from ULWR 20 to storage or treatment unit.
705	Pretreatment Sludge from ULWR 20 to storage or treatment unit.
710	Industrial Wastewater from ULWR 19 to storage or treatment unit.
723	Washwater from ULWR 9 to storage or treatment unit.
724	United can recycling wastes to storage or treatment unit.
725	Industrial Wastewater from ULWR 12 to storage or treatment unit.
751	Industrial Wastewater from ULWR 1 to storage or treatment unit.
753	Industrial sludge from ULWR 3 to storage or treatment unit.
754	Industrial sludge from ULWR 4 to storage or treatment unit.
755	Municipal sludge from ULWR 5 to storage or treatment unit.
758	Industrial Wastewater from ULWR 8 to storage or treatment unit.
760	Industrial Wastewater from ULWR 10 to storage or treatment unit.
761	Industrial Wastewater from ULWR 11 to storage or treatment unit.
763	Industrial Wastewater from ULWR 13 to storage or treatment unit.
765	Industrial wastewater from ULWR 15 to storage or treatment unit.
767	Sludge from ULWR 17 grease processing to storage or treatment unit.
768	Industrial sludge from ULWR 18 to storage or treatment unit.

Note: Each sampling point represents waste material from a specific client or source, as identified in the permit application.

1.2 Monitoring Requirements

The permittee shall comply with the following monitoring requirements.

1.2.1 Sampling Point 702 - Wastewater ULWR 20 ; 705- Sludge ULWR 20 ; 710- Wastewater ULWR 19; 723- Washwater ULWR 9; 724- United Can Recycling; 725- Wastewater ULWR 12; 751- Wastewater ULWR 1; 753- Sludge ULWR 3; 754- Sludge ULWR 4; 755- Municipal Sludge ULWR 5; 758- Wastewater ULWR 8; 760- Wastewater ULWR 10; 761- Wastewater ULWR 11; 763- Wastewater ULWR 13; 765- Wastewater ULWR 15; 767- Sludge ULWR 17, and 768- Sludge ULWR 18

Monitoring Requirements and Limitations					
Parameter	**Limit Type**	**Limit and Units**	**Sample Frequency**	**Sample Type**	**Notes**
Volume		gpd	Daily	Measure	The volume for each sample point shall be monitored and reported separately on the Discharge Monitoring Report.

1.2.1.1 Volume Monitoring

Volume monitoring is only required on days when wastes from a sampling point are discharged into any of the storage or treatment units.

1.2.1.2 Monitoring Requirements – Discharge to Storage

The permittee shall maintain a daily log of the volume of waste material received from each sampling point and discharged to a storage or treatment unit. The log shall include a record of the client name, the type of waste, the volume and any characterization of the waste, the date of addition, and to which storage or treatment unit it was discharged. For each truck load received, the permittee shall obtain from its client a written certification of the waste type and maintain this as part of the records. If an independent trucking company is transporting the waste to the permittee's facility, the name of the trucking company must also be recorded. When a truckload contains more than one type of waste, the volume of each waste shall be noted.

1.2.1.3 Requirements for New Waste Material

For each new waste material and source that has not been identified in the permit application, the permittee shall provide to the Department the information required in this section of the permit to identify the source and characteristics of the new waste material. The permittee shall not accept, handle, discharge to a storage or treatment unit, or land apply any new waste material until Department approval has been granted.

1. The name, address, and contact person for each new client, customer or generator. If an independent trucking company is transporting waste material to the permittee's facility, the name of this trucking company must also be submitted.
2. The type of waste material (e.g., treatment plant sludge, dairy permeate, off-spec or dated product, etc.) and industrial category (including SIC code, if applicable).
3. A detailed description of the industrial process or treatment system from which each individual waste material originates, regardless of the volume of the material.
4. MSDS sheets for any specific chemicals that could be present in their original state in the waste material.
5. For each client, customer or waste generator, the annual volume of each waste material type anticipated to be received, the expected frequency received, volume per receipt event, and period of the year it will be received.
6. A description of the manner in which each waste material from each client, customer or waste generator will be processed and discharged under this permit, including if the waste is applied directly on land under this permit or if it is co-mingled with other wastes in a storage facility(s).
7. Laboratory analyses (from a certified or registered laboratory) shall be performed to characterize the chemical composition of the material. An analysis shall be performed on every waste material from each waste generator for the following:

   COD, pH, TKN, Organic Nitrogen, Ammonia Nitrogen, Total Phosphorus, Chloride, Potassium. Include 'Total Solids' for sludge and other solid or semi-solid material.

   Where it is believed that waste material may contain any of the substances shown immediately below or listed in Attachment 1 of the Permit, analyses shall be submitted for those substances.

   Arsenic, Cadmium, Copper, Fecal Coliform, Lead, Mercury, Molybdenum, Nickel, Selenium, Zinc

   In addition, if any waste material is received from a Primary Industry listed in Attachment 2 of the Permit, the results of a pollutant scan of that waste material for the applicable pollutant group

shown in Attachment 2 shall be submitted. Analytical results shall be provided on a wet weight basis for liquid wastes and on a dry weight basis for sludge and other solid or semi-solid material.

8. Information that demonstrates that the land application of the waste material or the mixture of waste materials from a storage or treatment unit will be beneficial as a source of nutrients or a soil amendment or conditioner and not be detrimental to soils, crops, or groundwater.
9. Verification that the new waste is not hazardous under NR 518.

Based on the information provided, the Department may request additional information on the quality or content of the material being proposed for acceptance, handling, storage, or land application under this permit.

The permittee may demonstrate that specific new waste material is substantially similar to waste material from sources identified in the permit application. If such demonstration is made, the Department may waive the requirements described in items 7 through 9. **In all cases, the permittee shall obtain written Department approval prior to accepting, handling, or discharging to storage, or land applying new waste material**.

Prior to initiating land application of any new waste material, the permittee shall submit and obtain Department approval of an amended management plan. The Department's approval of the amended management plan may designate an outfall number for the land application of the waste material and require additional monitoring to reflect the characteristics of the material.

2 In-Plant Requirements

2.1 Sampling Point(s)

Sampling Point Designation	
Sampling Point Number	**Sampling Point Location, WasteType/Sample Contents and Treatment Description (as applicable)**
120	Sampling of the Storage Lagoon contents

2.2 Monitoring Requirements and Limitations

The permittee shall comply with the following monitoring requirements and limitations.

2.2.1 Sampling Point 120 - Storage Lagoon Contents

Monitoring Requirements and Limitations					
Parameter	**Limit Type**	**Limit and Units**	**Sample Frequency**	**Sample Type**	**Notes**
Dissolved Oxygen, Lagoon	Daily Min	2.0 mg/L	Weekly	Grab	See Dissolved Oxygen requirement below.

2.2.1.1 Minimum Dissolved Oxygen Requirement

A minimum dissolved oxygen level of 2.0 mg/L shall be maintained in the storage lagoon at all times. The management plan shall identify the location for collecting a representative sample to determine compliance with the dissolved oxygen limit.

3 Land Application Requirements

3.1 Sampling Point(s)

The discharge(s) shall be limited to land application of the waste type(s) designated for the listed sampling point(s) on Department approved land spreading sites.

Sampling Point Designation	
Sampling Point Number	**Sampling Point Location, WasteType/Sample Contents and Treatment Description (as applicable)**
001	Combined industrial wastes from tank designated as H-1. Future land applications from this outfall may include municipal sludge in accordance with permit conditions.
002	Industrial Liquid Waste Sugar Waters ULWR 20
005	Industrial Liquid Sludge from ULWR 20
010	Industrial Liquid Waste ULWR 19
012	H-2 containing combined industrial wastes to land application. Future land applications from this outfall may include municipal sludge in accordance with permit conditions.
019	Industrial wastewater from the anaerobic lagoons. Future land applications from this outfall may include municipal sludge in accordance with permit conditions.
020	Industrial wastewater from Storage Lagoon to land application. Future land applications from this outfall may include municipal sludge in accordance with permit conditions.
023	Industrial Wastewater from ULWR 9
024	Wastewater from ULWR can recycling operation
025	Wastewater from ULWR 12
028	Dewatered Waste Activated Sludge (WAS) from Storage Pad or Thickener. Future land applications from this outfall may include municipal sludge in accordance with permit conditions.
029	Municipal Sludge from H-4
030	Municipal Sludge from H3, Storage Pad or Thickener
032	Waste Activated Sludge (WAS) from H-2 Treatment System. Future land applications from this outfall may include municipal sludge in accordance with permit conditions.
039	Sludge from anaerobic lagoons. Future land applications from this outfall may include municipal sludge in accordance with permit conditions.

