UNITED STATES ENVIRONMENTAL PROTECTION AGENCY
REGION 5
77 WEST JACKSON BOULEVARD
CHICAGO, IL 60604-3590

Draft 11/26/2014

REISSUANCE
PART I
PAGE I-1
Permit No. MI-0058661-2

AUTHORIZATION TO DISCHARGE UNDER THE

NATIONAL POLLUTANT DISCHARGE ELIMINATION SYSTEM

In compliance with the provisions of the Clean Water Act, as amended, the Gun Lake Tribal Gaming Authority, a subsidiary of the Match-E-Be-Nash-She-Wish Tribe of Pottawatomi Indians a/k/a The Gun Lake Tribe is authorized by the United States Environmental Protection Agency, Region 5, to discharge from the Gun Lake Tribal Gaming Authority Wastewater Treatment Facility located on land held in trust for the Gun Lake Tribe, 1123 129th Avenue, Wayland, Michigan, Allegan County (the NW ¼ of Section 19, Township 3N, Range 11W) to Buskirk Creek, in accordance with effluent limitations, monitoring requirements, and other conditions set forth in Parts I, II and III hereof.

This permit and the authorization to discharge shall expire at midnight, [insert ~ 5 years from date of signature]. The permittee shall not discharge after the above date of expiration. In order to receive authorization to discharge beyond the date of expiration, the permittee shall submit such information and forms as are required by EPA no later than 180 days prior to the above date of expiration.

This permit shall become effective on the date of signature.

Signed and Dated _____, 2015

Draft 11/26/2014

_____

Director, Water Division

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Treatment Facility Description:

The permittee operates a 0.10 mgd (with plans to ultimately expand to 0.350 mgd) wastewater treatment facility (WWTF) with a continuous discharge to Buskirk Creek. The treatment consists of an influent equalization basin with three influent pumps followed by flow metering and fine screening. Following screening, the wastewater enters the activated sludge process at the anoxic basin which provides additional flow equalization as needed. Chemical addition of Alum for phosphorus removal and Sodium Hydroxide for pH adjustment occurs in the anoxic basin. Activated sludge is pumped from the anoxic basin to one or both pre-aeration basins which flow to one or both membrane bioreactor (MBR) for liquid/solids separation. Final effluent is pumped to ultra-violet light disinfection and post aeration prior to discharge to Buskirk Creek.

Waste activated sludge (WAS) is removed from the MBR basins as needed via the WAS pump. WAS is typically thickened using a drum thickener with polymer addition then pumped to the aerobic digester. WAS may be pumped directly to the aerobic digester without thickening. WAS is aerated in the aerobic digester. Additional thickening occurs in the digester when the solids are allowed to settle for supernatant removal. A loading standpipe and wash down station are provided to allow tankers to be loaded for biosolids disposal.

Summary of Regular Reporting

FOR INFORMATIONAL PURPOSES ONLY

Description	Due Date	Location
Wastewater Discharge Monitoring Report Forms and Monthly Operation Report Forms	Quarterly: by April 21; by July 21; by October 21; by January 21, each year	Part I.C.2
Treatment System Map Status	By January 31, 2016 and annually thereafter until completed	Part I.C.3.c
Mercury Minimization Program	Within 180 days of the effective date of the permit	Part I.C.4
Mercury Minimization Program Status Report	By January 31, each year	Part I.C.4

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Part I.A. - FINAL EFFLUENT LIMITATIONS AND MONITORING REQUIREMENTS

During the period beginning on the effective date of this permit and lasting until the expiration date of this permit, the permittee is authorized to discharge treated municipal wastewater from Monitoring Point 001A through Outfall 001. Outfall 001 discharges to Buskirk Creek. Such discharge shall be limited and monitored by the permittee as specified below. The following design flow was used in determining the limitations, but is not to be considered a limitation or actual capacity: 0.350 MGD

Parameter	Maximum Limits for Quantity or Loading				Maximum Limits for Quality or Concentration				Frequency of Analysis	Sample Type
	30-Day	7-Day	Daily	Units	30-Day	7-Day	Daily	Units		
Flow	Report	---	Report	MGD	---	---	---	---	Daily	Report Total Daily Flow
Outfall observation					---	Report	---	Yes/No	Weekly	Visual
Carbonaceous Biochemical Oxygen Demand ($CBOD_5$)										
May 1- Sept 30	12	---	29	lbs/day	4	---	10	mg/L	2 x Weekly	24-Hr Composite
Oct 1 – Nov 30	---	---	44	lbs/day	---	---	15	mg/L	2 x Weekly	24-Hr Composite
Dec 1 – March 31	73	117	---	lbs/day	25	40	---	mg/L	2 x Weekly	24-Hr Composite
April 1 - 30	---	---	61	lbs/day	---	---	21	mg/L	2 x Weekly	24-Hr Composite
Total Suspended Solids (TSS)										
May 1 – Sept 30	58	88	---	lbs/day	20	30	---	mg/L	2 x Weekly	24-Hr Composite
Oct 1 – April 30	88	131	---	lbs/day	30	45	---	mg/L	2 x Weekly	24-Hr Composite
Ammonia Nitrogen (as N)										
May 1- Sept 30	1.4	---	5.8	lbs/day	0.5	---	2.0	mg/L	2 x Weekly	24-Hr Composite
Oct 1 – Nov 30	---	---	15	lbs/day	---	---	5	mg/L	2 x Weekly	24-Hr Composite
Dec 1 – March 31	---	---	---	lbs/day	Report	---	---	mg/L	2 x Weekly	24-Hr Composite
April 1 – 30	20	---	38	lbs/day	7	---	13	mg/L	2 x Weekly	24-Hr Composite
Total Phosphorus (as P)										
May 1 – Sept 30	0.29	0.58	---	lbs/day	0.1	---	---	mg/L	2 x Weekly	24-Hr Composite
Oct 1 – April 30	2.9	5.8	---	lbs/day	1.0	2.0	---	mg/L	2 x Weekly	24-Hr Composite
E. coli					126	---	410	E.coli/100 ml	2 x Weekly	Grab
Mercury, Total					---	---	Report	ng/L	1 x Annually	Grab
$CBOD_5$ Minimum % Removal					Minimum 30-Day					
Dec 1 – March 31	---	---	---	---	≥85	---	---	%	Monthly	Calculation
TSS Minimum % Removal										
Oct 1 – April 30	---	---	---	---	≥85	---	---	%	Monthly	Calculation
					Minimum Daily		Maximum Daily			
pH	---	---	---	---	6.5	---	9.0	S.U.	2 x Weekly	Grab
Dissolve Oxygen										
May 1 – Sept 30	---	---	---	---	7	---	---	mg/L	2 x Weekly	Grab
Oct 1 – Nov 30	---	---	---	---	6	---	---	mg/L	2 x Weekly	Grab
Dec 1 – March 31	---	---	---	---	5	---	---	mg/L	2 x Weekly	Grab
April 1 – 30	---	---	---	---	6	---	---	mg/L	2 x Weekly	Grab

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a. Narrative Standard

The receiving water shall contain no turbidity, color, oil films, floating solids, foams, settleable solids, or deposits as a result of this discharge in unnatural quantities which are or may become injurious to any designated use.

b. Monitoring Location

Samples for $CBOD_5$, Total Suspended Solids, Ammonia Nitrogen, Total Mercury and Total Phosphorus shall be taken prior to disinfection. Samples for Dissolved Oxygen, E. coli, and pH shall be taken after disinfection. EPA may approve alternate sampling locations which are demonstrated by the permittee to be representative of the effluent.

c. Outfall Observation

Observations shall be taken at Outfall 001. Any unusual characteristics of the discharge (i.e., unnatural turbidity, color, oil film, floating solids, foams, settleable solids, suspended solids, or deposits) shall be reported within 24 hours to EPA by calling (312) 886-6106 followed with a written report within five (5) days detailing the findings of the investigation and the steps taken to correct the condition. . "Yes" means unusual characteristics were observed. "No" means no unusual characteristics were observed.

d. E. coli

The E. coli limits and monitoring requirements are applicable year round. The 30 day average limit is a geometric mean (See Part II, Section E.7.b).

e. Phosphorus Monitoring

Samples must be collected in a clean bottle (preferably cleaned by a certified laboratory) that was not washed with phosphate detergent. Also, a sulfuric acid preservative must be added immediately after the sample is collected, and it must be stored at four degrees Celsius until analysis.

f. Percent Removal

For the average during the discharge period when the percent removal limit is effective, the effluent concentration for $CBOD_5$ and TSS shall not exceed 15% of the arithmetic mean of the value for influent samples for $CBOD_5$ and TSS collected during the related treatment period.

g. Total Mercury Testing Requirements

The analytical protocol for total mercury shall be in accordance with U.S. EPA Method 1631, Revision E, "Mercury in Water by Oxidation, Purge and Trap, and Cold Vapor Atomic Fluorescence Spectrometry". The quantification level for total mercury shall be 0.5 ng/l, unless a higher level is appropriate because of sample matrix interference. Justification for higher quantification levels shall be submitted to EPA within 30 days of such determination. The quarterly sampling shall be conducted in January, April, July, and October.

The use of clean technique sampling procedures is strongly recommended. Guidance for clean technique sampling is contained in: U.S. EPA Method 1669, *Sampling Ambient Water for Trace Metals at U.S. EPA Water Quality Criteria Levels (Sampling Guidance),* U.S. EPA-821-R96-001, July 1996. Information and data documenting the permittee's sampling and analytical protocols and data acceptability shall be submitted to EPA upon request.

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Part I.B. - INFLUENT MONITORING REQUIREMENTS

From the Effective Date of the permit until the Expiration Date, the permittee shall monitor the treatment works' influent wastewater and report to EPA in accordance with the following table. Samples of influent used for calculation of percent removals must be taken the same day as those samples of effluent used for that determination.

Influent Monitoring

Influent Characteristics	Discharge Limitations							Monitoring Requirements	
	Concentration (Specified Units)				Quantity/Loading (lbs/day)			Measuring Frequency	Sampling Type
Parameter	Daily Minimum	Monthly Average	Weekly Average	Daily Maximum	Monthly Average	Weekly Average	Daily Maximum		
Influent flow (MGD)	-	-	-	-	Report	-	-	Continuous	Total Daily Flow
pH (SU)	Report	-	-	Report	-	-	-	2 x Weekly	Grab
Total Suspended Solids (TSS) (mg/L)	-	Report	-	-	Report	-	-	2 x Weekly	24-Hr Composite
Biochemical Oxygen Demand (BOD_5) (mg/L)	-	Report	-	-	Report	-	-	2 x Weekly	24-Hr Composite
Carbonaceous Biochemical Oxygen Demand ($CBOD_5$) (mg/L)	-	Report	-	-	Report	-	-	1 x Weekly	24-Hr Composite
Mercury, Total (ng/L)	-	-	-	Report	-	-	-	1 x Annually	Grab

a. Monitoring Location
Samples and measurements taken in compliance with the monitoring requirements above shall be taken at a point that is representative of the influent.

b. Total Mercury Testing Requirements
The analytical protocol for total mercury shall be in accordance with U.S. EPA Method 1631, Revision E, "Mercury in Water by Oxidation, Purge and Trap, and Cold Vapor Atomic Fluorescence Spectrometry". The quantification level for total mercury shall be 0.5 ng/l, unless a higher level is appropriate because of sample matrix interference. Justification for higher quantification levels shall be submitted to EPA within 30 days of such determination. The quarterly sampling shall be conducted in January, April, July, and October.

The use of clean technique sampling procedures is strongly recommended. Guidance for clean technique sampling is contained in: U.S. EPA Method 1669, *Sampling Ambient Water for Trace Metals at U.S. EPA Water Quality Criteria Levels (Sampling Guidance)*, U.S. EPA-821-R96-001, July 1996. Information and data documenting the permittee's sampling and analytical protocols and data acceptability shall be submitted to EPA upon request.

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C. Special Conditions

1. Representative Samples

Representative samples and measurements taken as required herein shall be representative of the volume and nature of the monitored discharge.

2. Reporting

The permittee shall record all monitoring results required by Part I.A and Part I.B on Discharge Monitoring Report (DMR) forms. One form shall be used for each month whether or not a discharge occurred during the month.

The permittee shall report monitoring results below the reporting limit (RL) of a particular instrument as "<" the value of the RL. For example, if an instrument has a RL of 0.1 mg/L and a parameter is not detected at a value of 0.1 mg/L or greater, the concentration shall be reported as "<0.1 mg/L." "Non-detected", "undetected", "below detection limit" and "zero" are unacceptable reporting results, and are permit reporting violations.

The DMR form shall be mailed to EPA and a copy mailed to the MDEQ, as a courtesy, on a quarterly basis, and postmarked no later than the 21st day of the month (April, July, October, January) following the quarter for which the monitoring was completed. By requiring that the forms be mailed to the MDEQ, it shall be clear that the EPA, by this condition, in no way intends that the sovereign right of self-government of the Match-E-Be-Nash-She-Wish Tribe of Pottawatomi Indians a/k/a The Gun Lake Tribe be eroded, in any manner. This requirement should not be viewed, and is not intended, as authority for the State to impose any of its laws upon the Match-E-Be-Nash-She-Wish Tribe of Pottawatomi Indians a/k/a The Gun Lake Tribe. The Match-E-Be-Nash-She-Wish Tribe of Pottawatomi Indians a/k/a The Gun Lake Tribe has **not** waived its sovereign immunity with respect to any claims brought by any person, including but not limited to the State of Michigan, under state law. The permittee shall retain a copy of all reports submitted. All reports shall be mailed to:

U.S. Environmental Protection Agency
Water Enforcement & Compliance Assurance Branch
Attention: Branch Chief - WC-15J
77 West Jackson Boulevard
Chicago, Illinois 60604

Michigan Department of Environmental Quality
Attention: Kalamazoo District Office:
7953 Adobe Rd.
Kalamazoo, MI 49009-5025

3. Operation and Maintenance Plan

The permittee shall at all times properly operate and maintain all facilities and systems of conveyance, treatment and control which are installed or used by the permittee to operate the

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treatment works and achieve and maintain compliance with the conditions of this permit. The requirements below are the first steps of an asset management program which contains goals of effective performance, adequate funding, adequate operator staffing and training. Asset management is a planning process that ensures that you get the most value from each of your assets and have the financial resources to rehabilitate and replace them when necessary, and typically includes five core elements which identify: 1) the current state of the asset; 2) the desired level of service (e.g., per the permit, or for the customer); 3) the most critical asset(s) to sustain performance; 4) the best life cycle cost; and 5) the long term funding strategy to sustain service and performance.