3.2 Monitoring Requirements and Limitations

The permittee shall comply with the following monitoring requirements and limitations.

3.2.1 Sampling Point (Outfall) 001 - Wastewater from H-1; 012- Wastewater from H-2; 019- Anaerobic Lagoons; 020- Wastewater from Storage Lagoon

Monitoring Requirements and Limitations					
Parameter	**Limit Type**	**Limit and Units**	**Sample Frequency**	**Sample Type**	**Notes**
COD		mg/L	Weekly	Grab	
pH Field		su	Weekly	Grab	
Nitrogen, Total Kjeldahl		mg/L	Weekly	Grab	

Monitoring Requirements and Limitations					
Parameter	**Limit Type**	**Limit and Units**	**Sample Frequency**	**Sample Type**	**Notes**
Phosphorus, Total		mg/L	Weekly	Grab	
Chloride		mg/L	Weekly	Grab	
Nitrogen, Ammonia (NH_3-N) Total		mg/L	Monthly	Grab	
Potassium, Total Recoverable		mg/L	Monthly	Grab	

Daily Log, Monitoring Requirements and Limitations

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

Parameters	**Limit**	**Units**	**Sample Frequency**	**Sample Type**
DNR Site Number(s)	-	Number	Daily	Log
Acres Applied	-	Acres	Daily	Log
Frozen Site Maximum Daily Loading Volume	6,800	Gal/Acre/Day	Daily	Calculated
Unfrozen Site Maximum Daily Loading Volume	13,500	Gal/Acre/Day	Daily	Calculated
Weekly Loading Volume	See NR 214 - Tbl 3	Inches/Week	Weekly	Calculated

Reporting & Monitoring Requirements and Limitations

By no later than January 31st of each year the permittee shall submit an Annual Report providing the following information for the previous calendar year. Also see Subsection 3.3 for monthly reporting requirements.

Parameters	**Limit**	**Units**		**Sample Type**
DNR Site Number(s)	-	Number		-
Acres Land Applied	-	Acres		-
Total Volume Per Site	-	Gallons		Total Annual
Total Kjeldahl Nitrogen per Site	165, or alternate approved in writing	Pounds/Acre/Year		Calculated
Total Chloride per Site	340	Pounds/Acre per 2 Years		Calculated

3.2.1.1 Annual Site Nitrogen and Chloride Loading

The nitrogen and chloride loading limit applies to the sum of nitrogen from all Outfalls and other sources, such as manure and fertilizer. For details on nitrogen loading requirements, including approval of an alternate nitrogen pounds/acre/year site loading, see the "Nitrogen Requirements for Liquid Wastes, By-Product Solids and Sludges" paragraph in the Standard Requirements section of this permit.

3.2.1.2 Land Application from Storage

Prior to any land application from a storage or treatment unit representative sample results shall be available from the storage or treatment unit for the parameters shown in Table 3.2.1. During land application, samples shall be collected and analyzed for the parameters at the frequency shown in Table 3.2.1, or as modified for new waste material in an approved management plan. The most recent analytical data shall be used to establish land application rates to ensure compliance with permit limits. Sampling procedures shall be addressed in the approved management plan.

3.2.1.3 Future Land application of Municipal Sludge

The Permittee shall notify the DNR Watershed Specialist prior to discharging municipal sludge into the tank, lagoon or treatment unit from which this land application occurs or into any upstream units. Upon introduction of municipal sludge at any of these locations, the Permittee shall initiate monitoring for the parameters shown in Table A below at the specified frequency, in addition to the parameters shown in Table 3.2.1. In addition, the requirements shown in Table C below shall be satisfied. **Land application of wastewater containing municipal sludge on frozen or snow covered soils is prohibited.**

Land application is not permitted if any of the Ceiling limits shown in Table A are exceeded.

If the High Quality limit shown in Table A is exceeded for any parameter, the permittee shall not exceed the Lifetime Cumulative Metal Loading limit for the parameters shown in Table B. Cumulative pollutant loading records shall be kept for all land application of sludge which does not meet the high quality limit for any parameter. This requirement applies for the entire calendar year in which any exceedance of the High Quality limit occurs. Such loading records shall be kept for all parameters shown in Table B for each site on which land application occurs in that calendar year. The formula to be used for calculating cumulative loading is as follows:

[Pollutant concentration (mg/L) x Million gallons applied/ac x 8.34] + previous loading (lbs/acre) = cumulative lbs pollutant per acre

When a site reaches 90% of the allowable cumulative loading for any metal shown in Table B the Department shall be so notified through letter or in the comment section of the annual land application report (3400-55).

Table A - Municipal Sludge Related Requirements

Monitoring Requirements and Limitations					
Parameter	**Limit Type**	**Limit and Units**	**Sample Frequency**	**Sample Type**	**Notes**
Solids, Total		Percent	Quarterly	Grab	
Arsenic Dry Wt	Ceiling	75 mg/L	Quarterly	Grab	
Arsenic Dry Wt	High Quality	41 mg/L	Quarterly	Grab	
Cadmium Dry Wt	Ceiling	85 mg/L	Quarterly	Grab	
Cadmium Dry Wt	High Quality	39 mg/L	Quarterly	Grab	
Copper Dry Wt	Ceiling	4,300 mg/L	Quarterly	Grab	
Copper Dry Wt	High Quality	1,500 mg/L	Quarterly	Grab	
Lead Dry Wt	Ceiling	840 mg/L	Quarterly	Grab	
Lead Dry Wt	High Quality	300 mg/L	Quarterly	Grab	
Mercury Dry Wt	Ceiling	57 mg/L	Quarterly	Grab	
Mercury Dry Wt	High Quality	17 mg/L	Quarterly	Grab	
Molybdenum Dry Wt	Ceiling	75 mg/L	Quarterly	Grab	
Nickel Dry Wt	Ceiling	420 mg/L	Quarterly	Grab	
Nickel Dry Wt	High Quality	420 mg/L	Quarterly	Grab	
Selenium Dry Wt	Ceiling	100 mg/L	Quarterly	Grab	
Selenium Dry Wt	High Quality	100 mg/L	Quarterly	Grab	
Zinc Dry Wt	Ceiling	7,500 mg/L	Quarterly	Grab	

Monitoring Requirements and Limitations					
Parameter	**Limit Type**	**Limit and Units**	**Sample Frequency**	**Sample Type**	**Notes**
Zinc Dry Wt	High Quality	2,800 mg/L	Quarterly	Grab	

Table B - Lifetime Cumulative Metal Loadings

Metal	Lb/A
Arsenic	36
Cadmium	34
Copper	1339
Lead	268
Mercury	15
Nickel	375
Selenium	89

Table C - Other Municipal Sludge Related Requirements

Other Municipal Sludge Requirements (as defined in Standard Requirements)	
Sludge Requirements	**Sample Frequency**
Pathogen Control: The Pathogen Control requirements for Class B Sludge shall be met prior to land application of sludge as specified in Standard Requirements.	**Quarterly**
Vector Attraction Reduction: The Vector Attraction Reduction requirements shall be satisfied prior to, or at the time of land application as specified in Standard Requirements.	**Quarterly**

3.2.2 Sampling Point (Outfall) 002 - ULWR 20 Wastewater; 010- Wastewater ULWR 19 ; 023- Wastewater ULWR 9; 024- United Can Recycling Liquid; 025- Wastewater ULWR 12