Asset management includes developing a plan to minimize costs while optimizing efficiency and the reliability of your assets. It is intended that subsequent permits will contain the additional requirements to complete the evolution of the O&M Plan into a full-featured asset management program appropriate for the permitted wastewater works.

If the permittee has not already done so, the permittee shall as soon as possible but no later than 12 months from the effective date of the permit, develop and implement an Operation & Maintenance Plan, which will be made available to EPA upon request, to document compliance with the following:

a. Certified Operator. The wastewater treatment facility shall be operated under the direct supervision of a Certified Wastewater Treatment Operator that has the knowledge, skills and experience required for the facility type and size. If the permittee chooses to meet the certification requirements by entering into a contractual agreement with a properly certified operator, a copy of the contract shall be submitted to EPA at the address in Part I.C.3.c below. The permittee shall notify the EPA, in writing, of any changes in certification or contract status within30 days of the change.

b. Maintenance and Operations Staff. The permittee shall provide an adequate staff to carry out the operation, maintenance, repair, and testing functions required to ensure compliance with the terms and conditions of this permit. The level of staffing needed, in numbers, training and experience, shall be determined taking into account the work involved in operating the system, conducting maintenance, and complying with this permit.

c. Treatment System Map. As soon as possible but no later than the expiration date of the permit, the permittee shall complete a map of the system service area showing the sewer collection system it owns and operates including the wastewater treatment system or point of exit from the Tribal system if final treatment is at a non-Tribal facility. The map shall be of sufficient detail and at a scale to allow easy interpretation. The treatment system information shown on the map shall be based on current conditions and shall be kept up to date and available for review by federal agencies. Concurrently, the permittee should consider the accumulation of asset characterization data into a database for all principle assets inventoried and illustrated, to supplement asset information consistent with the map. Such map(s) shall include, but not be limited to the

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following:

i. All sanitary sewer lines and related manholes;
ii. All outfalls of the system or the treatment plant outfall(s);
iii. All pump stations and force mains;
iv. The wastewater treatment facility(ies);
v. All surface waters (labeled);
vi. Other major appurtenances such as inverted siphons and air release valves;
vii. A numbering system which uniquely identifies manholes, catch basins, overflow points, regulators and outfalls;
viii. The scale and a north arrow; and
ix. The pipe diameter, date of installation, type of material, distance between manholes and, invert elevations at manhole locations, and the direction of flow.

On or before January 31, 2016, and annually thereafter until the collection system map is completed, the permittee shall submit a report for the previous calendar year to EPA at the address below, that provides a status of map completion, a summary of the work done in the previous year to complete the map and an estimated date of completion. Once this collection system map is completed, the Tribal authorized representative will send confirmation of completion of this subtask to:

U.S. Environmental Protection Agency, Region 5
Water Division – NPDES Programs Branch
Attention: Tribal Team Leader – WN-16J
77 West Jackson Blvd. Chicago, Illinois 60604

d. Preventive Maintenance Program. If the permittee has not already done so, the permittee shall as soon as possible but no later than 18 months from the effective date of the permit, develop and begin implementing a preventive maintenance program that helps to prevent breakdowns, reduces wear, improves efficiency and extends the life of equipment and structures. The preventive maintenance program shall consist of at a minimum:

i. A method of periodic inspection, lubrication, adjustment and/or other servicing of machinery, equipment and structures.
ii. A record of repairs, alterations and replacements.
iii. A method of cost accounting and budgeting for the different parts of the preventative maintenance program.

e. User Fees. If the permittee has not already done so, the permittee shall as soon as possible but no later than 12 months from the effective date of the permit, establish connection fees and user rates and collect such charges from individuals served by the system as are necessary to sustain the operation, maintenance, and repair of the Gun Lake Tribal Gaming Authority WWTF sewerage systems. Fee structures must address both repairs and replacements, for both short-lived

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mechanical assets and long-lived fixed structural assets. Alternatively, the permittee may provide this revenue from another dedicated revenue source. The Operation & Maintenance plan shall indicate which revenue source(s) are being used and how these contributions are allocated to categories of operation, maintenance, repairs, and replacement.

f. New Connections. If the permittee has not already done so, the permittee shall as soon as possible but no later than 12 months from the effective date of the permit, enact and enforce appropriate ordinances or regulations governing: (1) Connection to the Gun Lake Tribal Gaming Authority WWTF sewerage system by the residents of the reservation; and, (2) The methods and materials to be used in making connections to the Gun Lake Tribal Gaming Authority WWTF sewerage system in a safe and sanitary manner.

4. Mercury Minimization Program

The goal of the Mercury Minimization Program (MMP) is to maintain the effluent concentration of total mercury at or below 1.3 ng/L. Within 180 days of the effective date of the permit, the permittee shall submit to EPA an approvable MMP designed to proceed toward the goal. The MMP shall include the following:

- An annual review and annual monitoring of potential sources of mercury entering the wastewater collection system;
- A program for annual monitoring of influent and effluent mercury and periodic monitoring of sludge for mercury; and
- Implementation of reasonable cost-effective control measures when sources of mercury are identified. Factors to be considered include significance of sources, economic considerations, and technical and treatability considerations.

The MMP be implemented upon approval by EPA or within 45 days of submittal, whichever is sooner.

On or before January 31 of each year, the permittee shall submit a status report for the previous calendar year to EPA that includes 1) the monitoring results for the previous year, 2) an updated list of potential mercury sources, and 3) a summary of all actions taken to reduce or eliminate identified sources of mercury. The status report shall be submitted to:

U.S. Environmental Protection Agency
Water Division – NPDES Program Branch Attention:
Tribal Team Leader - WN-16J
77 West Jackson Blvd.
Chicago, Illinois 60604

Any information generated as a result of the MMP set forth in this permit may be used to support a request to modify the approved program or to demonstrate that the MMP requirement has been completed satisfactorily.

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A request for modification of the approved program and supporting documentation shall be submitted in writing to EPA for review and approval. EPA may approve modifications to the approved program (approval of a program modification does not require a permit modification).

This permit may be modified in accordance with applicable laws and rules to include additional mercury conditions and/or limitations as necessary.

5. <u>Industrial Waste Pretreatment Program</u>

a. The permittee shall comply with all applicable requirements 40 CFR Part 403 to prevent any pass through of pollutants or any inhibition or disruption of the permittee's facility, its treatment process, or its sludge process or disposal, which contributes to the violation of the conditions of this permit or any federal, state, or local law or regulation.

b. The permittee shall prohibit the discharge of the following to its wastewater treatment facility:

i. pollutants which cause, in whole or in part, the permittee's failure to comply with any condition of this permit or the Clean Water Act;

ii. pollutants which restrict, in whole or in part, the permittee's ability to comply with applicable sludge management and disposal requirements;

iii. pollutants which cause, in whole or in part, operational problems at the treatment facility or in the collection system;

iv. pollutants which cause pass through or interference;

v. pollutants which create a fire or explosion hazard in the sewerage system, including, but not limited to, wastestreams with a closed cup with a flashpoint of less than 60 degrees C (140 degrees F) using the test methods specified in 40 CFR 261.21;

vi. pollutants which will cause corrosive structural damage to the sewerage system, but in no case, discharges with pH of less than 5.0 S.U., unless the works is specifically designed to accommodate such discharges;

vii. solid or viscous pollutants in amounts which will cause obstruction to the flow in the sewerage system resulting in interference;

viii. any pollutant, including oxygen demanding pollutants (BOD, etc.) released in a discharge at a flow rate and/or pollutant concentration which will cause interference with the treatment plant;

ix. heat in amounts which will inhibit biological activity in the treatment plant resulting in interference, but in no case, heat in such quantities that the

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temperature at the treatment plant exceeds 40 degrees C (104 degrees F) unless the EPA Region 5 Water Division Director, upon request of the permittee, approves alternate temperature limits;

x. pollutants which result in the presence of toxic gases, vapors, or fumes within the sewerage system in a quantity that may cause acute worker health or safety problems;

xi. petroleum oil, nonbiodegradable cutting oil, or products of mineral oil origin in amounts that will cause interference or pass through;

xii. any trucked or hauled pollutants, except at discharge points designated by the permittee;

xiii. pollutants which violate categorical standards identified in 40 CFR Chapter I, SubchapterN; and

xiv. pollutants which violate local limits established in accordance with 40 CFR 403.5(c).

c. The permittee shall prohibit new discharges of non-contact cooling waters unless there are no cost-effective alternatives. Existing discharges of non-contact cooling water to the WWTF shall be eliminated, where elimination is cost-effective, or where an infiltration/inflow analysis and sewer system evaluation survey indicates the need for such removal.

d. If the permittee accepts trucked-in wastes, the permittee shall evaluate the trucked in waste prior to acceptance in the same manner as it monitors sewered wastes. The permittee shall accept trucked-in wastes only at specifically designated points.

e. The permittee shall maintain a list of its nondomestic users that meet the criteria of a significant industrial user (SIU) as identified in 40 CFR 403.3(t).

f. Control of Significant Industrial Users (SIUs)

i. The permittee shall impose pretreatment requirements on SIUs which will ensure compliance with all applicable effluent limitations and other requirements set forth in this permit, or any applicable federal, state, or local law or regulation. These requirements shall be applied to SIUs by means of an individual control mechanism.

ii. The permittee shall make no agreement with any user that would allow the user to contribute an amount or strength of wastewater that would cause violation of any limitation or requirement in this permit, or any applicable federal, state, or local law or regulation.

g. Monitoring of Significant Industrial Users - The permittee shall obtain from SIUs

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specific information on the quality and quantity of the SIUs discharges to the permittee's POTW. Except where specifically requested by the permittee and approved by EPA, this information shall be obtained by means of representative monitoring conducted by the permittee or by the SIU under requirements imposed by the Permittee in the SIU's individual control mechanism. Monitoring performed to comply with this requirement shall include all pollutants for which the SIU is significant and shall be done at a frequency commensurate with the significance of the SIU.

h. Reporting and Notification

i. If a SIU discharges to the POTW during a given calendar year, the permittee shall submit a Pretreatment Annual Report for that calendar year, due by January 31 of the following year. The Pretreatment Annual Report shall include:

A. the name, address, and telephone number of the permittee's primary pretreatment contact, and the names and phone numbers of any other individuals who should be contacted regarding aspects of the pretreatment program;

B. a description of changes or proposed changes in the permittee's pretreatment program, including changes to its legal authority (sewer use ordinance), Industrial User Individual Control Mechanisms, or pretreatment program procedures;

C. an updated listing of the permittee's SIUs with additions and deletions noted and reasons given for deletions;

D. a summary of all monitoring data for SIUs, including all industrial self monitoring and all monitoring of industrial users by the permittee;

E. a summary of all inspections of industrial users performed by the permittee, violations by industrial users of any requirements imposed by the permittee, and enforcement actions taken against industrial users by the permittee; and a description of any interferences, upsets or operational problems at the facility, and any increased or unusual levels of pollutants discharged or contained in sludge.

The description shall include an evaluation of possible causes and an assessment of the effectiveness of the pretreatment program in preventing interference, pass-through of pollutants, and contamination of sludge.

ii. The permittee shall notify the EPA in writing of any:

A. SIU of the permittee's POTW which has not been previously disclosed to the EPA;

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B. anticipated or actual changes in the volume or quality of discharge by an industrial user that could result in the industrial user becoming an SIU as defined in this permit; or

C. anticipated or actual changes in the volume or quality of discharges by a SIU that would require changes to the SIU's individual control mechanism.

This notification shall be submitted as soon as possible and, where changes are proposed, must be submitted prior to changes being made.

iii. Upon notifying the EPA of a SIU or change in a SIU discharge as required above, the permittee shall submit the following for approval:

A. the control mechanism that will be used to control the SIU;

B. a characterization of the SIU's discharge;

C. a load balance for all pollutants for which the SIU is significant, showing the derivation of the limits to be applied to the SIU and the loading to the treatment works by the SIU and other users of the treatment works; and

D. a plan for monitoring the SIU which is consistent with monitoring requirements in this permit.

iv. In addition, the permittee shall, upon request, submit the following to the EPA for approval:

A. the permittee's legal authority to be used for regulating the SIU; and

B. the permittee's procedures for enforcing the requirement imposed on the SIU.

v. This permit may be modified to require development of a pretreatment program approvable under the Federal General Pretreatment Regulation (40 CFR Part 403).

6. <u>Sludge Disposal Requirements</u>

In addition to the sludge land application requirements in Part III of the permit, the following requirements also apply to the permittee.

a. If sewage sludge is land applied outside the exterior boundaries of the reservation, it shall also be done in compliance with Part 24 Rules of the Michigan Administrative Code (Land Application of Biosolids). The permittee shall contact the Michigan Department of Environmental Quality to receive any needed approvals or permits prior to land applying any sludge outside the exterior boundaries of the reservation.

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b. The following site identified in the permit application shall be used for the land application of sewage sludge by the permittee.

Owner	Site ID#	Latitude	Longitude
Wayne and Sandra Larsen	02N11W13-WL01	N42, 38.895’	W85, 33.693’

c. If the permittee wishes to land apply at sites not identified in this permit prior to the expiration date of this permit, the permittee shall submit a request to the Chief of the NPDES Programs Branch containing the information listed in 1 through 5 below. Upon receipt of the information, the permit may be modified with public notice.