Monitoring Requirements and Limitations					
Parameter	**Limit Type**	**Limit and Units**	**Sample Frequency**	**Sample Type**	**Notes**
COD		mg/L	Monthly	Grab	
pH Field		su	Monthly	Grab	
Nitrogen, Total Kjeldahl		mg/L	Monthly	Grab	
Phosphorus, Total		mg/L	Monthly	Grab	
Chloride		mg/L	Monthly	Grab	
Nitrogen, Ammonia (NH_3-N) Total		mg/L	Quarterly	Grab	

Monitoring Requirements and Limitations					
Parameter	**Limit Type**	**Limit and Units**	**Sample Frequency**	**Sample Type**	**Notes**
Potassium, Total Recoverable		mg/L	Quarterly	Grab	

Daily Log, Monitoring Requirements and Limitations All land application and monitoring activity shall be documented on log sheets. Originals of the log sheets shall be kept by the permittee as described under "Records Retention" in the Standard Requirements section, and if requested, made available to the Department.				
Parameters	**Limit**	**Units**	**Sample Frequency**	**Sample Type**
DNR Site Number(s)	-	Number	Daily	Log
Acres Applied	-	Acres	Daily	Log
Frozen Site Maximum Daily Loading Volume	6,800	Gal/Acre/Day	Daily	Calculated
Unfrozen Site Maximum Daily Loading Volume	13,500	Gal/Acre/Day	Daily	Calculated
Weekly Loading Volume	See NR 214 - Tbl 3	Inches/Week	Weekly	Calculated

Reporting & Monitoring Requirements and Limitations By no later than January 31st of each year the permittee shall submit an Annual Report providing the following information for the previous calendar year. Also see Subsection 3.3 for monthly reporting requirements.				
Parameters	**Limit**	**Units**		**Sample Type**
DNR Site Number(s)	-	Number		-
Acres Land Applied	-	Acres		-
Total Volume Per Site	-	Gallons		Total Annual
Total Kjeldahl Nitrogen per Site	165, or alternate approved in writing	Pounds/Acre/Year		Calculated
Total Chloride per Site	340	Pounds/Acre per 2 Years		Calculated

3.2.2.1 Annual Site Nitrogen and Chloride Loading

The nitrogen and chloride loading limit applies to the sum of nitrogen from all Outfalls and other sources, such as manure and fertilizer. For details on nitrogen loading requirements, including approval of an alternate nitrogen pounds/acre/year site loading, see the "Nitrogen Requirements for Liquid Wastes, By-Product Solids and Sludges" paragraph in the Standard Requirements section of this permit.

3.2.2.2 Direct Land Application

Representative samples shall be taken of the waste material from each direct application outfall at least once each month during which land application occurs. The samples shall be analyzed for the parameters at the frequency specified in Table 3.2.2.

3.2.3 Sampling Point (Outfall) 005 - ULWR 20 Industrial Sludge

Monitoring Requirements and Limitations					
Parameter	**Limit Type**	**Limit and Units**	**Sample Frequency**	**Sample Type**	**Notes**
Solids, Total		Percent	Monthly	Grab	
COD		Percent	Monthly	Grab	
pH Field		su	Monthly	Grab	
Nitrogen, Total Kjeldahl		Percent	Monthly	Grab	
Phosphorus, Total		Percent	Monthly	Grab	
Chloride		Percent	Monthly	Grab	
Nitrogen, Ammonia (NH_3-N) Total		Percent	Quarterly	Grab	
Phosphorus, Water Extractable		% of Tot P	Quarterly	Grab	
Potassium, Total Recoverable		Percent	Quarterly	Grab	

Daily Log, Monitoring Requirements and Limitations

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

Parameters	**Limit**	**Units**	**Sample Frequency**	**Sample Type**
DNR Site Number(s)	-	Number	Daily	Log
Acres Applied	-	Acres	Daily	Log
Application Rate	-	Gal/Acre/Day	Daily	Calculated

Reporting & Monitoring Requirements and Limitations

By no later than January 31st of each year the permittee shall submit an Annual Report providing the following information for the previous calendar year. Also see Subsection 3.3 for monthly reporting requirements.

Parameters	**Limit**	**Units**		**Sample Type**
DNR Site Number(s)	-	Number		-
Acres Land Applied	-	Acres		-
Total Volume Per Site	-	Gallons		Total Annual
Total Kjeldahl Nitrogen per Site	165, or alternate approved in writing	Pounds/Acre/Year		Calculated
Total Chloride per Site	340	Pounds/Acre per 2 Years		Calculated

3.2.3.1 Annual Site Nitrogen and Chloride Loading

The nitrogen and chloride loading limit applies to the sum of nitrogen from all Outfalls and other sources, such as manure and fertilizer. For details on nitrogen loading requirements, including approval of an alternate nitrogen pounds/acre/year site loading, see the "Nitrogen Requirements for Liquid Wastes, By-Product Solids and Sludges" paragraph in the Standard Requirements section of this permit.

3.2.3.2 Direct Land Application

Representative samples shall be taken of the waste material at least once each month during which land application occurs. The samples shall be analyzed for the parameters at the frequency specified in Table 3.2.3.

3.2.4 Sampling Point (Outfall) 028 - Dewatered WAS; 032- WAS from H-2, and 039- Sludge from Anaerobic Lagoons

Monitoring Requirements and Limitations					
Parameter	**Limit Type**	**Limit and Units**	**Sample Frequency**	**Sample Type**	**Notes**
Solids, Total		Percent	Monthly	Grab	
BOD_5, Total		Percent	Monthly	Grab	
pH Field		su	Monthly	Grab	
Nitrogen, Total Kjeldahl		Percent	Monthly	Grab	
Phosphorus, Total		Percent	Monthly	Grab	
Chloride		Percent	Monthly	Grab	
Nitrogen, Ammonia (NH_3-N) Total		Percent	Quarterly	Grab	
Phosphorus, Water Extractable		% of Tot P	Quarterly	Grab	
Potassium, Total Recoverable		Percent	Quarterly	Grab	

Daily Log, Monitoring Requirements and Limitations

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

Parameters	**Limit**	**Units**	**Sample Frequency**	**Sample Type**
DNR Site Number(s)	-	Number	Daily	Log
Acres Applied	-	Acres	Daily	Log
Application Rate	-	Tons/Acre/Day	Daily	Calculated

Reporting & Monitoring Requirements and Limitations By no later than January 31st of each year the permittee shall submit an Annual Report providing the following information for the previous calendar year. Also see Subsection 3.3 for monthly reporting requirements.				
Parameters	**Limit**	**Units**		**Sample Type**
DNR Site Number(s)	-	Number		-
Acres Land Applied	-	Acres		-
Total Amount Per Site	-	Tons		Total Annual
Total Kjeldahl Nitrogen per Site	165, or alternate approved in writing	Pounds/Acre/Year		Calculated
Total Chloride per Site	340	Pounds/Acre per 2 Years		Calculated

3.2.4.1 Annual Site Nitrogen and Chloride Loading

The nitrogen and chloride loading limit applies to the sum of nitrogen from all Outfalls and other sources, such as manure and fertilizer. For details on nitrogen loading requirements, including approval of an alternate nitrogen pounds/acre/year site loading, see the "Nitrogen Requirements for Liquid Wastes, By-Product Solids and Sludges" paragraph in the Standard Requirements section of this permit.

3.2.4.2 Land Application from Storage

Prior to any land application from a storage or treatment unit representative sample results shall be available from the storage or treatment unit for the parameters shown in Table 3.2.4. During land application, samples shall be collected and analyzed for the parameters at the frequency shown in Table 3.2.4, or as modified for new waste material in an approved management plan. The most recent analytical data shall be used to establish land application rates to ensure compliance with permit limits. Sampling procedures shall be addressed in the approved management plan.

3.2.4.3 Future Land Application of Municipal Sludge

The Permittee shall notify the DNR Watershed Specialist prior to discharging municipal sludge into the tank, lagoon or treatment unit from which this land application occurs or into any upstream units. Upon introduction of municipal sludge at any of these locations, the Permittee shall initiate monitoring for the parameters shown in Table A below at the specified frequency, in addition to the parameters shown in Tables 3.2.4. In addition, the requirements shown in Table C below shall be satisfied. **Land application of wastewater containing municipal sludge on frozen or snow covered soils is prohibited.**

Land application is not permitted if any of the Ceiling limits shown in Table A are exceeded.

If the High Quality limit shown in Table A is exceeded for any parameter, the permittee shall not exceed the Lifetime Cumulative Metal Loading limit for the parameters shown in Table B. Cumulative pollutant loading records shall be kept for all land application of sludge which does not meet the high quality limit for any parameter. This requirement applies for the entire calendar year in which any exceedance of the High Quality limit occurs. Such loading records shall be kept for all parameters shown in Table B for each site on which land application occurs in that calendar year. The formula to be used for calculating cumulative loading is as follows:

[Pollutant concentration (mg/L) x Million gallons applied/ac x 8.34] + previous loading (lbs/acre) = cumulative lbs pollutant per acre

When a site reaches 90% of the allowable cumulative loading for any metal shown in Table B, the Department shall be so notified through letter or in the comment section of the annual land application report (3400-55).

Table A - Municipal Sludge Related Requirements

Monitoring Requirements and Limitations					
Parameter	**Limit Type**	**Limit and Units**	**Sample Frequency**	**Sample Type**	**Notes**
Solids, Total		Percent	Quarterly	Grab	
Arsenic Dry Wt	Ceiling	75 mg/kg	Quarterly	Grab	
Arsenic Dry Wt	High Quality	41 mg/kg	Quarterly	Grab	
Cadmium Dry Wt	Ceiling	85 mg/kg	Quarterly	Grab	
Cadmium Dry Wt	High Quality	39 mg/kg	Quarterly	Grab	
Copper Dry Wt	Ceiling	4,300 mg/kg	Quarterly	Grab	
Copper Dry Wt	High Quality	1,500 mg/kg	Quarterly	Grab	
Lead Dry Wt	Ceiling	840 mg/kg	Quarterly	Grab	
Lead Dry Wt	High Quality	300 mg/kg	Quarterly	Grab	
Mercury Dry Wt	Ceiling	57 mg/kg	Quarterly	Grab	
Mercury Dry Wt	High Quality	17 mg/kg	Quarterly	Grab	
Molybdenum Dry Wt	Ceiling	75 mg/kg	Quarterly	Grab	
Nickel Dry Wt	Ceiling	420 mg/kg	Quarterly	Grab	
Nickel Dry Wt	High Quality	420 mg/kg	Quarterly	Grab	
Selenium Dry Wt	Ceiling	100 mg/kg	Quarterly	Grab	
Selenium Dry Wt	High Quality	100 mg/kg	Quarterly	Grab	
Zinc Dry Wt	Ceiling	7,500 mg/kg	Quarterly	Grab	
Zinc Dry Wt	High Quality	2,800 mg/kg	Quarterly	Grab	

Table B – Lifetime Cumulative Metal Loadings

Metal	**Lb/A**
Arsenic	36
Cadmium	34
Copper	1339
Lead	268
Mercury	15
Nickel	375
Selenium	89

Table C – Other Municipal Sludge Requirements

Other Municipal Sludge Requirements(as defined in Standard Requirements)	
Sludge Requirements	**Sample Frequency**
Pathogen Control: The Pathogen Control requirements for Class B Sludge shall be met prior to land application of sludge as specified in Standard Requirements.	**Quarterly**
Vector Attraction Reduction: The Vector Attraction Reduction requirements shall be satisfied prior to, or at the time of land application as specified in Standard Requirements.	**Quarterly**

3.2.5 Sampling Point (Outfall) 029 - Municipal Sludge from H-4 and 030- Municipal Cake Sludge

Monitoring Requirements and Limitations					
Parameter	**Limit Type**	**Limit and Units**	**Sample Frequency**	**Sample Type**	**Notes**
Solids, Total		Percent	Quarterly	Grab	
Arsenic Dry Wt	Ceiling	75 mg/kg	Quarterly	Grab	
Arsenic Dry Wt	High Quality	41 mg/kg	Quarterly	Grab	
Cadmium Dry Wt	Ceiling	85 mg/kg	Quarterly	Grab	
Cadmium Dry Wt	High Quality	39 mg/kg	Quarterly	Grab	
Copper Dry Wt	Ceiling	4,300 mg/kg	Quarterly	Grab	
Copper Dry Wt	High Quality	1,500 mg/kg	Quarterly	Grab	
Lead Dry Wt	Ceiling	840 mg/kg	Quarterly	Grab	
Lead Dry Wt	High Quality	300 mg/kg	Quarterly	Grab	
Mercury Dry Wt	Ceiling	57 mg/kg	Quarterly	Grab	
Mercury Dry Wt	High Quality	17 mg/kg	Quarterly	Grab	
Molybdenum Dry Wt	Ceiling	75 mg/kg	Quarterly	Grab	
Nickel Dry Wt	Ceiling	420 mg/kg	Quarterly	Grab	
Nickel Dry Wt	High Quality	420 mg/kg	Quarterly	Grab	
Selenium Dry Wt	Ceiling	100 mg/kg	Quarterly	Grab	
Selenium Dry Wt	High Quality	100 mg/kg	Quarterly	Grab	
Zinc Dry Wt	Ceiling	7,500 mg/kg	Quarterly	Grab	
Zinc Dry Wt	High Quality	2,800 mg/kg	Quarterly	Grab	
Nitrogen, Total Kjeldahl		Percent	Quarterly	Grab	
Nitrogen, Ammonium (NH_4-N) Total		Percent	Quarterly	Grab	
Phosphorus, Total		Percent	Quarterly	Grab	
Phosphorus, Water Extractable		% of Tot P	Quarterly	Grab	
Potassium, Total Recoverable		Percent	Quarterly	Grab	

3.2.5.1 Annual Site Nitrogen and Chloride Loading

The nitrogen and chloride loading limit applies to the sum of nitrogen from all Outfalls and other sources, such as manure and fertilizer. For details on nitrogen loading requirements, including approval of an alternate nitrogen pounds/acre/year site loading, see the "Nitrogen Requirements for Liquid Wastes, By-Product Solids and Sludges" paragraph in the Standard Requirements section of this permit.

3.2.5.2 Land Application from Storage

Prior to any land application from a storage or treatment unit representative sample results shall be available from the storage or treatment unit for the parameters shown in Table 3.2.5. During land application, samples shall be collected and analyzed for the parameters at the frequency shown in Table 3.2.5, or as modified for new waste material in an approved management plan. The most recent analytical data shall be used to establish land application rates to ensure compliance with permit limits. Sampling procedures shall be addressed in the approved management plan.

3.2.5.3 Municipal Sludge Requirements

The Permittee shall monitor for the parameters shown in Table 3.2.5 at the specified frequency. In addition, the requirements shown in Table C below shall be satisfied. **Land application of municipal sludge on frozen or snow covered soils is prohibited.**

Land application is not permitted if any of the Ceiling limits shown in Table 3.2.5 are exceeded.

If the High Quality limit shown in Table 3.2.5 is exceeded for any parameter, the permittee shall not exceed the Lifetime Cumulative Metal Loading limit for the parameters shown in Table B. Cumulative pollutant loading records shall be kept for all land application of sludge which does not meet the high quality limit for any parameter. This requirement applies for the entire calendar year in which any exceedance of the High Quality limit occurs. Such loading records shall be kept for all parameters shown in Table B for each site on which land application occurs in that calendar year. The formula to be used for calculating cumulative loading is as follows:

[Pollutant concentration (mg/L) x Million gallons applied/ac x 8.34] + previous loading (lbs/acre) = cumulative lbs pollutant per acre

When a site reaches 90% of the allowable cumulative loading for any metal shown in Table B, the Department shall be so notified through letter or in the comment section of the annual land application report (3400-55).