1. Certification that the application contractor has received all necessary information to comply with applicable provisions of 40 CFR Part 503;

2. Site information including:

   - Site location by latitude and longitude, and code number to identify field or field portion.
   - Plat map showing location of the site relative to local landmarks.
   - Proximity to surface waters of the United States.
   - Potential presence of endangered species.
   - Soil fertility test with fertilizer recommendations.
   - Previous crop and future crop with yield goal.
   - Participation Agreement signed by the landowner or operator, if different, of the site to receive sludge.
   - Determination whether the site has previously been used for sewage sludge applications.
   - If previously used, determination of cumulative pollutant loading rate since July 19, 1993;

3. Certification that the local township supervisor has been notified that a site has been identified and is intended for use;

4. Certification that the County Health Department has been notified that hauling is scheduled to take place; and

5. Certification that notice has been provided to landowners and occupants adjacent to, or abutting the proposed land application site. Such notice shall be accomplished by one of the following: written notice through the regular mail; public notice in the local newspaper; public reading of notice at open local public meeting.

d. The application contractor has received all necessary information to comply with applicable provisions of 40 CFR Part 503.

e. Duty to mitigate. The permittee shall take all reasonable steps to minimize any sludge use or disposal in violation of this permit.

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f. Planned Changes. The permittee shall give notice to the EPA, and the MDEQ (as a courtesy), as soon as possible of any changes in sludge use and disposal.

g. The permittee shall retain records of all monitoring information required by this permit related to the permittee's sewage sludge use and disposal activities for a period of at least 5 years.

h. If the permittee monitors any pollutants more frequently than required by the permit, using test procedures approved under 40 CFR Parts 136 or 503, the results of this monitoring shall be included in the reporting data submitted to the Agency.

i. The permittee shall comply with existing federal regulations governing sewage sludge use or disposal and shall comply with all existing applicable regulations in any jurisdiction in which the sewage sludge is actually used or disposed.

j. The permit may be reopened to incorporate any applicable standards for sewage sludge use or disposal promulgated under Section 405(d) of the CWA.

k. The permittee shall comply with standards for sewage sludge use or disposal established under Section 405(d) of the CWA within the time provided in the regulations that establish the standards for sewage sludge use or disposal even if the permit has not been modified to incorporate the requirement.

l. The permittee shall ensure that the applicable requirements in 40 CFR Part 503 are met when the sewage sludge is applied to the land, placed on a surface disposal site, or fired in a sewage sludge incinerator.

m. The permittee shall not store sludge onsite or offsite for more than two years without an approved plan for use or disposal.

7. Additional Monitoring Requirements

a. As a condition of this permit, the permittee shall monitor the discharge from Outfall 001 for the constituents listed below. This monitoring is an application requirement of 40 CFR 122.21(j), effective December 2, 1999. Testing shall be conducted in **June 2016, September 2017, December 2018 and March 2019**. Grab samples shall be taken for Oil and Grease. For all other parameters 24-hour composite samples shall be taken. **This information shall be submitted with the permit renewal application.**

Total Kjeldahl Nitrogen (TKN)	Oil and Grease
Nitrate plus Nitrite Nitrogen	Total Dissolved Solids (TDS)

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PART II
STANDARD CONDITIONS FOR NPDES PERMITS

SECTION A. GENERAL CONDITIONS

1. Duty to Comply

The permittee must comply with all conditions of this permit. Any permit noncompliance constitutes a violation of the Clean Water Act and is grounds for enforcement action, for permit termination, revocation and reissuance, or modification; or for denial of a permit renewal application.

Operators must comply with effluent standards or prohibitions established under CWA section 307(a) for toxic pollutants within the time provided in the regulations that establish these standards, even if the permit has not yet been modified to incorporate the requirement. See also paragraph A.5 below.

2. Penalties for Violations of Permit Conditions

EPA will periodically adjust for inflation the civil and administrative penalties listed below in accordance with the Civil Monetary Penalty Inflation Adjustment Rule (61 FR 252, December 31, 1996, pp. 69359–69366, as corrected in 62 FR 54, March 20, 1997, pp.13514–13517) as mandated by the Debt Collection Improvement Act of 1996. This rule allows EPA's penalties to keep pace with inflation. The Agency is required to review its penalties at least once every 4 years thereafter and to adjust them as necessary for inflation according to a specified formula. The civil and administrative penalties following were adjusted for inflation starting in 1996.

a. Criminal Penalties

(1) Negligent Violations. The CWA provides that any person who negligently violates permit conditions implementing sections 301, 302, 306, 307, 308, 318, or 405 of the Act is subject to criminal penalties of not less than $2,500 nor more than $25,000 per day of violation, or imprisonment of not more than one year, or both. In the case of a second or subsequent conviction for a negligent violation, a person will be subject to criminal penalties of not more than $50,000 per day of violation or by imprisonment of not more than two years, or both.

(2) Knowing Violations. The CWA provides that any person who knowingly violates permit conditions implementing sections 301, 302, 306, 307, 308, 318, or 405 of the Act is subject to a fine of not less than $5,000 nor more than $50,000 per day of violation, or by imprisonment for not more than 3 years, or both. In the case of a second or subsequent conviction for a knowing violation, a person will be subject to criminal penalties of not more than $100,000 per day of violation, or imprisonment of not more than 6 years, or both.

(3) Knowing Endangerment. The CWA provides that any person who knowingly violates permit conditions implementing sections 301, 302, 306, 307, 308, 318, or 405 of the Act and who knows at that time that he or she is placing another person in imminent danger of death or serious bodily injury will upon conviction be subject to a fine of not more than $250,000 or by imprisonment of not more than 15 years, or both. In the case of a second or subsequent conviction for a knowing endangerment violation, a person will be subject to a fine of not more than $500,000 or by imprisonment of not more than 30 years, or both. An organization, as defined in section 309(c)(3)(B)(iii) of the Act, will, upon conviction of violating the imminent danger provision, be subject to a fine of not more than $1,000,000 and can fined up to $2,000,000 for second or subsequent convictions.

(4) False Statement. The CWA provides that any person who falsifies, tampers with, or knowingly renders inaccurate any monitoring device or method required to be maintained under this permit will, upon conviction, be punished by a fine of not more than $10,000, or by imprisonment for not more than 2 years, or both. If a conviction of a person is for a violation committed after a first conviction of such person under this paragraph, punishment is a fine of not more than $20,000 per day of violation, or by imprisonment of not more than 4 years, or both. The Act further provides that any person who knowingly makes any false statement, representation, or certification in any record or other

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documentsubmitted or required to be maintained under this permit, including monitoring reports or reports of compliance or noncompliance will, upon conviction, be punished by a fine of not more than $10,000 per violation, or by imprisonment for not more than 6 months per violation, or by both. (See Section 309(c)(4) of the Clean Water Act).

b. Civil Penalties. The CWA provides that any person who violates a permit condition implementing sections 301, 302, 306, 307, 308, 318, or 405 of the Act is subject to a civil penalty not to exceed the maximum amounts authorized by Section 309(d) of the Act and the Federal Civil Penalties Inflation Adjustment Act (28 U.S.C. 2461 note) as amended by the Debt Collection Improvement Act (31 U.S.C. 3701 note) (currently $37,500 per day for each violation).

c. Administrative Penalties. The CWA provides that any person who violates a permit condition implementing sections 301, 302, 306, 307, 308, 318, or 405 of the Act is subject to an administrative penalty, as follows:

(1) Class I Penalty. Not to exceed the maximum amounts authorized by CWA section 309(g)(2)(A) and the Federal Civil Penalties Inflation Adjustment Act (28 U.S.C. 2461 note) as amended by the Debt Collection Improvement Act (31 U.S.C. 3701 note) (currently $11,000 per violation, with the maximum amount of any Class I penalty assessed not to exceed $37,500).

(2) Class II Penalty. Not to exceed the maximum amounts authorized by CWA section 309(g)(2)(B) and the Federal Civil Penalties Inflation Adjustment Act (28 U.S.C. 2461 note) as amended by the Debt Collection Improvement Act (31 U.S.C. 3701 note) (currently $11,000 per day for each day during which the violation continues, with the maximum amount of any Class II penalty not to exceed $157,500).

3. Duty to Mitigate

The permittee shall take all reasonable steps to minimize or prevent any discharge in violation of this permit which has a reasonable likelihood of adversely affecting human health or the environment.

4. Permit Modification

After notice and opportunity for a hearing, this permit may be modified, terminated or revoked for cause (as described in 40 CFR 122.62 et. seq) including, but not limited to, the following:

a. Violation of any terms or conditions of this permit;

b. Obtaining this permit by misrepresentation or failure to disclose fully all relevant facts;

c. A change in any conditions that requires either temporary interruptions or elimination of the permitted discharge; or

d. Information newly acquired by the Agency indicating the discharge poses a threat to human health or welfare.

If the permittee believes that any past or planned activity would be cause for modification or revocation and reissuance under 40 CFR 122.62, the permittee must report such information to the Permit Issuing Authority. The submittal of a new application may be required of the permittee. The filing of a request by the permittee for a permit modification, revocation and reissuance, or termination, or a notification of planned changes or anticipated noncompliance, does not stay any permit condition.

5. Toxic Pollutants

Notwithstanding Paragraph A-4, above, if a toxic effluent standard or prohibition (including any schedule of compliance specified in such effluent standard or prohibition) is established under Section 307(a) of the Act for a toxic pollutant which is present in the discharge and such standard or prohibition is more stringent than any limitation for such pollutant in this permit, this permit shall be modified or revoked and reissued to conform to the

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toxic effluent standard or prohibition and the permittee so notified.

6. Civil and Criminal Liability

Except as provided in permit conditions on "Bypassing" Part II, Section B, Paragraph B-3, nothing in this permit shall be construed to relieve the permittee from civil or criminal penalties for noncompliance.

7. Oil and Hazardous Substance Liability

Nothing in this permit shall be construed to preclude the institution of any legal action or relieve the permittee from any responsibilities, liabilities, or penalties to which the permittee is or may be subject under Section 311 of the Act.

8. State/Tribal Laws

Nothing in this permit shall be construed to preclude the institution of any legal action or relieve the permittee from any responsibilities, liabilities, or penalties established pursuant to any applicable State/Tribal law or regulation under authority preserved by Section 510 of the Act.

9. Property Rights

The issuance of this permit does not convey any property rights of any sort, or any exclusive privileges, nor does it authorize any injury to private property or any invasion of personal rights nor any infringement of Federal, State, Tribal, or local laws or regulations.

10. Onshore or Offshore Construction

This permit does not authorize or approve the construction of any onshore or offshore physical structures or facilities or the undertaking of any work in any waters of the United States.

11. Severability

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

12. Duty to Provide Information

The permittee shall furnish to the Permit Issuing Authority, within a reasonable time, any information which the Permit Issuing Authority may request to determine whether cause exists for modifying, revoking and reissuing, or terminating this permit or to determine compliance with this permit. The permittee shall also furnish to the Permit Issuing Authority, upon request, copies of records required to be kept by this permit.

SECTION B. OPERATION AND MAINTENANCE OF POLLUTION CONTROLS

1. Proper Operation and Maintenance

The permittee shall at all times properly operate and maintain all facilities and systems of treatment and control (and related appurtenances) which are installed or used by the permittee to achieve compliance with the conditions of this permit. Proper operation and maintenance also includes adequate laboratory controls and appropriate quality assurance procedures. This provision requires the operation of back-up or auxiliary facilities or similar systems which are installed by a permittee only when the operation is necessary to achieve compliance with the conditions of the permit.

2. Need to Halt or Reduce Not a Defense

It shall not be a defense for a permittee in an enforcement action that it would have been necessary to halt or reduce the permitted activity in order to maintain compliance with the condition of this permit.

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3. Bypass of Treatment Facilities

a. Definitions

(1) "Bypass means the intentional diversion of waste streams from any portion of a treatment facility, which is not a designed or established operating mode for the facility.

(2) "Severe property damage" means substantial physical damage to property, damage to the treatment facilities which causes them to become inoperable, or substantial and permanent loss of natural resources which can reasonably be expected to occur in the absence of a bypass. Severe property damage does not mean economic loss caused by delays in production.

b. Bypass not exceeding limitations

The permittee may allow any bypass to occur which does not cause effluent limitations to be exceeded, but only if it also is for essential maintenance to assure efficient operation. These bypasses are not subject to the provisions of Paragraph c. and d. of this section.

c. Notice

(1) Anticipated bypass. If the permittee knows in advance of the need for a bypass, it shall submit prior notice, if possible at least ten 10 days before the date of the bypass, including an evaluation of the anticipated quality and effect of the bypass.

(2) Unanticipated bypass. The permittee shall submit notice of an unanticipated bypass as required in Section D, Paragraph D-8 (24-hour notice).

d. Prohibition of bypass.

(1) Bypass is prohibited and the Permit Issuing Authority may take enforcement action against a permittee for bypass, unless:

(a) Bypass was unavoidable to prevent loss of life, personal injury, or severe property damage;

(b) 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 in the exercise of reasonable engineering judgment to prevent a bypass which occurred during normal periods of equipment downtime or preventive maintenance; and

(c) The permittee submitted notice as required under Paragraph c. of this section.

(2) The Permit Issuing Authority may approve an anticipated bypass, after considering its adverse effects, if the Permit Issuing Authority determines that it will meet the three conditions listed above in Paragraph d. (1) of this section.

4. Upsets

"Upsets" means an exceptional incident in which there is unintentional and temporary noncompliance with technology based permit effluent limitations because of factors beyond the reasonably control of the permittee. An upset does not include noncompliance to the extent caused by operational error, improperly designed treatment facilities, inadequate treatment facilities, lack of preventive maintenance, or careless or improper operation. An upset constitutes an affirmative defense to an action brought for noncompliance with such technology based permit limitation if the requirements of 40 CFR 122.41(n)(3) are met.

5. Removed Substances

This permit does not authorize discharge of solids, sludge, filter backwash, or other pollutants removed in the course of treatment or control of wastewater to waters of the United States unless specifically limited in Part I.

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SECTION C. MONITORING AND RECORDS

1. Representative Sampling

Samples and measurements taken as required herein shall be representative of the volume and nature of the monitored discharge. All samples shall be taken at the monitoring points specified in this permit and, unless otherwise specified, before the effluent joins or is diluted by any other wastestream, body of water, or substance. Monitoring points shall not be changed without notification to and the approval of the Permit Issuing Authority.

2. Flow Measurements

Appropriate flow measurement devices and methods consistent with accepted scientific practices shall be selected and used to insure the accuracy and reliability of measurements of the volume of monitored discharges. The devices shall be installed, calibrated and maintained to insure that the accuracy of the measurements is consistent with the accepted capability of that type of device. Devices selected shall be capable of measuring flows with a maximum deviation of less than ± 10 percent from the true discharge rates throughout the range of expected discharge volumes. Once-through condenser cooling water flow which is monitored by pump logs, or pump hours meters as specified in Part I of this permit, and based on the manufacturer's pump curves, shall not be subject to this requirement. Guidance in selection, installation, calibration, and operation of acceptable flow measurements devices can be obtained from the following references:

a. "A Guide of Methods and Standards for the Measurement of Water Flow", U.S. Department of Commerce, National Bureau of Standards, and Special Publication 421, May 1975, 97 pp. (Available from the U.S. Government Printing Office, Washington, D.C. 20402. Order by SD Catalog No. C13.10:421.)

b. "Water Measurement Manual", U.S. Department of Interior, Bureau of Reclamation, Second Edition, Revised Reprint, 1974, 327 pp. (Available from the U.S. Government Printing Office, Washington, D.C. 20402. Order by Catalog No. 127.19/2:W29/2, Stock No. S/N 24003-0027.)

c. "Flow Measurement in Open Channels and Closed Conduits", U.S. Department of Commerce, National Bureau of Standards, NBS Special Publication 484, October 1977, 982 pp. (Available in paper copy or microfiche from National Technical Information Service (NTIS), Springfield, VA 22151. Order by NTIS No. PB-273 535/5ST.)

d. "NPDES Compliance Flow Measurement Manual", U.S. Environmental Protection Agency, Office of Water Enforcement, Publication MOD-77, September 1981, 135 pp. (Available from the General Services Building 41, Denver Federal Center, Denver, CO 80225.)

3. Monitoring Procedures

Monitoring must be conducted according to test procedures approved under 40 CFR Part 136, unless other test procedures have been specified in this permit.

4. Retention of Records

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 this permit, and records of all data used to complete the application for this permit, for a period of at least 3 years from the date of the sample, measurement, report or application. This period may be extended by the Permit Issuing Authority at any time.

5. Records Contents

Records of monitoring information shall include:

a. The date, exact place, and time of sampling or measurements;

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b. The individual(s) who performed the sampling or measurements;

c. The date(s) analyses were performed;

d. The individual(s) who performed the analyses;

e. The analytical techniques or methods used; and

f. The results of such analyses.

6. Inspection and Entry

The permittee shall allow the Permit Issuing Authority, or an authorized representative, upon the presentation of credentials and other documents as may be required by law, to:

a. Enter upon the permittee's premises where a regulated facility or activity is located or conducted, or where records must be kept under the conditions of this permit;

b. Have access to and copy, at reasonable times, any records that must be kept under the conditions of this permit;

c. Inspect at reasonable times the facilities, equipment (including monitoring and control equipment), practices, or operations regulated or required under this permit; and

d. Sample or monitor at reasonable times, for the purposes of assuring permit compliance or as otherwise authorized by the Clean Water Act, any substances or parameters at any location.

SECTION D. REPORTING REQUIREMENTS

1. Change in Discharge

The permittee shall give notice to the Permit Issuing Authority, as soon as possible, of any planned physical alterations or additions to the permitted facility. Notice is required only when:

a. The alteration or addition to a permitted facility may meet one of the criteria for determining whether a facility is a new source; or

b. The alteration or addition could significantly change the nature or increase the quantity of pollutants discharged. This notification applies to pollutants which are subject neither to effluent limitations in the permit, nor to notification requirements under Section D, Paragraph D-10(a).

2. Anticipated Noncompliance

The permittee shall give advance notice to the Permit Issuing Authority by calling (312) 886-6106, of any planned change in the permitted facility or activity which may result in noncompliance with permit requirements. Any maintenance of facilities, which might necessitate unavoidable interruption of operation and degradation of effluent quality, shall be scheduled during noncritical water quality periods and carried out in a manner approved by the Permit Issuing Authority.

3. Transfer of Ownership or Control

A permit may be automatically transferred to another party if:

a. The permittee notifies the Permit Issuing Authority of the proposed transfer at least 30 days in advance of the proposed transfer date;

b. The notice includes a written agreement between the existing and new permittees containing a specific date for transfer of permit responsibility, coverage, and liability between them, and

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c. The Permit Issuing Authority does not notify the existing permittee of its intent to modify or revoke and reissue the permit. If this notice is not received, the transfer is effective on the date specified in the agreement mentioned in paragraph b.

4. Monitoring Reports

See Part I.C.2 of this permit.

5. Additional Monitoring by the Permittee

If the permittee monitors any pollutant more frequently than required by this permit, using test procedures approved under 40 CFR 136 or as specified in this permit, the results of this monitoring shall be included in the calculation and reporting of this data submitted in the Discharge Monitoring Report (DMR). Such increased frequency shall also be indicated.

6. Averaging of Measurements

Calculations for limitations which require averaging of measurements shall utilize an arithmetic mean unless otherwise specified by the Permit Issuing Authority in the permit.

7. Compliance Schedules

Reports of compliance or noncompliance with, or any progress reports on, interim and final requirements contained in any compliance schedule of this permit shall be submitted no later than 14 days following each schedule data. Any reports of noncompliance shall include the cause of noncompliance, any remedial actions taken, and the probability of meeting the next scheduled requirements.

8. Twenty-Four Hour Reporting

The permittee shall orally report any noncompliance which may endanger health or the environment, within 24 hours from the time the permittee becomes aware of the circumstances by calling (312) 886-6106. A written submission shall also be provided within 5 days of the time the permittee becomes aware of the circumstances to the following address:

U.S. Environmental Protection Agency
Water Enforcement & Compliance Assurance Branch
Attention: Branch Chief - WC-15J
77 West Jackson Boulevard
Chicago, Illinois 60604

The written submission shall contain a description of the noncompliance and its cause; the period of noncompliance, including exact dates and times; if the noncompliance has not been corrected; the anticipated time it is expected to continue; and steps taken or planned to reduce, eliminate, and prevent reoccurrence of the noncompliance. The Permit Issuing Authority may verbally waive the written report, on a case-by-case basis, when the oral report is made.

The following violations shall be included in the 24-hour report when they might endanger health or the environment.

a. An unanticipated bypass which exceeds any effluent limitation in the permit.

b. Any upset which exceeds any effluent limitation in the permit.

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9. Other Noncompliance

The permittee shall report, in narrative form, all instances of noncompliance not previously reported under Section D, Paragraphs D-2, D-4, D-7, and D-8 at the time monitoring reports are submitted. The reports shall contain the information listed in Paragraph D-8.

10. Changes In Discharges of Toxic Substances

The permittee shall notify the Permit Issuing Authority as soon as it knows or has reason to believe:

a. That any activity has occurred or will occur which would result in the discharge, on a routine or frequent basis, of any toxic substance(s) (listed at 40 CFR 122, Appendix D, Table II and III) which is not listed in the permit, if that discharge will exceed the highest of the following "notification levels":

(1) One hundred micrograms per liter (100 ug/L);

(2) Two hundred micrograms per liter (200 ug/L) for acrolein and acrylonitrile; five hundred micrograms per liter (500 ug/L) for 2, 4-dinitrophenol and for 2 methyl-4,6-dinitrophenol; and one milligram per liter (1 mg/L) for antimony; or

(3) Five (5) times the maximum concentration value reported for that pollutant(s) in the permit application.

b. That any activity has occurred or will occur which would result in any discharge, on a non-routine or infrequent basis, of a toxic pollutant (listed at 40 CFR 122, Appendix D. Table II and III) which is not limited in the permit, if that discharge will exceed the highest of the following "notification levels":

(1) Five hundred micrograms per liter (500 ug/L);

(2) One milligram per liter (1 mg/L) for antimony; or

(3) Ten (10) times the maximum concentration value reported for that pollutant(s) in the permit application.

11. Changes In Discharges of Toxic Substances by Indirect Users

All Publicly Owned Treatment Works (POTWs) must provide adequate notice to the Permit Issuing Authority of the following:

a. Any new introduction of pollutants into the POTW from an indirect discharger which would be subject to section 301 or 306 of the Act if it were directly discharging those pollutants; and

b. Any substantial change in the volume or character of pollutants being introduced into that POTW by a source introducing pollutants into the POTW at the time of issuance of the permit.

c. For purposes of this paragraph, adequate notice shall include information on (i) the quality and quantity of effluent introduced into the POTW, and (ii) any anticipated impact of the change on the quantity or quality of effluent to be discharged from the POTW.

12. Duty to Reapply

If the permittee wishes to continue an activity regulated by this permit after the expiration date of this permit, the permittee must apply for and obtain a new permit. The application should be submitted at least 180 days before the expiration date of this permit. The Permit Issuing Authority may grant permission to submit an application less than 180 days in advance but not later than the permit expiration date.

Where EPA is the Permit Issuing Authority, the terms and conditions of this permit are automatically continued in accordance with 40 CFR 122.6, only where the permittee has submitted a timely and sufficient application for a renewal permit and the Permit Issuing Authority is unable through no fault of the permittee to issue a new permit

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before the expiration date.

13. Signatory Requirements

All applications, reports, or information submitted to the Permit Issuing Authority shall be signed and certified.

a. All permit applications shall be signed as follows:

(1) For a corporation: by a responsible corporate officer. For the purpose of this Section, a responsible corporate officer means (1) a president, secretary, treasurer, or vice president of the corporation in charge of a principal business function, or any other person who performs similar policy or decision making functions for the corporation; or

(2) The manager of one manufacturing production or operating facility employing more than 250 persons or having gross annual sales of expenditures exceeding 25 million (in second quarter 1980 dollars), if authority to sign documents has been assigned or delegated to the manager in accordance with corporate procedures.

(3) For a partnership or sole proprietorship: by a general partner or the proprietor, respectively; or

(4) For a municipality, State, Federal, or other public agency; by either a principal executive officer or ranking elected official.

b. All reports required by the permit and other information requested by the Permit Issuing Authority shall be signed by a person described above or by a duly authorized representative of that person. A person is duly authorized representative only if:

(1) The authorization is made in writing by a person described above;

(2) The authorization specifies either an individual or a position having responsibility for the overall operation of the regulated facility or activity, such as the position of plant manager, operator of a well or a well field, superintendent, position of equivalent responsibility, or an individual or position having overall responsibility for environmental matters for the company. (A duly authorized representative may thus be either a named individual or any individual occupying a named position.); and

(3) The written authorization is submitted to the Permit Issuing Authority.

c. Certification. Any person signing a document under paragraphs (a) or (b) of this section shall make the following certification:

"I certify under penalty of law that this document and all attachment were prepared under my direction or supervision in accordance with a system designed to assure that qualified personnel properly gather and evaluate the information submitted. Based on my inquiry of the person or persons who manage the system, or those persons directly responsible for gathering the information, the information submitted is, to the best of my knowledge and belief, true, accurate, and complete. I am aware that there are significant penalties for submitting false information, including, the possibility of fine and imprisonment for knowing violations."

14. Availability of Reports

Except for data determined to be confidential under 40 CFR Part 2, all reports prepared in accordance with the terms of this permit shall be available for public inspection at the offices of the Permit Issuing Authority. As required by the Act, permit applications, permits and effluent data shall not be considered confidential.

SECTION E. DEFINITIONS FOR PARTS I AND II

1. Permit Issuing Authority

The Regional Administrator of EPA Region 5 or his designee, unless at some time in the future the Tribe receives

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authority to administer the NPDES program and assumes jurisdiction over the permit; at which time, the Director/Chairman of the Tribal program receiving authorization becomes the issuing authority.

2. Act

"Act" means the Clean Water Act (formerly referred to as the Federal Water Pollution Control Act) Public Law 92-500, as amended, 33 U.S.C. 1251 et seq.

3. Mass/Day Measurements

a. The "30-day average discharge" is defined as the total mass of all daily discharges sampled and/or measured during a consecutive 30 day period on which daily discharges are sampled and measured, divided by the number of daily discharges samples and/or measured during such period. It is therefore, an arithmetic mean found by adding the weights of the pollutant found each day of the consecutive 30 day period and then dividing this sum by the number of days the tests were reported. The limitation is identified as "Daily Average" or "30-day Average" in Part I of the permit and the average monthly discharge value is reported in the "Average" Column under "Quantity" on the Discharge Monitoring Report (DMR).

b. The "7-day average discharge" is defined as the total mass of all daily discharges sampled and/or measured during a consecutive 7 day period on which daily discharges are sampled and measured, divided by the number of daily discharges sampled and/or measured during such period. It is, therefore, an arithmetic mean found by adding the weights of pollutants found each day of the consecutive 7 day period and then dividing this sum by the number of days the tests were reported. This limitation is identified as "7-day Average" in Part I of the permit and the highest average weekly discharge value is reported in the "Maximum" column under "Quantity" on the DMR.

c. The "maximum daily average" is the total mass (weight) of a pollutant discharge during a calendar day. If only one sample is taken during any calendar day, the weight of pollutant calculated from it is the "maximum daily discharge". This limitation is identified as "Daily Maximum", in Part I of the permit and one highest such value recorded during the reporting period is reported in the "Maximum" column under "Quantity" on the DMR.

d. The "average annual discharge" is defined as the total mass of all daily discharges sampled and/or measured during the calendar year on which daily discharges are sampled and measured, divided by the number of daily discharges sampled and/or measured during such year. It is, therefore, an arithmetic mean found by adding the weights of pollutants found each day of the year and then dividing the sum by number of days the test were reported. This limitation is defined as "Annual Average" in Part I of the permit and the average annual discharge value is reported in the "Average" column under "Quantity" on the DMR. The DMR for this report shall be submitted in January for the previous reporting calendar year.