Table B – Lifetime Cumulative Metal Loadings

Metal	Lb/A
Arsenic	36
Cadmium	34
Copper	1339
Lead	268
Mercury	15
Nickel	375
Selenium	89

Table C – Other Municipal Sludge Requirements

Other Municipal Sludge Requirements (as defined in Standard Requirements)	
Sludge Requirements	**Sample Frequency**
Pathogen Control: The Pathogen Control requirements for Class B Sludge shall be met prior to land application of sludge as specified in Standard Requirements.	**Quarterly**
Vector Attraction Reduction: The Vector Attraction Reduction requirements shall be satisfied prior to, or at the time of land application as specified in Standard Requirements.	**Quarterly**

3.3 Record Keeping and Reporting

The permittee shall maintain records consisting of the volume, application rate, date of application and any characterizations of waste land applied to each approved land application site (by Outfall and site number) and land application daily logs. The permittee shall retain the original daily logs and sample results for a period of at least 5 years. This information shall be made available to Department staff for inspection upon request.

For each load, the permittee shall obtain from its client a written certification of the waste type discharged to storage or directly to land application and maintain this as part of the records.

Land application monitoring results shall be provided monthly to the Department by submitting a Form 3400-49 for each designated outfall by no later than the 15th of the month following the calendar month during which the samples were taken. These forms shall be submitted to the Madison address indicated on the form. If no land application occurs during a calendar month, the permittee shall indicate on the reporting form that no land application occurred during that month.

The monthly totals for the land application loadings of waste for each designated outfall shall be submitted by the 15th of the month following the calendar month that wastes were land applied in a format similar to the Annual 3400-55 form. (The method of providing this information shall be approved in the management plan.) The monthly land application forms shall be submitted to the Department Basin Representative.

Annual 3400-55 forms shall be submitted to the Madison address as indicated by your annual report package cover letter and shall include the sum of each month's activity.

3.4 Operating Requirements/Management Plan

All land application sites used for treatment of liquid wastes, by-product solids and sludge shall be operated in accordance with a Department approved management plan. The management plan shall be consistent with the requirements of this permit, ss. NR 214.17 (3) and (6), and NR 214.18 (3) and (6), Wis. Adm. Code. To ensure this consistency, the management plan shall address: 1) the information identified in NR 214.17 (6) and NR 214.18 (6); 2) record keeping and maintenance (including responsible individuals); 3) a full description of calculations used to determine appropriate application rates and loadings delivered to land application sites; 4) tracking of site loading; 5) notification and mitigation procedures for handling wastes that deviate from those anticipated; and 6) odor control.

The management plan shall also describe waste acceptance procedures which ensure that waste material placed in storage have characteristics and volume similar to those contained in the permit application and authorized by this permit and that such waste materials contain no characteristics that could be reasonably expected to prevent compliance with this permit. These procedures may include representative sampling and analysis for COD, pH, TKN, total phosphorus, chloride or other pollutant parameters as necessary.

The Department shall be notified prior to any land application of waste material from a storage tank, lagoon or pad. The management plan shall contain a description of the manner by which this notification will occur. All such notifications shall occur at a reasonable time prior to the land application event and shall include a list of sites anticipated for use during those events. Similar procedures shall be described for direct land application events so Department staff are aware of what will be applied and when it will be applied.

A new land application management plan shall be submitted to the Department for approval by no later than December 31, 2007. If future operational changes are needed, the land application management plan shall be amended by submitting a written request to the Department for approval of such amendments.

3.5 Reauthorization of Land Application Sites

Prior to the first use during the term of the reissued permit of a previously approved site, the permittee shall notify the Department Basin Representative of its intent to apply wastes to the site. The permittee shall provide information on any changes in the site characteristics since the previous approval. The permittee shall not use the site until an updated approval is provided by the Department. In the event the Department does not approve or deny the use of the site within 7 business days after notification of its intent to use the site, the permittee may apply waste to the site under the conditions of its previous approval, pending further action by the Department. Upon notification by Department staff of the unacceptability of a site, the permittee shall immediately discontinue use of the site.

3.6 New Waste Stream Requirements

Refer to the Influent section for 'New Waste Stream Requirements' prior to the acceptance, handling or land application of waste material that has not been identified in the permit application. This waste material may not be accepted, handled, or land applied until the Department has approved acceptance of the material.

4 Schedules of Compliance

4.1 Evaluate tanks & if necessary correct deficiencies

Required Action	Date Due
Submit report on the structural integrity of existing tanks, H1, H2, H3, & H4: Submit a report from a qualified, licensed professional engineer evaluating the structural integrity of tanks H1, H2, H3, and H4. The report shall include: a listing of tank panel numbers; conclusion regarding the compatibility of the panels, a structural analysis of the tanks; an evaluation of the adequacy of the joints and reinforcing members; a discussion of any physical flaws or concerns; recommendations for any corrective actions necessary to prevent a tank failure; and recommendations of interim measures necessary to reduce the potential for a failure prior to completing corrective actions .	10/31/2007
Complete any necessary corrective action.: Complete any actions identify in the evaluation report that are necessary to prevent failure of any tank.	12/31/2007

4.2 Land Application Management Plan

Required Action	Date Due
Management Plan: Submit for approval a new management plan to optimize the land application system performance and demonstrate compliance with the conditions of this permit.	12/31/2007

5 Standard Requirements

NR 205, Wisconsin Administrative Code (Conditions for Industrial Dischargers): The conditions in ss. NR 205.07(1) and NR 205.07(3), Wis. Adm. Code, are included by reference in this permit. The permittee shall comply with all of these requirements. Some of these requirements are outlined in the Standard Requirements section of this permit. Requirements not specifically outlined in the Standard Requirement section of this permit can be found in ss. NR 205.07(1) and NR 205.07(3).

5.1 Reporting and Monitoring Requirements

5.1.1 Monitoring Results

Monitoring results obtained during the previous month shall be summarized and reported on a Department Wastewater Discharge Monitoring Report. The report shall contain all of the information specified below under 'Recording of Results'. This report is to be returned to the Department no later than the date indicated on the form. When submitting a paper Discharge Monitoring Report form, the original and one copy of the Wastewater Discharge Monitoring Report Form shall be submitted to the return address printed on the form. A copy of the Wastewater Discharge Monitoring Report Form or an electronic file of the report shall be retained by the permittee.

All Wastewater Discharge Monitoring Reports submitted to the Department after January 1, 2008 should be submitted using the electronic Discharge Monitoring Report system. Permittees who may be unable to submit Wastewater Discharge Monitoring Reports electronically may request approval to submit paper DMRs upon demonstration that electronic reporting is not feasible or practicable.

If the permittee monitors any pollutant more frequently than required by this permit, the results of such monitoring shall be included on the Wastewater Discharge Monitoring Report.

The permittee shall comply with all limits for each parameter regardless of monitoring frequency. For example, monthly, weekly, and/or daily limits shall be met even with monthly monitoring. The permittee may monitor more frequently than required for any parameter.

An Electronic Discharge Monitoring Report Certification sheet shall be signed and submitted with each electronic Discharge Monitoring Report submittal. This certification sheet, which is not part of the electronic report form, shall be signed by a principal executive officer, a ranking elected official or other duly authorized representative and shall be mailed to the Department at the time of submittal of the electronic Discharge Monitoring Report. The certification sheet certifies that the electronic report form is true, accurate and complete. Paper reports shall be signed by a principal executive officer, a ranking elected official, or other duly authorized representative.

5.1.2 Sampling and Testing Procedures

Sampling and laboratory testing procedures shall be performed in accordance with Chapters NR 218 and NR 219, Wis. Adm. Code and shall be performed by a laboratory certified or registered in accordance with the requirements of ch. NR 149, Wis. Adm. Code. Groundwater sample collection and analysis shall be performed in accordance with ch. NR 140, Wis. Adm. Code. The analytical methodologies used shall enable the laboratory to quantitate all substances for which monitoring is required at levels below the effluent limitation. If the required level cannot be met by any of the methods available in NR 219, Wis. Adm. Code, then the method with the lowest limit of detection shall be selected. Additional test procedures may be specified in this permit.