4. Concentration Measurements

a. The "30-day average concentration", other than for E. coli bacteria, is the sum of the concentrations of all daily discharges sampled and/or measured during a consecutive 30 day period on which daily discharges are sampled and measured, divided by the number of daily discharges sampled and/or measured during such period (arithmetic mean of the daily concentration values). The daily concentration value is equal to the concentration of a composite sample or in the case of grab samples is the arithmetic mean (weighted by flow value) of all the samples collected during a calendar day. The 30-day average count for E. coli bacteria is the geometric mean of the counts for samples collected during a consecutive 30 day period. This limitation is identified as "30-day Average" or "Daily Average" in Part I of the permit and the average monthly concentration value is reported under the "Average" column under "Quality" on the DMR.

b. The "7-day average concentration", other than for E. coli bacteria, is the sum of the concentrations of all daily discharges sampled and/or measured during a consecutive 7 day period on which daily discharges are sampled and measured divided by the number of daily discharges sampled and/or measured during such period (arithmetic mean of the daily concentration value). The daily concentration value is equal to the concentration of a composite sample or in the case of grab samples is the arithmetic mean (weighted by flow value) of all the samples collected during that calendar day. The 7-day average count for E. coli bacteria is

the geometric mean of the counts for samples collected during a consecutive 7 day period. This limitation is identified as "7-day Average" in Part I of the permit and the highest 7-day average concentration value is reported under the "Maximum" column under "Quality" on the DMR.

c. The "maximum daily concentration" is the concentration of a pollutant discharge during a calendar day. It is identified as "Daily Maximum" in Part I of the permit and the highest such value recorded during the reporting period is reported under the "Maximum" column under "Quality" on the DMR.

d. The "average annual concentration", other than for E. coli bacteria, is the sum of the concentrations of all daily discharges sampled and/or measured during a calendar year on which daily discharges are sampled and measured divided by the number of daily discharges sampled and/or measured during such year (arithmetic mean of the daily concentration values). The daily concentration value is equal to the concentration of a composite sample or in the case of grab samples is the arithmetic mean (weighted by flow value) of all samples collected during that calendar day. The average yearly count for E. coli bacteria is the geometric mean of the counts for samples collected during a calendar year. This limitation is identified as "Annual Average" in Part I of the permit and the average annual concentration value is reported under the "Average" column under "Quality" on the DMR. The DMR for this report shall be submitted in January for the previous reporting year.

5. Other Measurements

a. The effluent flow expressed as M^3/day (MGD) is the 24 hour average flow averaged monthly. It is the arithmetic mean of the total daily flows recorded during the calendar month. Where monitoring requirements for flow are specified in Part I of the permit the flow rate values are reported in the "Average" column under "Quantity" on the DMR.

b. An "instantaneous flow measurement" is a measure of flow taken at the time of sampling, when both the sample and flow will be representative of the total discharge.

c. Where monitoring requirements for pH, dissolved oxygen or E. coli bacteria are specified in Part I of the permit, the values are generally reported in the "Quality of Concentration" column on the DMR.

6. Types of Samples

a. Composite Sample: A "composite sample" is a combination of not less than 8 influent or effluent portions, of at least 100 ml, collected over the full time period specified in Part I.A. The composite sample must be flow proportioned by either time interval between each aliquot or by volume as it relates to effluent flow at the time of sampling of total flow since collection of the previous aliquot. Aliquots may be collected manually or automatically.

b. Grab Sample: A "grab sample" is a single influent or effluent portion of at least 100 ml which is not a composite sample. The sample(s) shall be collected at the period(s) most representative of the total discharge.

7. Calculation of Means

a. Arithmetic Mean: The arithmetic mean of any set of values is the summation of the individual values divided by the number of individual values.

b. Geometric Mean: The geometric mean of any set of values is the Nth root of the product of the individual values where N is equal to the number of individual values. The geometric mean is equivalent to the antilogy of the arithmetic mean of the logarithms of the individual values. For purposes of calculating the geometric mean, values of zero (0) shall be considered to be one (1).

c. Weighted by Flow Value: Weighted by flow value means the summation of each concentration times its respective flow divided by the summation of the respective flows.

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8. Calendar Day

A calendar day is defined as the period from midnight of one day until midnight of the next day. However, for purposes of this permit, any consecutive 24-hour period that reasonably represents the calendar day may be used for sampling.

9. Hazardous Substance

A hazardous substance means any substances designed under 40 CFR Part 116 pursuant to Section 311 of the Clean Water Act.

10. Toxic Pollutant

A toxic pollutant is any pollutant listed as toxic under Section 307(a)(1) of the Clean Water Act.

11. Significant Industrial User

Significant industrial user is a nondomestic user that: 1) is subject to Categorical Pretreatment Standards under 40 CFR 403.6 and 40 CFR Chapter I, Subchapter N; or 2) discharges an average of 25,000 gallons per day or more of process wastewater to a POTW (excluding sanitary, noncontact cooling and boiler blowdown wastewater); contributes a process wastestream which makes up five (5) percent or more of the average dry weather hydraulic or organic capacity of the POTW treatment plant; or is designated as such by the permittee as defined in 40 CFR 403.12(a) on the basis that the industrial user has a reasonable potential for adversely affecting the POTW's treatment plant operation or violating any pretreatment standard or requirement (in accordance with 40 CFR 403.8(f)(6)).

12. Chief of the NPDES Programs Branch

The Chief of the NPDES Programs Branch of EPA Region 5 is located at the EPA, Region 5 Office, NPDES Programs Branch, WN-16J, 77 West Jackson Boulevard, Chicago, Illinois 60604, telephone: 312-353-5333.

13. Acute Toxic Unit

Acute toxic unit (TU_a) means $100/LC_{50}$ where the LC_{50} is determined from a whole effluent toxicity (WET) test which produces a result that is statistically or graphically estimated to be lethal to 50% of the test organisms.

14. Bioaccumulative Chemical of Concern

Bioaccumulative chemical of concern (BCC) means a chemical which, upon entering the surface waters, by itself or as its toxic transformation product, accumulates in aquatic organisms by a human health bioaccumulation factor of more than 1000 after considering metabolism and other physiochemical properties that might enhance or inhibit bioaccumulation. Chemicals with half-lives of less than 8 weeks in the water column, sediment, and biota are not BCCs. The minimum bioaccumulation concentration factor (BAF) information needed to define an organic chemical as a BCC is either a field-measured BAF or a BAF derived using the biota-sediment accumulation factor (BSAF) methodology. The minimum BAF information needed to define an inorganic chemical as a BCC, including an organometal, is either a field-measured BAF or a laboratory-measured bioconcentration factor (BCF).

15. Biosolids

Biosolids are the solid, semisolid, or liquid residues generated during the treatment of sanitary sewage or domestic sewage in a treatment works. This includes, but is not limited to, scum or solids removed in primary, secondary, or advanced wastewater treatment processes and a derivative of the removed scum or solids.

16. Bulk Biosolids

Bulk biosolids means biosolids that are not sold or given away in a bag or other container for application to a lawn or home garden.

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17. Chronic Toxic Unit

Chronic toxic unit (TU_c) means 100/MATC or $100/IC_{25}$, where the maximum acceptable toxicant concentration (MATC) and IC_{25} are expressed as a percent effluent in the test medium.

18. Class B Biosolids

Class B Biosolids refers to material that has met the Class B pathogen reduction requirements or equivalent treatment by a Process to Significantly Reduce Pathogens (PSRP) in accordance with the 40 CFR Part 503 Rules. Processes include aerobic digestion, composting, anaerobic digestion, lime stabilization and air drying.

19. Detection Level

Detection Level means the lowest concentration or amount of the target analyte that can be determined to be different from zero by a single measurement at a stated level of probability.

20. EC_{50}

EC_{50} means a statistically or graphically estimated concentration that is expected to cause 1 or more specified effects in 50% of a group of organisms under specified conditions.

21. IC_{25}

IC_{25} means the toxicant concentration that would cause a 25% reduction in a nonquantal biological measurement for the test population.

22. Interference

Interference is a discharge which, alone or in conjunction with a discharge or discharges from other sources, both: 1) inhibits or disrupts the POTW, its treatment processes or operations, or its sludge processes, use or disposal; and 2) therefore, is a cause of a violation of any requirement of the POTW's discharge permit (including an increase in the magnitude or duration of a violation) or, of the prevention of sewage sludge use or disposal in compliance with the following statutory provisions and regulations or permits issued thereunder (or more stringent state or local regulations): the Solid Waste Disposal Act (SWDA) (including Title II, more commonly referred to as the Resource Conservation and Recovery Act (RCRA), and including state regulations contained in any state sludge management plan prepared pursuant to Subtitle D of the SWDA), the Clean Air Act, the Toxic Substances Control Act, and the Marine Protection, Research and Sanctuaries Act. [This definition does not apply to sample matrix interference.]

23. Land Application

Land Application means spraying or spreading biosolids or a biosolids derivative onto the land surface, injecting below the land surface, or incorporating into the soil so that the biosolids or biosolids derivative can either condition the soil or fertilize crops or vegetation grown in the soil.

24. LC_{50}

LC_{50} means a statistically or graphically estimated concentration that is expected to be lethal to 50% of a group of organisms under specified conditions.

25. Maximum Acceptable Toxicant Concentration

Maximum acceptable toxicant concentration (MATC) means the concentration obtained by calculating the geometric mean of the lower and upper chronic limits from a chronic test. A lower chronic limit is the highest tested concentration that did not cause the occurrence of a specific adverse effect. An upper chronic limit is the lowest tested concentration which did cause the occurrence of a specific adverse effect and above which all tested concentrations caused such an occurrence.

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26. Monthly Frequency of Analysis

Monthly frequency of analysis refers to a calendar month. When required by this permit, an analytical result, reading, value or observation must be reported for that period if a discharge occurs during that period.

27. NOAEL

NOAEL means the highest tested dose or concentration of a substance that result in no observed adverse effect in exposed test organisms where higher doses or concentrations result in an adverse effect.

28. Noncontact Cooling Water

Noncontact Cooling Water is water used for cooling which does not come into direct contact with any raw material, intermediate product, by-product, waste product or finished product.

29. Nondomestic user

Nondomestic user is any discharger to a POTW that discharges wastes other than or in addition to water-carried wastes from toilet, kitchen, laundry, bathing or other facilities used for household purposes.

30. Pretreatment

Pretreatment is reducing the amount of pollutants, eliminating pollutants, or altering the nature of pollutant properties to a less harmful state prior to discharge into a public sewer. The reduction or alteration can be by physical, chemical, or biological processes, process changes, or by other means. Dilution is not considered pretreatment unless expressly authorized by an applicable National Pretreatment Standard for a particular industrial category.

31. POTW

POTW is a publicly owned treatment works.

32. Quantification Level

Quantification level means the measurement of the concentration of a contaminant obtained by using a specified laboratory procedure calculated at a specified concentration above the detection level. It is considered the lowest concentration at which a particular contaminant can be quantitatively measured using a specified laboratory procedure for monitoring of the contaminant.

33. Significant Materials

Significant Materials means any material which could degrade or impair water quality, including but not limited to: raw materials; fuels; solvents, detergents, and plastic pellets; finished materials such as metallic products; hazardous substances designated under Section 101(14) of Comprehensive Environmental Response, Compensation, and Liability Act (CERCLA) (see 40 CFR 372.65); any chemical the facility is required to report pursuant to Section 313 of Emergency Planning and Community Right-to-Know Act (EPCRA); fertilizers; pesticides; and waste products such as ashes, slag, and sludge that have the potential to be released with storm water discharges.

34. Weekly Frequency of Analysis

Weekly frequency of analysis refers to a calendar week which begins on Sunday and ends on Saturday. When required by this permit, an analytical result, reading, value or observation must be reported for that period if a discharge occurs during that period.

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PART III

SEWAGE SLUDGE REQUIREMENTS

INSTRUCTIONS TO PERMITTEES

This permit only covers the land application of sewage sludge. If the permittee plans to dispose of sewage sludge in a different manner (e.g., landfill, incineration or surface disposal), the permittee shall give prior notice to EPA (See Section I.A.6 below).

Select only those Sections which apply to your sludge reuse or disposal practice.

If the quality of your sludge varies (for example, Section II and Section III of Part III apply) use a separate Discharge Monitoring Report (DMR) for each Section that is applicable.

The sludge DMRs and other requirements of Section IV shall be due by February 19th of each year and shall cover the previous January through December time period.

The sludge conditions do not apply to wastewater treatment lagoons where sludge is not wasted for final reuse/disposal. If the sludge is not removed, the permittee shall indicate on the DMR "No Discharge".

LAND APPLICATION

SECTION I: Page 2 - Requirements Applying to All Sewage Sludge Land Application

SECTION II: Page 8 - Requirements Specific to Bulk Sewage Sludge for Application to the Land Meeting Class A or B Pathogen Reduction and the Cumulative Loading Rates in Table 2, or Class B Pathogen Reduction and the Pollutant Concentrations in Table 3

SECTION III: Page 12 - Requirements Specific to Bulk Sewage Sludge Meeting Pollutant Concentrations in Table 3 and Class A Pathogen Reduction Requirements

SECTION IV: Page 13 - Reporting of Monitoring Results and Other Information

SECTION V: Page 13 – Definitions

SECTION VI: Page 16 - Approved methods for the analysis of sewage sludge (40 CFR Part 503)

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SECTION I. REQUIREMENTS APPLYING TO ALL SEWAGE SLUDGE LAND APPLICATION

A. General Requirements

1. The permittee shall handle and dispose of sewage sludge in accordance with Section 405 of the Clean Water Act and all other applicable Federal regulations to protect public health and the environment from any reasonably anticipated adverse effects due to any toxic pollutants which may be present in the sludge.

2. If requirements for sludge management practices or pollutant criteria become more stringent than the sludge pollutant limits or acceptable management practices in this permit, or control a pollutant not listed in this permit, this permit may be modified or revoked and reissued to conform to the requirements promulgated at Section 405(d)(2) of the Clean Water Act. If new limits for Molybdenum are promulgated prior to permit expiration, then those limits shall become directly enforceable.

3. In all cases, if the person (permit holder) who prepares the sewage sludge supplies the sewage sludge to another person for land application use or to the owner or lease holder of the land, the permit holder shall provide necessary information to the parties who receive the sludge to assure compliance with these regulations.

4. The permittee shall comply with existing federal regulations governing sewage sludge use or disposal and shall comply with all existing applicable regulations in any jurisdiction in which the sewage sludge is actually used or disposed.

5. Permanent storage of sewage sludge is prohibited. Sewage sludge shall not be temporarily stored for more than two years unless written permission is given by the permitting authority. Storage of sewage sludge for more than two years will be allowed only if it is determined that significant treatment is occurring.

6. The permittee shall give prior notice to EPA (Chief, NPDES Programs Branch, Water Division, Mail Code WN-16J, EPA Region 5, 77 West Jackson Boulevard, Chicago, Illinois 60604) of any planned changes in the sewage sludge disposal practice, in accordance with 40 CFR Part 122.41(l)(1)(iii). These changes may justify the application of permit conditions that are different from or absent in the existing permit. Change in the sludge use or disposal practice may be cause for modification of the permit in accordance with 40 CFR Part 122.62(a)(1).

B. Testing and Process Requirements

1. Sewage sludge shall not be applied to the land if the concentration of the pollutants exceeds the pollutant concentration criteria in Table 1. The frequency of testing for pollutants in Table 1 is found in Section I.C.6 below.

TABLE 1
Ceiling Concentration

Pollutant	(milligrams per kilogram)*
Arsenic	75
Cadmium	85
Copper	4300
Lead	840
Mercury	57
Molybdenum	75
Nickel	420
PCBs	49
Selenium	100
Zinc	7500

* Dry weight basis

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2. Pathogen Control

All sewage sludge that is applied to agricultural land, forest, a public contact site, or a reclamation site shall be treated by either the Class A or Class B pathogen requirements. Sewage sludge that is applied to a lawn or home garden shall be treated by the Class A pathogen requirements. Sewage sludge that is sold or given away in a bag shall be treated by Class A pathogen requirements. **If the sewage sludge does not meet Class A, it cannot be sold or given away in a bag or other container for application to land or for use on a lawn or home garden.**

a. In order for a sewage sludge to be classified Class A with respect to pathogens, the requirements in either 40 CFR § 503. 32(a)(3), 32(a)(4), 32(a)(5), 32(a)(6), 32(a)(7), or 32(a)(8) shall be met. The Class A pathogen requirements must be met in the same treatment process as the vector attraction reduction requirements in Section I.B.3 below are met or in a treatment process prior to meeting the vector attraction reduction requirements in Section I.B.3 below. This requirement does not apply when the vector attraction reduction requirements are met by using Section I.B.3, Alternatives 6, 9 or 10 below.

All 6 options require either the density of fecal coliform in the sewage sludge be less than 1000 Most Probable Number (MPN) per gram of total solids (dry weight basis), or the density of Salmonella sp. bacteria in the sewage sludge be less than three MPN per four grams of total solids (dry weight basis) at the time the sewage sludge is used or disposed; at the time the sewage sludge is prepared for sale or given away in a bag or other container for application to the land. The values of fecal coliforms and *Salmonella* are to be based on the MPN procedures of analyses. **The membrane filter (MF) procedures of analyses are not acceptable.** This is based on a minimum of seven (7) samples of sewage sludge collected over a two week period (or as approved by the permitting authority in your sampling and analysis plan). (i.e., If quarterly sampling is required, a minimum of seven samples is required each quarterly event.) Samples to be analyzed for fecal coliform and/or *Salmonella* shall be discrete, individual samples, with no compositing of samples. Samples are to be collected at the time the sewage sludge is used or disposed; at the time the sewage sludge is prepared for sale or given away in a bag or other container for application to the land; or at the time the sewage sludge or material derived from sewage sludge is prepared to meet the requirements in 40 CFR § 503.10 (b), (c), (e), or (f).

Below are the additional requirements necessary to meet the definition of a Class A sludge.

Alternative 1 - The temperature of the sewage sludge that is used or disposed shall be maintained at a specific value for a period of time. See 503.32(a)(3)(ii) for specific information.

Alternative 2 - The pH of the sewage sludge that is used or disposed shall be raised to above 12 and shall remain above 12 for 72 hours.

The temperature of the sewage sludge shall be above 52 degrees Celsius for 12 hours or longer during the period that the pH of the sewage sludge is above 12.

At the end of the 72 hour period during which the pH of the sewage sludge is above 12, the sewage sludge shall be air dried to achieve a percent solids in the sewage sludge greater than 50 percent.

Alternative 3 - The sewage sludge shall be analyzed for enteric viruses prior to pathogen treatment. The limit for enteric viruses is one Plaque-forming Unit per four grams of total solids (dry weight basis) either before or following pathogen treatment. See 503.32(a)(5)(ii) for specific information. The sewage sludge shall be analyzed for viable helminth ova prior to pathogen treatment. The limit for viable helminth ova is less than one per four grams of total solids (dry weight basis) either before or following pathogen treatment. See 503.32(a)(5)(iii) for specific information.

Facilities/operations that use Alternative 3 (40CFR503.32(a)(5)) for meeting the Class A pathogen requirements, shall provide a detailed sampling plan and quality assurance project plan(QAPP) that will show that the sewage sludge that has been or will be land applied can comply with the applicable pathogen requirements in 40 CFR § 503.32. That sampling plan and QAPP shall meet the requirements set forth in "EPA requirements for Quality Assurance Project Plans" (QA/R-5) available at 'http://www.epa.gov/quality/qs-docs/r5-final.pdf'.

Facilities/operations that use Alternative 3 shall use only EPA methods 1680 or 1681 for fecal coliform and 1682 for *Salmonella*; and the methods listed in Section VI, APPROVED METHODS FOR THE ANALYSIS OF SEWAGE SLUDGE, for Helminth Ova and enteric virus.

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Alternative 4 - The density of enteric viruses in the sewage sludge shall be less than one Plaque-forming Unit per four grams of total solids (dry weight basis) at the time the sewage sludge is used or disposed or at the time the sludge is prepared for sale or give away in a bag or other container for application to the land.

The density of viable helminth ova in the sewage sludge shall be less than one per four grams of total solids (dry weight basis) at the time the sewage sludge is used or disposed or at the time the sewage sludge is prepared for sale or given away in a bag or other container for application to the land.

Facilities/operations that use alternative 4 (40CFR503.32(a)(6)) for meeting the Class A pathogen requirements, shall provide a detailed sampling plan and quality assurance project plan(QAPP) that will show that the sewage sludge that has been or will be land applied can comply with the applicable pathogen requirements in 40 CFR § 503.32. That sampling plan and QAPP shall meet the requirements set forth in "EPA requirements for Quality Assurance Project Plans" (QA/R-5) available at 'http://www.epa.gov/quality/qs-docs/r5-final.pdf'.

Facilities/operations that use alternative 4 shall use only EPA methods 1680 or 1681 for fecal coliform and 1682 for *Salmonella*; and the methods listed in Section VI, APPROVED METHODS FOR THE ANALYSIS OF SEWAGE SLUDGE, for Helminth Ova and enteric virus.

Alternative 5 - Sewage sludge shall be treated by one of the Processes to Further Reduce Pathogens (PFRP) described in 503 Appendix B. PFRPs include composting, heat drying, heat treatment, and thermophilic aerobic digestion.

The specific requirements for composting are as follows (one of the following):

(i) Composting using either the within-vessel or static aerated pile composting method, the temperature of the sewage sludge is maintained at 55° C or higher for three days.

(ii) Composting using the windrow method, the temperature of the sewage sludge is maintained at 55° C or higher for 15 days or longer, with a minimum of 5 turnings of the pile during those 15 days.

Alternative 6 - Sewage sludge shall be treated by a process that is equivalent to a Process to Further Reduce Pathogens, if individually approved by the Pathogen Equivalency Committee representing the EPA.

b. Three alternatives are available to demonstrate compliance with Class B sewage sludge.

Alternative 1 – Fecal Coliform Testing

(i) A minimum of seven (7) samples of sewage sludge collected over a two week period (or as approved by the permitting authority in your sampling and analysis plan). (i.e., If quarterly sampling is required, a minimum of seven samples is required each quarterly event.) Samples to be analyzed for fecal coliform shall be discrete, individual samples, with no compositing of samples.

(ii) The geometric mean of the density of fecal coliform in the samples collected shall be less than either 2,000,000 MPN per gram of total solids (dry weight basis). The values of fecal coliform are to be based on the MPN procedures of analyses. **The membrane filter (MF) procedures of analyses are not acceptable.**

Alternative 2 - Sewage sludge shall be treated in one of the Processes to significantly Reduce Pathogens described in 503 Appendix B.

The specific requirements for composting are as follows:

(i) Composting using the within-vessel, static pile or windrow methods, the temperature is maintained at 40° C or higher for 5 days. During those 5 days the temperature in the pile exceeds 55° C for 4 hours.

Alternative 3 - Sewage sludge shall be treated in a process that is equivalent to a PSRP, if individually approved by the Pathogen Equivalency Committee representing the EPA.

c. In addition, if the sewage sludge is **Class B** with respect to pathogens, the permittee shall comply with all of the site restrictions listed below:

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(i) Food crops with harvested parts that touch the sewage sludge/soil mixture and are totally above the land surface shall not be harvested for 14 months after application of sewage sludge.

(ii) Food crops with harvested parts below the surface of the land shall not be harvested for 20 months after application of sewage sludge when the sewage sludge remains on the land surface for 4 months or longer prior to incorporation into the soil.

(iii) Food crops with harvested parts below the surface of the land shall not be harvested for 38 months after application of sewage sludge when the sewage sludge remains on the land surface for less than 4 months prior to incorporation into the soil.

(iv) Food crops, feed crops, and fiber crops shall not be harvested for 30 days after application of sewage sludge.

(v) Animals shall not be allowed to graze on the land for 30 days after application of sewage sludge.

(vi) Turf grown on land where sewage sludge is applied shall not be harvested for 1 year after application of the sewage sludge when the harvested turf is placed on either land with a high potential for public exposure or a lawn, unless otherwise specified by the permitting authority.

(vii) Public access to land with a high potential for public exposure shall be restricted for 1 year after application of sewage sludge.

(viii) Public access to land with a low potential for public exposure shall be restricted for 30 days after application of sewage sludge.

3. Vector Attraction Reduction Requirements

All bulk sewage sludge that is applied to agricultural land, forest, a public contact site, or a reclamation site shall be treated by one of the following alternatives 1 through 10 for Vector Attraction Reduction. **If bulk sewage sludge is applied to a home garden, or bagged sewage sludge is applied to the land, only alternative 1 through alternative 8 shall be used.**

Alternative 1 - The mass of volatile solids in the sewage sludge shall be reduced by a minimum of 38 percent.

Alternative 2 - If Alternative 1 cannot be met for an anaerobically digested sludge, demonstration can be made by digesting a portion of the previously digested sludge anaerobically in the laboratory in a bench-scale unit for 40 additional days at a temperature between 30 and 37 degrees Celsius. Volatile solids must be reduced by less than 17 percent to demonstrate compliance.

Alternative 3 - If Alternative 1 cannot be met for an aerobically digested sludge, demonstration can be made by digesting a portion of the previously digested sludge with a percent solids of two percent or less aerobically in the laboratory in a bench-scale unit for 30 additional days at 20 degrees Celsius. Volatile solids must be reduced by less than 15 percent to demonstrate compliance.

Alternative 4 - The specific oxygen uptake rate (SOUR) for sewage sludge treated in an aerobic process shall be equal to or less than 1.5 milligrams of oxygen per hour per gram of total solids (dry weight basis) at a temperature of 20 degrees Celsius.

Alternative 5 - Sewage sludge shall be treated in an aerobic process for 14 days or longer. During that time, the temperature of the sewage sludge shall be higher than 40 degrees Celsius and the average temperature of the sewage sludge shall be higher than 45 degrees Celsius.

Alternative 6 - The pH of sewage sludge shall be raised to 12 or higher by alkali addition and, without the addition of more alkali shall remain at 12 or higher for two hours and then at 11.5 or higher for an additional 22 hours.

Alternative 7 - The percent solids of sewage sludge that does not contain unstabilized solids generated in a primary wastewater treatment process shall be equal to or greater than 75 percent based on the moisture content and total solids prior to mixing with other materials. Unstabilized solids are defined as organic materials in sewage sludge that have not been treated in either an aerobic or anaerobic treatment process.

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Alternative 8 - The percent solids of sewage sludge that contains unstabilized solids generated in a primary wastewater treatment process shall be equal to or greater than 90 percent based on the moisture content and total solids prior to mixing with other materials. Unstabilized solids are defined as organic materials in sewage sludge that have not been treated in either an aerobic or anaerobic treatment process.

Alternative 9 – Injection

(i) Sewage sludge shall be injected below the surface of the land.

(ii) No significant amount of the sewage sludge shall be present on the land surface within one hour after the sewage sludge is injected.