5.1.3 Recording of Results

The permittee shall maintain records which provide the following information for each effluent measurement or sample taken:

- the date, exact place, method and time of sampling or measurements;

- the individual who performed the sampling or measurements;
- the date the analysis was performed;
- the individual who performed the analysis;
- the analytical techniques or methods used; and
- the results of the analysis.

5.1.4 Reporting of Monitoring Results

The permittee shall use the following conventions when reporting effluent monitoring results:

- Pollutant concentrations less than the limit of detection shall be reported as < (less than) the value of the limit of detection. For example, if a substance is not detected at a detection limit of 0.1 mg/L, report the pollutant concentration as < 0.1 mg/L.

- Pollutant concentrations equal to or greater than the limit of detection, but less than the limit of quantitation, shall be reported and the limit of quantitation shall be specified.

- For the purposes of reporting a calculated result, average or a mass discharge value, the permittee may substitute a 0 (zero) for any pollutant concentration that is less than the limit of detection. However, if the effluent limitation is less than the limit of detection, the department may substitute a value other than zero for results less than the limit of detection, after considering the number of monitoring results that are greater than the limit of detection and if warranted when applying appropriate statistical techniques.

5.1.5 Records Retention

The permittee shall retain records of all monitoring information, including all calibration and maintenance records and all original strip chart recordings for continuous monitoring instrumentation, copies of all reports required by the permit, and records of all data used to complete the application for the permit for a period of at least 5 years from the date of the sample, measurement, report or application.

5.1.6 Other Information

Where the permittee becomes aware that it failed to submit any relevant facts in a permit application or submitted incorrect information in a permit application or in any report to the Department, it shall promptly submit such facts or correct information to the Department.

5.2 System Operating Requirements

5.2.1 Noncompliance Notification

- The permittee shall report the following types of noncompliance by a telephone call to the Department's regional office within 24 hours after becoming aware of the noncompliance;
  - any noncompliance which may endanger health or the environment;
  - any violation of an effluent limitation resulting from an unanticipated bypass;
  - any violation of an effluent limitation resulting from an upset; and
  - any violation of a maximum discharge limitation for any of the pollutants listed by the Department in the permit.
- A written report describing the noncompliance shall also be submitted to the Department's regional office within 5 days after the permittee becomes aware of the noncompliance. On a case-by-case basis, the Department may waive the requirement for submittal of a written report within 5 days and instruct the permittee to submit the written report with the next regularly scheduled monitoring report. In either case, the written report shall contain a description of the noncompliance and its cause; the period of

noncompliance, including exact dates and times; the steps taken or planned to reduce, eliminate and prevent reoccurrence of the noncompliance; and if the noncompliance has not been corrected, the length of time it is expected to continue.

- The permittee shall give advance notice to the Department of any planned changes in the permitted facility or activity which may result in noncompliance with permit requirements.

NOTE: Section 292.11(2)(a), Wisconsin Statutes, requires any person who possesses or controls a hazardous substance or who causes the discharge of a hazardous substance to notify the Department of Natural Resources **immediately** of any discharge not authorized by the permit. The discharge of a hazardous substance that is not authorized by this permit or that violates this permit may be a hazardous substance spill. To report a hazardous substance spill, call DNR's 24-hour HOTLINE at **1-800-943-0003**.

5.2.2 Unscheduled Bypassing

Any unscheduled bypass or overflow of wastewater at the treatment works or from the collection system is prohibited, and the Department may take enforcement action against a permittee for such occurrences under s. 283.89, Wis. Stats., unless:

- The bypass was unavoidable to prevent loss of life, personal injury, or severe property damage;
- There were no feasible alternatives to the bypass, such as the use of auxiliary treatment facilities, retention of untreated wastes, or maintenance during normal periods of equipment downtime. This condition is not satisfied if adequate back-up equipment should have been installed in the exercise of reasonable engineering judgment to prevent a bypass which occurred during normal periods of equipment downtime or preventive maintenance; and
- The permittee notified the Department as required in this Section.

Whenever there is an unscheduled bypass or overflow occurrence at the treatment works or from the collection system, the permittee shall notify the Department within 24 hours of initiation of the bypass or overflow occurrence by telephoning the wastewater staff in the regional office as soon as reasonably possible (FAX, email or voice mail, if staff are unavailable).

In addition, the permittee shall within 5 days of conclusion of the bypass or overflow occurrence report the following information to the Department in writing:

- Reason the bypass or overflow occurred, or explanation of other contributing circumstances that resulted in the overflow event. If the overflow or bypass is associated with wet weather, provide data on the amount and duration of the rainfall or snow melt for each separate event.
- Date the bypass or overflow occurred.
- Location where the bypass or overflow occurred.
- Duration of the bypass or overflow and estimated wastewater volume discharged.
- Steps taken or the proposed corrective action planned to prevent similar future occurrences.
- Any other information the permittee believes is relevant.

5.2.3 Scheduled Bypassing

Any construction or normal maintenance which results in a bypass of wastewater from a treatment system is prohibited unless authorized by the Department in writing. If the Department determines that there is significant public interest in the proposed action, the Department may schedule a public hearing or notice a proposal to approve the bypass. Each request shall specify the following minimum information:

- proposed date of bypass;
- estimated duration of the bypass;

- estimated volume of the bypass;
- alternatives to bypassing; and
- measures to mitigate environmental harm caused by the bypass.

5.2.4 Proper Operation and Maintenance

The permittee shall at all times properly operate and maintain all facilities and systems of treatment and control which are installed or used by the permittee to achieve compliance with the conditions of this permit. The wastewater treatment facility shall be under the direct supervision of a state certified operator as required in s. NR 108.06(2), Wis. Adm. Code. Proper operation and maintenance includes effective performance, adequate funding, adequate operator staffing and training as required in ch. NR 114, Wis. Adm. Code, and adequate laboratory and process controls, including appropriate quality assurance procedures. This provision requires the operation of back-up or auxiliary facilities or similar systems only when necessary to achieve compliance with the conditions of the permit.

5.2.5 Planned Changes

In accordance with ss. 283.31(4)(b) and 283.59, Stats., the permittee shall report to the Department any facility expansion, production increase or process modifications which will result in new, different or increased discharges of pollutants. The report shall either be a new permit application, or if the new discharge will not violate the effluent limitations of this permit, a written notice of the new, different or increased discharge. The notice shall contain a description of the new activities, an estimate of the new, different or increased discharge of pollutants and a description of the effect of the new or increased discharge on existing waste treatment facilities. Following receipt of this report, the Department may modify this permit to specify and limit any pollutants not previously regulated in the permit.

5.2.6 Duty to Halt or Reduce Activity

Upon failure or impairment of treatment facility operation, the permittee shall, to the extent necessary to maintain compliance with its permit, curtail production or wastewater discharges or both until the treatment facility operations are restored or an alternative method of treatment is provided.

5.3 Land Application Requirements

5.3.1 Municipal Sludge Pathogen Control and Vector Attraction Reduction

PATHOGEN CONTROL FOR CLASS B SLUDGE

The permittee shall implement pathogen control as listed below. The Department shall be notified of the pathogen control utilized and shall be notified when the permittee decides to utilize alternative pathogen control.

The following requirements shall be met prior to land application of sludge.

Parameter	Unit	Limit
Fecal Coliform*	MPN/gTS or CFU/gTS	2,000,000
OR, ONE OF THE FOLLOWING PROCESS OPTIONS		
Aerobic Digestion	Air Drying	
Anaerobic Digestion	Composting	
Alkaline Stabilization	PSRP Equivalent Process	

***** The Fecal Coliform limit shall be reported as the geometric mean of 7 discrete samples on a dry weight basis.

VECTOR ATTRACTION REDUCTION

The permittee shall implement any one of the vector attraction reduction options specified below. The Department shall be notified of the option utilized and shall be notified when the permittee decides to utilize an alternative option.