(iii) When sewage sludge that is injected below the surface of the land is Class A with respect to pathogens, the sewage sludge shall be injected below the land surface within eight hours after being discharged from the pathogen treatment process.

Alternative 10 – Incorporation

(i) Sewage sludge applied to the land surface or placed on a surface disposal site shall be incorporated into the soil within six hours after application to or placement on the land, unless otherwise specified by the permitting authority.

(ii) When sewage sludge that is incorporated into the soil is Class A with respect to pathogens, the sewage sludge shall be applied to or placed on the land within eight hours after being discharged from the pathogen treatment process.

C. Monitoring Requirements

1. At a minimum, upon the date of coverage under this permit, the permittee shall monitor sewage sludge related activities as specified below. Samples or measurements shall be representative of the quantity and quality of the sewage sludge.

If this facility/operation collects samples from sewage sludge bodies (e.g., long-term treatment piles, compost piles, drying beds, storage piles, lagoon cells, etc.) a sampling and analysis plan is to be prepared and submitted to the EPA within 90 days of the effective date of this permit. This plan is to detail how representative samples are to be obtained. Guidance on collecting representative samples using a random sampling process may be found in EPA's *POTW Sludge Sampling and Analysis Guidance document, August* 1989. In addition, the local office of the agricultural extension service, the State Land Grant University, etc., might have guidance on collecting representative samples. The number of samples collected will be at least as many as those that would be collected annually as required from the amount of sewage sludge land applied (see Section I.C.6 below).

2. The sewage sludge shall be monitored for the chemical pollutants listed in Section I.B.1 above. See Section I.C.6 below for the minimum frequency of monitoring. The concentrations shall be reported as mg/Kg (dry weight basis) and the average and maximum concentrations shall be reported.

If the concentration of any pollutant in sewage sludge that is land applied exceeds the limitations in Table 3 (Monthly average limitation) in Section III.A.1 below, the limitations in Table 2 must be used thereafter for each site where that sewage sludge was land applied. The permittee shall determine cumulative pollutant loadings **for all of the pollutants** listed in Section II.A.1 below for each land application site where that sewage sludge was land applied. This must be done for each succeeding application of sewage sludge to that site even if the concentrations of pollutants meet the limitations in Table 3.

3. Provide a brief description of the method used during the reporting year to meet the applicable pathogen requirements given in Section I.B.2 above. For Class B pathogen requirements met by fecal coliform densities and for Class A pathogen requirements, the permittee shall monitor the sewage sludge for the applicable pathogens. The results shall be reported in the units used in the limitations (e.g., fecal coliform, MPN/gram of total solids). For Class A pathogen requirements the samples shall be collected at approximately the time of use/disposal of the sewage sludge. In addition, for Class A pathogen requirements, the permittee shall monitor the appropriate process

parameters. If the Class B pathogen requirements in Section I.B.2.b above are met by complying with one of process requirements, the permittee shall monitor the appropriate process parameters. See Section I.C.6 below for the minimum frequency of monitoring. For each sampling event for fecal coliform and/or *Salmonella*, a minimum of seven discrete samples shall be collected and analyzed separately. This applies to the fecal coliform and/or *Salmonella* sampling for meeting the Class A pathogen requirements and for meeting the Class B pathogen requirements. If the samples are not collected from sewage sludge bodies (e.g., long-term treatment piles, compost piles, drying beds, storage piles, lagoon cells, etc.), the samples shall be collected on separate days within a two week period. If the samples are collected from sewage sludge bodies, a minimum of seven samples shall be collected from each sludge body for each sampling event.

It should be noted that for the analyses of fecal coliforms and *Salmonella*, the MPN procedures of analyses are to be used and that the membrane filter (MF) procedures of analyses are not acceptable.

4. Provide a brief description of the method used to meet the applicable vector attraction reduction requirements given in Section I.B.3 above. If the vector attraction reduction requirements are met by a treatment process, the permittee shall monitor the appropriate process parameters in the treatment of the sewage sludge. If the facility/operation produces sewage sludge that meets Class A pathogen requirements, the determination of meeting the vector attraction reduction requirements shall include the final sewage sludge treatment process involved.

5. Provide the average and maximum concentrations of ammonia (as N), total Kjeldahl nitrogen (TKN), organic nitrogen, nitrates (as N), total phosphorus (as P), and total solids (percent solids) of the sewage sludge that was land applied during the reporting year. The nitrogen parameters shall be reported as percent (%) of total solids (dry weight basis). See Section I.C.6 below for the minimum frequency of monitoring.

6. **Minimum monitoring frequency for metals, pathogen requirements, and vector attraction reduction requirements**: The minimum frequency of monitoring for the sewage sludge that is land applied shall be based on the table below.

Amount of sewage sludge* (metric tons per 365 day period)	Frequency
0 ≤ Sludge < 290	Once/Year
290 ≤ Sludge < 1,500	Once/Quarter
1,500 ≤ Sludge < 15,000	Once/Two Months
15,000 ≤ Sludge	Once/Month

* Either the amount of bulk sewage sludge applied to the land or the amount of sewage sludge that is sold or given away in a bag or other container for application to the land (dry weight basis).

7. Sample collection, preservation and analysis shall be performed in a manner consistent with the requirements of 40 CFR Part 503 and/or other criteria specified in this permit. The analyses for metals in sewage sludge samples and soil samples are to be done using appropriate methods from those listed in Section VI of this permit. The digestion of those samples are to be done in accordance with the requirements of footnote b/ of Section VI. For the digestion procedure, an amount of sewage sludge equivalent to one gram dry weight shall be used.

8. After two years of monitoring at the frequency specified (may include monitoring done prior to coverage under this permit), the permittee may request that the permitting authority reduce the sampling frequency for the chemical pollutants listed in Section I.B.1. The frequency cannot be reduced to less than once per year for land applied sewage sludge for any parameter. The frequency also cannot be reduced for any of the pathogen or vector attraction reduction requirements listed in this permit.

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SECTION II. REQUIREMENTS SPECIFIC TO BULK SEWAGE SLUDGE FOR APPLICATION TO THE LAND MEETING CLASS A or B PATHOGEN REDUCTION AND THE CUMULATIVE LOADING RATES IN TABLE 2, OR CLASS B PATHOGEN REDUCTION AND THE POLLUTANT CONCENTRATIONS IN TABLE 3

A. For those permittees meeting Class A or B pathogen reduction requirements and that meet the cumulative loading rates in Table 2 below, or the Class B pathogen reduction requirements and contain concentrations of pollutants below those listed in Table 3 found in Part I, Section III, the following conditions apply:

1. Pollutant Limits

Table 2

Pollutant	Cumulative Pollutant Loading Rate (kilograms per hectare)
Arsenic	41
Cadmium	39
Copper	1500
Lead	300
Mercury	17
Molybdenum	Report
Nickel	420
Selenium	100
Zinc	2800

2. Pathogen Control

All bulk sewage sludge that is applied to agricultural land, forest, a public contact site, a reclamation site, or lawn or home garden shall be treated by either Class A or Class B pathogen reduction requirements as defined above in Section I.B.2.

3. Management Practices

a. Bulk sewage sludge or the application of the sewage sludge shall not cause or contribute to the harm of a threatened or endangered species listed under Section 4 of the Endangered Species Act or result in the destruction or adverse modification of critical habitat of a threatened or endangered species after application.

b. Bulk sewage sludge shall not be applied to agricultural land, forest, a public contact site, or a reclamation site that is flooded, frozen, or snow-covered so that the bulk sewage sludge enters a wetland or other waters of the U.S., as defined in 40 CFR 122.2, except as provided in a permit issued pursuant to section 404 of the CWA.

Application of sewage sludge to frozen, ice-covered, or snow covered sites where the slope of the site exceeds six percent is prohibited.

No person shall apply sewage sludge for beneficial use to frozen, ice-covered, or snow-covered land where the slope of such land is greater than three percent and is less than or equal to six percent unless one of the following requirements is met:

(i) there is 80 percent vegetative ground cover; or,

(ii) approval from the permitting authority has been obtained based upon a plan demonstrating adequate runoff containment measures.

c. Application of sewage sludge shall be conducted in a manner that will not cause a violation of any receiving water quality standard from discharges of surface runoff from the land application sites. Bulk sewage sludge shall not be applied within 10 meters of a water of the U.S.

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d. Bulk sewage sludge shall be applied at or below the agronomic rate in accordance with recommendations from the following references unless prior written approval is given by the permit issuing authority:

(i) STANDARDS 1992, Standards, Engineering Practices and Data, 39th Edition (1992) American Society of Agricultural Engineers, 2950 Niles Road, St. Joseph, MI 49085-9659.

(ii) National Engineering Handbook Part 651, Agricultural Waste Management Field Handbook (1992), P.O. Box 2890, Washington, D.C. 20013.

(iii) Recommendations of local extension services or Soil Conservation Services.

(iv) Recommendations of a major University's Agronomic Department.

(v) Minnesota Rule 7041.1200and 7041.3000

e. An information sheet shall be provided to the person who receives bulk sewage sludge sold or given away. The information sheet shall contain the following information:

(i) The name and address of the person who prepared the sewage sludge that is sold or given away in a bag or other container for application to the land.

(ii) A statement that application of the sewage sludge to the land is prohibited except in accordance with the instructions on the label or information sheet.

(iii) The annual whole sludge application rate for the sewage sludge that does not cause any of the cumulative pollutant loading rates in Table 2 above to be exceeded, unless the pollutant concentrations in Table 3 found in Part I, Section III below are met.

4. Notification requirements

a. If bulk sewage sludge is applied to land outside the boundaries of the Indian Reservation in which the sludge is prepared, written notice shall be provided prior to the initial land application to the permitting authority for the State in which the bulk sewage sludge is proposed to be applied. The notice shall include:

(i) The location, by either street address or latitude and longitude, of each land application site.

(ii) The approximate time period bulk sewage sludge will be applied to the site.

(iii) The name, address, telephone number, and National Pollutant Discharge Elimination System permit number (if appropriate) for the person who prepares the bulk sewage sludge.

(iv) The name, address, telephone number, and National Pollutant Discharge Elimination System permit number (if appropriate) for the person who will apply the bulk sewage sludge.

b. The permittee shall give 60 days prior notice to the Chief of the NPDES Programs Branch of any change planned in the sewage sludge practice. Any change shall include any planned physical alterations or additions to the permitted treatment works, changes in the permittee's sludge use or disposal practice, and also alterations, additions, or deletions of disposal sites. These changes may justify the application of permit conditions that are different from or absent in the existing permit, including notification of additional disposal sites not reported during the permit application process or absent in the existing permit. Change in the sludge use or disposal practice may be cause for modification of the permit in accordance with 40 CFR 122.62(a)(1).

c. If the sewage sludge will be land applied outside the boundaries of the Indian Reservation within the State of Wisconsin, the permittee shall comply with the permitting and site approval requirements of Wisconsin Administrative Code NR 204.

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5. Recordkeeping Requirements - The sludge documents will be retained on site at the same location as other NPDES records.

a. The person who prepares bulk sewage sludge or a sewage sludge material shall develop the following information and shall retain the information for five years. If the permittee supplies the sludge to another person who land applies the sludge, the permittee shall notify the land applier of the requirements for recordkeeping found in 40 CFR 503.17 for persons who land apply. **NOTE**: If sewage sludge that exceeds Table 3 values, for any parameter, is land applied to a site, that site thereafter is subject to the cumulative pollutant loading rates in Table 2. **Records for those sites are to be retained in perpetuity.**

(i) The concentration (mg/Kg) in the sludge of each pollutant listed in Table 3 found in Section III and the applicable pollutant concentration criteria (mg/Kg), or the applicable cumulative pollutant loading rate and the applicable cumulative pollutant loading rate limit (kg/ha) listed in Table 2 above.

(ii) A description of how the pathogen reduction requirements are met (including site restrictions for Class B sludges, if applicable).

(iii) A description of how the vector attraction reduction requirements are met.

(iv) A description of how the management practices listed above in Section II.A.3 above is being met.

(v) The recommended agronomic loading rate from the references listed in Section II.A.3.d above, as well as the actual agronomic loading rate shall be retained.

(vi) A description of how the site restrictions in 40 CFR Part 503.32(b)(5) are met for each site on which Class B bulk sewage sludge is applied.

(vii) The following certification statement:

"I certify, under penalty of law, that the information that will be used to determine compliance with the management practices in §503.14 was prepared for each site on which bulk sewage sludge was applied under my direction and supervision in accordance with the system designed to ensure that qualified personnel properly gather and evaluate this information. I am aware that there are significant penalties for false certification including fine and imprisonment."

(viii) A certification statement that all applicable requirements (specifically listed) have been met, and that the permittee understands that there are significant penalties for false certification including fine and imprisonment. See 40 CFR 503.17(a)(4)(i)(B) or 40 CFR Part 503.17(a)(5)(i)(B) as applicable to the permittees sludge treatment activities.

(ix) The permittee shall maintain information that describes future geographical areas where sludge may be land applied.

(x) The permittee shall maintain information identifying site selection criteria regarding land application sites not identified at the time of permit application submission.

(xi) The permittee shall maintain information regarding how future land application sites will be managed.

b. The person who prepares bulk sewage sludge or a sewage sludge material shall develop the following information and shall retain the information **indefinitely** if they land applying in accordance with Table 2. If the permittee supplies the sludge to another person who land applies the sludge, the permittee shall notify the land applier of the requirements for recordkeeping found in 40 CFR 503.17 for persons who land apply.

(i) The location, by either street address or latitude and longitude, of each site on which sludge is applied.

(ii) The number of hectares in each site on which bulk sludge is applied.

(iii) The date sludge is applied to each site.

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(iv) The cumulative amount of each pollutant in kilograms/hectare listed in Table 2 applied to each site.

(v) The total amount of sludge applied to each site in metric tons.