One of the following shall be satisfied prior to, or at the time of land application as specified below.

Option	Limit	Where/When it Shall be Met
Volatile Solids Reduction	≥38%	Across the process
Specific Oxygen Uptake Rate	≤1.5 mg O_2/hr/g TS	On aerobic stabilized sludge
Anaerobic bench-scale test	<17 % VS reduction	On anaerobic digested sludge
Aerobic bench-scale test	<15 % VS reduction	On aerobic digested sludge
Aerobic Process	>14 days, Temp >40°C and Avg. Temp > 45°C	On composted sludge
pH adjustment	>12 S.U. (for 2 hours) and >11.5 (for an additional 22 hours)	During the process
Drying without primary solids	>75 % TS	When applied or bagged
Drying with primary solids	>90 % TS	When applied or bagged
Equivalent Process	Approved by the Department	Varies with process
Injection	-	When applied
Incorporation	-	Within 6 hours of application

5.3.2 Land Application Characteristic Report

The analytical results from testing of liquid wastes, by-product solids and sludges that are land applied shall be reported annually on the Characteristic Form 3400-49. The report shall be submitted no later than the date indicated on the form.

The permittee shall use the following convention when reporting sludge monitoring results: Pollutant concentrations less than the limit of detection shall be reported as < (less than) the value of the limit of detection. For example, if a substance is not detected at a detection limit of 1.0 mg/kg, report the pollutant concentration as < 1.0 mg/kg .

All sludge results shall be reported on a dry weight basis.

5.3.3 Monitoring and Calculating PCB Concentrations in Sludge

When sludge analysis for "PCB, Total Dry Wt" is required by this permit, the PCB concentration in the sludge shall be determined as follows.

Either congener-specific analysis or Aroclor analysis shall be used to determine the PCB concentration. The permittee may determine whether Aroclor or congener specific analysis is performed. Analyses shall be performed in accordance with the following provisions and Table EM in s. NR 219.04, Wis. Adm. Code.

- EPA Method 1668 may be used to test for all PCB congeners. If this method is employed, all PCB congeners shall be delineated. Non-detects shall be treated as zero. The values that are between the limit of detection and the limit of quantitation shall be used when calculating the total value of all congeners. All results shall be added together and the total PCB concentration by dry weight reported. **Note**: It is recognized that a number of the congeners will co-elute with others, so there will not be 209 results to sum.
- EPA Method 8082A shall be used for PCB-Aroclor analysis and may be used for congener specific analysis as well. If congener specific analysis is performed using Method 8082A, the list of congeners

tested shall include at least congener numbers 5, 18, 31, 44, 52, 66, 87, 101, 110, 138, 141, 151, 153, 170, 180, 183, 187, and 206 plus any other additional congeners which might be reasonably expected to occur in the particular sample. For either type of analysis, the sample shall be extracted using the Soxhlet extraction (EPA Method 3540C) (or the Soxhlet Dean-Stark modification) or the pressurized fluid extraction (EPA Method 3545A). If Aroclor analysis is performed using Method 8082A, clean up steps of the extract shall be performed as necessary to remove interference and to achieve as close to a limit of detection of 0.11 mg/kg as possible. Reporting protocol, consistent with s. NR 106.07(6)(e), should be as follows: If all Aroclors are less than the LOD, then the Total PCB Dry Wt result should be reported as less than the highest LOD. If a single Aroclor is detected then that is what should be reported for the Total PCB result. If multiple Aroclors are detected, they should be summed and reported as Total PCBs. If congener specific analysis is done using Method 8082A, clean up steps of the extract shall be performed as necessary to remove interference and to achieve as close to a limit of detection of 0.003 mg/kg as possible for each congener. If the aforementioned limits of detection cannot be achieved after using the appropriate clean up techniques, a reporting limit that is achievable for the Aroclors or each congener for the sample shall be determined. This reporting limit shall be reported and qualified indicating the presence of an interference. The lab conducting the analysis shall perform as many of the following methods as necessary to remove interference:

3620C – Florisil	3611B - Alumina
3640A - Gel Permeation	3660B - Sulfur Clean Up (using copper shot instead of powder)
3630C - Silica Gel	3665A - Sulfuric Acid Clean Up

5.3.4 Land Application Report

The annual totals for the land application loadings of liquid wastes, by-product solids and sludges to field spreading sites shall be submitted on the Land Application Report Form 3400-55 by January 31, following each year waste is land applied.

5.3.5 Other Methods of Disposal or Distribution Report

The permittee shall submit Report Form 3400-52 by January 31, following each year waste is hauled to another facility, landfilled, incinerated, or stored in a manure pit.

5.3.6 Land Application Site Approval

The permittee is authorized to landspread permitted liquid wastes, by-product solids and sludges on sites approved in writing by the Department in accordance with ss. NR 214.17(2) and 214.18(2), Wis. Adm. Code. Any site use restrictions or granting of case-by-case exceptions shall be identified in the approval letter. If the permittee wishes to have approval for additional sites, application shall be made using Land Application Site Request Form 3400-053. Complete information shall be submitted about each site, including location maps and soil maps, any soil analyses results and other information showing that the site complies with all application requirements and permit conditions. Spreading on a site may commence upon receipt of Department approval. If an existing spreading site is found by the Department to be environmentally unacceptable, a written notice will be issued to withdraw approval of that site.

5.3.7 Operating Requirements/Management Plan

All land application sites used for treatment of liquid wastes, by-product solids and sludges shall be operated in accordance with a Department approved management plan. The management plan shall be consistent with the requirements of this permit, ss. NR 214.17 (3) and (6), and NR 214.18 (3) and (6), Wis. Adm. Code. If operational changes are needed, the land application management plan shall be amended by submitting a written request to the Department for approval. A land application management plan shall be submitted for approval at least 60 days prior to land application.

5.3.8 Chloride Requirements for Liquid Wastes and By-Product Solids

The total pounds of chloride applied shall be limited to 340 pounds per acre per 2 year period. Calculate the chloride loading as follows:

$$\text{Wet Weight Solids: } \frac{\text{lbs of solids X \%solids X \%chloride}}{\text{acres land applied X 100 X 100}} = \text{lbs chloride/acre}$$

$$\text{Liquid: } \frac{\text{mg/L chloride X (millions of gallons) X 8.34}}{\text{acres land applied}} = \text{lbs chloride/acre}$$

5.3.9 Nitrogen Requirements for Liquid Wastes and By-Product Solids and Sludges

NR 214.17(4) and NR 214.18(4) Wis. Adm. Code specify that the total pounds of nitrogen land applied per acre per year shall be limited to the nitrogen needs of the cover crop minus any other nitrogen added to the land application site, including fertilizer or manure. Nitrogen applied can be calculated on the basis of plant available nitrogen, as long as the release of nitrogen from the organic material is credited to future years. This permit requires that the Total Kjeldahl Nitrogen calendar year application amount shall not exceed 165 pounds per acre per year, except when alternate numerical nitrogen loading limits (consistent with the above sections of NR 214) are approved in writing via the Department's land application management plan approval. Calculate nitrogen loading as follows ("TKN" represents "Total Kjeldahl Nitrogen"):

$$\text{Wet Weight Solids and Sludges: } \frac{\text{lbs of solids X \%solids X \% TKN}}{\text{acres land applied X 100 X 100}} = \text{lbs TKN/acre}$$

$$\text{Liquid: } \frac{\text{mg/L TKN X (millions of gallons) X 8.34}}{\text{acres land applied}} = \text{lbs TKN/acre}$$

5.3.10 Ponding

The volume of liquid wastes land applied shall be limited to prevent ponding, except for temporary conditions following rainfall events. If ponding occurs all land application shall cease immediately. The permittee shall land apply only the liquid wastes that are permitted.

5.3.11 Runoff

The volume of liquid wastes land applied shall be limited to prevent runoff. If runoff occurs all land application shall cease immediately. The permittee shall land apply only the liquid wastes that are permitted.

5.3.12 Soil Incorporation Requirements

- Liquid Sludge Requirements: The Department may require that liquid sludge be incorporated into the soil on specific land application sites when necessary to prevent surface runoff or objectionable odors. Requirements and procedures for incorporation of liquid sludge, when such incorporation may be necessary, shall be specified in the management plan or in specific site applications, subject to Department approval. The permittee shall comply with the requirements in the Department approved management plan, specific site-approval requirements and the terms and conditions of this permit.
- Cake Sludge Requirements: After land application, cake sludge shall be incorporated into the soil. The timing of such incorporation and other related requirements and procedures shall be specified in the management plan or in specific site applications, subject to Department approval. The permittee shall

comply with the requirements in the Department approved management plan, specific site-approval requirements and the terms and conditions of this permit.

- Liquid Wastewater Requirements: The Department may require that liquid wastewater be incorporated or injected into the soil on specific land application sites when necessary to prevent surface runoff or objectionable odors. Requirements and procedures for injection or incorporation of liquid wastewater, when such injection or incorporation is necessary, shall be specified in the management plan or in specific site applications, subject to Department approval. The permittee shall comply with the requirements in the Department approved management plan, specific site-approval requirements and the terms and conditions of this permit.

5.3.13 Additional Requirements from ch. NR 214, Wis. Adm. Code

The requirements of s. NR 214.17 (4)(c) [pathogen prohibition for human consumption crop fields], (4)(d)1 [no adverse soil effects], (4)(d)10 [allowable whey spreading rates], and (4)(e)1-3 [by-product solids spreading within agricultural practices and not cause contamination] for landspreading of liquid wastes and by product solids and s. NR 214.18 (4)(b),(d)-(h) [application, nutrient, pH, metals, and PCB limitations] for sludge spreading systems are included by reference in this permit. The permittee shall comply with these requirements.

6 Summary of Reports Due

FOR INFORMATIONAL PURPOSES ONLY

Description	Date	Page
Evaluate tanks & if necessary correct deficiencies -Submit report on the structural integrity of existing tanks, H1, H2, H3, & H4	October 31, 2007	18
Evaluate tanks & if necessary correct deficiencies -Complete any necessary corrective action.	December 31, 2007	18
Land Application Management Plan -Management Plan	December 31, 2007	18
Characteristic Form 3400-49	no later than the date indicated on the form	23
Land Application Report Form 3400-55	January 31, following each year waste is land applied	24
Report Form 3400-52	by January 31, following each year waste is hauled to another facility, landfilled, incinerated, or stored in a manure pit	24
Wastewater Discharge Monitoring Report. The report shall contain all of the inform	no later than the date indicated on the form	19

Report forms shall be submitted to the address printed on the report form. Any facility plans or plans and specifications for wastewater systems shall be submitted to the Bureau of Watershed Management, P.O. Box 7921, Madison, WI 53707-7921. All other submittals required by this permit shall be submitted to:
South Central Region, 3911 Fish Hatchery Road, Fitchburg, WI 53711-5397

ATTACHMENT 1

TOXIC POLLUTANTS AND HAZARDOUS SUBSTANCES TO BE IDENTIFIED (if Believed Present)

Asbestos	Dimethyl amine	Nitrotoluene
	Dintrobenzene	Parathion
Acetaldehyde	Diquat	Phenolsulfanate
Allyl alcohol	Disulfoton	Phosgene
Allyl chloride	Diuron	Propargite
Amyl acetate	Epichlorohydrin	Propylene oxide
Aniline	Ethion	Pyrethrins
Benzonitrile	Ethylene diamine	Quinoline
Benzyl chloride	Ethylene dibromide	Resorcinol
Butyl acetate	Formaldehyde	Strontium
Butylamine	Furfural	Strychnine
Captan	Guthion	Styrene
Carbaryl	Isoprene	2,4,5-T (2,4,5-Trichloro-phenoxy acetic acid)
Carbofuran	Isopropanolamine	
Carbon disulfide	Dodecylbenzenesulfonate	TDE (Tetrachloro-Diphenylethane)
Chlorpyrifos	Kelthane	
Coumaphos	Kepone	2,4,5-TP [2-(2,4,5-Trichloro-phenoxy) propanoic acid]
Cresol	Malathion	
Crotonaldehyde	Mercaptodimethur	Trichlorofan
Cyclohexane	Methoxychlor	Triethanolamine dodecyl-Benzenesulfonate
2,4-D (2,4-Dichlorophenoxy acetic acid)	Methyl mercaptan	
	Methyl methacrylate	Triethylamine
Diazinon	Methyl parathion	Trimethylamine
Dicamba	Mevinphos	Uranium
Dichlobenil	Mexacarbate	Vanadium
Dichlone	Monoethyl amine	Vinyl acetate
2,2-Dichloropropionic acid	Monomethyl amine	Xylene
Dichlorvos	Naled	Xylenol
Diethyl amine	Napthenic acid	Zirconium

ATTACHMENT 2

PRIMARY INDUSTRIES AND POLLUTANT GROUPS REQUIRING TESTING

INDUSTRIAL CATEGORY	POLLUTANT GROUPS				
	Volatile Organics	Acid Extractable Compounds	Base/Neutral Compounds	Pesticides	Dioxins and Furans
Adhesives and sealants	X	X	X		
Aluminum forming	X	X	X		
Auto and other laundries	X	X	X	X	
Battery manufacturing	X		X		
Coal mining	X	X	X	X	
Coil coating	X	X	X		
Copper forming	X	X	X		
Electric and electronic compounds	X	X	X	X	
Electroplating	X	X	X		
Explosives manufacturing	X	X	X		
Foundries	X	X	X		
Gum and wood chemicals					
All subparts except D and F	X	X			
Subpart D	X	X	X		
Subpart F	X	X	X		
Inorganic chemicals manufacturing	X	X	X		
Iron and steel manufacturing	X	X	X		
Leather tanning and finishing	X	X	X		X
Mechanical products manufacturing	X	X	X		
Nonferrous metals manufacturing	X	X	X	X	
Ore mining (applies to Subpart B)		X			
Organic chemicals manufacturing	X	X	X	X	X
Paint and ink forming	X	X	X		
Pesticides	X	X	X	X	
Petroleum refining	X				X
Pharmaceutical preparations	X	X	X		
Photographic equipment and supplies	X	X	X		
Plastic and synthetic materials manufacturing	X	X	X	X	
Plastic processing	X				
Porcelain enameling					
Printing and publishing	X	X	X	X	

INDUSTRIAL CATEGORY	POLLUTANT GROUPS				
	Volatile Organics	Acid Extractable Compounds	Base/Neutral Compounds	Pesticides	Dioxins and Furans
Pulp, paper and paperboard mills					
Subpart A - Dissolving Kraft	X	X			X
Subpart B - Bleached Papergrade Kraft and Soda	X	X			X
Subpart C - Unbleached Kraft		X		X	X
Subpart D - Dissolving Sulfite	X	X			X
Subpart E - Papergrade Sulfite	X	X	X		X
Subpart F - Semi-chemical		X			X
Subpart G - Mechanical Pulp	X	X			X
Subpart H - Non-Wood Chemical Pulp	?	?	?	?	X
Subpart I - Secondary Fiber Deink	X	X		X	X
Subpart J - Secondary Fiber Non-Deink	X	X		X	X
Subpart K - Fine and Lightweight Papers from Purchased Pulp					
Nonintegrated Fine		X			X
Nonintegrated Lightweight	X	X		X	X
Subpart L - Tissue, Filter, Non-Woven and Paperboard from Purchased Pulp	X	X		X	X
Rubber processing	X	X	X		
Soap and detergent manufacturing	X	X	X		
Steam electric power plants	X	X			
Textile mills (excluding Subpart C)	X	X	X		
Timber products processing	X	X	X	X	