(vi) The following certification statement:

"I certify, under penalty of law, that the information that will be used to determine compliance with the requirement to obtain information in §503.12(e)(2) was prepared for each site on which bulk sewage sludge was applied under my direction and supervision in accordance with the system designed to ensure that qualified personnel properly gather and evaluate this information. I am aware that there are significant penalties for false certification including fine and imprisonment."

(vii) A description of how the requirements to obtain information in §503.12(e)(2) are met.

6. Reporting Requirements - The permittee shall report annually on the DMR the following information:

a. Pollutant Table (2 or 3) appropriate for permittee's land application practices.

b. The frequency of monitoring listed in Section I.C. which applies to the permittee.

c. The concentration (mg/Kg) in the sludge of each pollutant listed in Table 1 as well as the applicable pollutant concentration criteria (mg/Kg) listed in Table 3 (defined as a monthly average) found in Section III below, or the applicable pollutant loading rate limit (kg/ha) listed in Table 2 above if it exceeds 90% of the limit.

d. Level of pathogen reduction achieved (Class A or Class B).

e. Alternative used as listed in Section I.B.2 (a. or b.). Alternatives describe how the pathogen reduction requirements are met. If Class B sludge, include information on how site restrictions were met in the DMR comment section or attach a separate sheet to the DMR.

f. Vector attraction reduction alternative used as listed in Section I.B.3.

g. Annual sludge production in dry metric tons/year.

h. Amount of sludge land applied in dry metric tons/year.

i. Amount of sludge transported interstate in dry metric tons/year.

j. The certification statement listed in 503.17(a)(4)(i)(B) or 503.17(a)(5)(i)(B) whichever applies to the permittees sludge treatment activities shall be attached to the DMR.

k. When the amount of any pollutant applied to the land exceeds 90% of the cumulative pollutant loading rate for that pollutant, as described in Table 2, the permittee shall report the following information as an attachment to the DMR.

(i) The location, by either street address or latitude and longitude.

(ii) The number of hectares in each site on which bulk sewage sludge is applied.

(iii) The date bulk sewage sludge is applied to each site.

(iv) The cumulative amount of each pollutant (i.e., kilograms/hectare) listed in Table 2 in the bulk sewage sludge applied to each site.

(v) The amount of sewage sludge (i.e., metric tons) applied to each site.

(vi) The following certification statement:

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"I certify, under penalty of law, that the information that will be used to determine compliance with the requirement to obtain information in §503.12(e)(2) was prepared for each site on which bulk sewage sludge was applied under my direction and supervision in accordance with the system designed to ensure that qualified personnel properly gather and evaluate this information. I am aware that there are significant penalties for false certification including fine and imprisonment."

(vii) A description of how the requirements to obtain information in 40 CFR 503.12(e)(2) are met.

SECTION III. REQUIREMENTS SPECIFIC TO BULK OR BAGGED SEWAGE SLUDGE MEETING POLLUTANT CONCENTRATIONS IN TABLE 3 AND CLASS A PATHOGEN REDUCTION REQUIREMENTS AND ONE OF THE VECTOR ATTRACTION REDUCTION ALTERNATIVES 1-8

A. For those permittees with sludge that contains concentrations of pollutants below those pollutant limits listed in Table 3 for bulk or bagged (containerized) sewage sludge, meets the Class A pathogen reduction requirements, and also one of the vector attraction reduction alternative 1-8, the following conditions apply (Note: All bagged sewage sludge must be treated by Class A pathogen reduction requirements.):

1. Pollutant limits - The concentration of the pollutants in the municipal sewage sludge is at or below the values listed.

Table 3

Pollutant	Monthly Average Concentration (milligrams per kilogram)*
Arsenic	41
Cadmium	39
Copper	1500
Lead	300
Mercury	17
Molybdenum	Report
Nickel	420
Selenium	100
Zinc	2800

* Dry weight basis

NOTE: If the sewage sludge is to be applied to a lawn or home garden or if the sewage sludge is to be sold or given away in a bag or other container for application to the land for other than lawn or home garden use it shall meet the maximum pollutant concentrations in Table 1 and the monthly average pollutant concentrations in Table 3.

2. Pathogen Control

All bulk sewage sludge that is applied to agricultural land, forest, a public contact site, a reclamation site, or lawn or home garden shall be treated by the Class A pathogen reduction requirements as defined above in Section I.B.2.a. All bagged sewage sludge **must** be treated by Class A pathogen reduction requirements Section I.B.2.a.

3. Management Practices - None.

4. Notification Requirements - None.

5. Recordkeeping Requirements - The permittee shall develop the following information and shall retain the information for five years. The sludge documents will be retained on site at the same location as other NPDES records.

a. The concentration (mg/Kg) in the sludge of each pollutant listed in Table 3 and the applicable pollutant concentration criteria listed in Table 3.

b. A certification statement that all applicable requirements (specifically listed) have been met, and that the

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permittee understands that there are significant penalties for false certification including fine and imprisonment. See 503.17(a)(1)(ii) or 503.17(a)(3)(i)(B), whichever applies to the permittees sludge treatment activities.

c. A description of how the Class A pathogen reduction requirements are met.

d. A description of how the vector attraction reduction requirements are met.

6. Reporting Requirements - The permittee shall report annually on the DMR the following information:

a. Pollutant Table 3 appropriate for permittee's land application practices.

b. The frequency of monitoring listed in Section I.C. which applies to the permittee.

c. The concentration (mg/Kg) in the sludge of each pollutant listed in Table 1 as well as the applicable pollutant concentration criteria (mg/Kg) listed in Table 3 (defined as a monthly average) above.

d. Pathogen reduction Alternative used for Class A bagged or bulk sludge as listed in Section I.B.2.a.

e. Vector attraction reduction Alternative used as listed in Section I.B.3.

f. Annual sludge production in dry metric tons/year.

g. Amount of sludge land applied in dry metric tons/year.

h. Amount of sludge transported interstate in dry metric tons/year.

i. The certification statement listed in 503.17(a)(1)(ii) or 503.17(a)(3)(i)(B), whichever applies to the permittees sludge treatment activities, shall be attached to the DMR.

SECTION IV. REPORTING OF MONITORING RESULTS AND OTHER INFORMATION

A. **By no later than February 19 of each year**, the permittee shall submit sewage sludge DMRs and a report including all information that the permit requires be recorded during the previous calendar year. **(This includes items listed under Recordkeeping requirements for the permittees use/disposal practices.)** The report shall include the results of all chemical pollutant monitoring performed and the required information on pathogen requirements, vector attraction reduction requirements, management practices, land application sites, site restrictions, and the required signed certification statements. If no sewage sludge was generated, treated, and/or used/disposed of during the reporting period, "no sewage sludge was generated, treated, and/or used/disposed" shall be reported. Legible copies of these, and all other reports required herein, shall be signed and certified in accordance with the Signatory Requirements (see Part II, Section D.13) and submitted to EPA at the following address:

Regional Biosolids Coordinator
U.S.EPA, Region 5, WN-16J
77 West Jackson Blvd.
Chicago, IL 60604

SECTION V. DEFINITIONS FOR THIS PART

Agronomic rate is the whole sewage sludge application rate (dry-weight basis) designed to: (1) provide the amount of nitrogen needed by the crop or vegetation grown on the land; and (2) minimize the amount of nitrogen in the sewage sludge that passes below the root zone of the crop or vegetation grown on the land to the ground water.

Animals for the purposes of this permit means domestic livestock.

Annual pollutant loading rate is the maximum amount of a pollutant (dry-weight basis) that can be applied to a unit area of land during a 365-day period.

Annual whole sewage sludge application rate is the amount of sewage sludge (dry-weight basis) that can be applied to a unit area of land during a cropping cycle.

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Application site or land application site means all contiguous areas of a users' property intended for sewage sludge application.

Batch is when a pile of sewage sludge is created, allowed to treat for a specific period of time and then removed from the site. A batch of sewage sludge could be compost piles or long-term treatment piles.

Biosolids means any sewage sludge or material derived from sewage sludge that can be beneficially used. Beneficial use includes, but is not limited to, land application to agricultural land, forest land, a reclamation site or sale or give away to the public for home lawn and garden use.

Bulk sewage sludge is sewage sludge that is not sold or given away in a bag or other container for application to the land.

Composite sewage sludge sample is a sample taken either in a wastewater treatment process, dewatering facility, or application device consisting of a series of individual grab samples. For liquid sewage sludges, a minimum of three grab samples of 500 milliliters taken during the first one-third, second one-third and final one-third of a pumping cycle and combined in equal volumetric amounts. For semi-dewatered, dewatered or dried sewage sludge, a composite sample consisting of a minimum of three grab samples of 0.5 pounds taken over a period of 24 hours not less than two hours apart or another representative sample as defined or approved by the permitting authority.

Cumulative pollutant loading rate is the maximum amount of an inorganic pollutant (dry-weight basis) that can be applied to a unit area of land.

CWA means the Clean Water Act (formerly referred to as either the Federal Water Pollution Act or the Federal Water Pollution Control Act Amendments of 1972), Pub. L. 92-500, as amended by Pub. L. 95-217, Pub. L. 95-576, Pub. L. 96-483, Pub. L. 97-117, and Pub. L. 100-4.

Daily Maximum (*Daily Max.*) is the maximum measured value for a pollutant discharged during a calendar day or any 24-hour period that reasonably represents a calendar day for purposes of sampling. For pollutants with daily maximum limitations expressed in units of mass (e.g., kilograms, pounds), the daily maximum is calculated as the total mass of pollutant discharged over the calendar day or representative 24-hour period. For pollutants with limitations expressed in other units of measurement (e.g., milligrams/liter, parts per billion), the daily maximum is calculated as the average of all measurements of the pollutant over the calendar day or representative 24-hour period. If only one measurement or sample is taken during a calendar day or representative 24-hour period, the single measured value for a pollutant will be considered the daily maximum measurement for that calendar day or representative 24-hour period.

Director means the Regional Administrator of the United States Environmental Protection Agency, Region 5.

Dry weight-basis means 100 percent solids (i.e., zero percent moisture).

EPA means the United States Environmental Protection Agency.

Facility for the purpose of this permit generally means where sewage sludge is generated and/or treated for use/disposal. If the sewage sludge is generated at one site and treated at another site, the sewage sludge is transported to the treatment site via a pipeline or sewer, and both sites are operated by the same operator, then the two sites are considered to be the same facility for purposes of this permit.

Grab sample, for monitoring requirements, is defined as a single "dip and take" sample collected at a representative point anywhere in wastewater treatment or sewage sludge use/disposal processes.

Grit and screenings are sand, gravel, cinders, other materials with a high specific gravity and relatively large materials such as rags generated during preliminary treatment of domestic sewage at a treatment works. (Note: The disposal of grit and screenings are not regulated under this permit. They should be disposed of in accordance with applicable State (or Tribal, if applicable) and local regulations.)

Ha means hectares. One hectare equals 2.47 acres.

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High potential for public contact site is land with a high potential for contact by the public. This includes, but is not limited to, public parks, ball fields, cemeteries, plant nurseries, turf farms, and golf courses.

Instantaneous measurement, for monitoring requirements, is defined as a single reading, observation, or measurement.

Land application is the spraying or spreading of sewage sludge onto the land surface; the injection of sewage sludge below the land surface; or the incorporation of sewage sludge into the land so that the sewage sludge can either condition the soil or fertilize crops or vegetation grown in the soil. Land application includes distribution and marketing (i.e. the selling or giving away of the sewage sludge).

Liquid Sewage Sludge means a sewage sludge having a dry weight solids content less than or equal to 8% of the total weight of the sewage sludge.

Long-term treatment is the process where Class B sewage sludge is treated in batch piles over a minimum of two summers in order to achieve a Class A sewage sludge with respect to pathogens.

Low potential for public contact site is land with a low potential for contact by the public. This includes, but is not limited to, farms, ranches, reclamation areas, and other lands which are private lands, restricted public lands, or lands which are not generally accessible to or used by the public.

Monthly average is the arithmetic mean of all measurements taken during the month.

Other container is either an open or closed receptacle. This includes, but is not limited to, a bucket, a box, a carton, and a vehicle or trailer with a load capacity of one metric ton or less.

Pathogen means an organism that is capable of producing an infection or disease in a susceptible host.

Person is an individual, association, partnership, corporation, municipality, State or Federal agency, or an agent or employee thereof.

PFRP means *Processes to Further Reduce Pathogens*, as described in detail in Appendix B (Part B.) of 40 CFR Part 503 using composting, heat drying, heat treatment, thermophilic aerobic digestion, irradiation or pasteurization as specified in that part.

Pollutant for the purposes of this permit is an organic substance, an inorganic substance, a combination of organic and inorganic substances, or pathogenic organisms that, after discharge and upon exposure, ingestions, inhalation, or assimilation into an organism either directly from the environment or indirectly by ingestion through the food-chain, could, on the basis of information available to the Administrator of EPA, cause death, disease, behavioral abnormalities, cancer, genetic mutations, physiological malfunctions (including malfunction in reproduction), or physical deformations in either organisms or offspring of the organisms.

Pollutant limit is a numerical value that describes the amount of a pollutant allowed per unit amount of sewage sludge (e.g., milligrams per kilogram of total solids); the amount of a pollutant that can be applied to a unit area of land (e.g., kilograms per hectare); or the volume of a material that can be applied to a unit area of land (e.g., gallons per acre).

PSRP means *Processes to Significantly Reduce Pathogens*, as described in detail in Appendix B (Part A.) of 40 CFR Part 503 and consists of aerobic digestion, air drying, anaerobic digestion, composting, or lime stabilization as specified in that part.

Runoff is rainwater, leachate, or other liquid that drains overland on any part of a land surface and runs off of the land surface.

Sewage sludge means solid, semi-solid, or liquid residue generated during the treatment of domestic sewage and/or a combination of domestic sewage and industrial waste of a liquid nature in a treatment works. Sewage sludge includes, but is not limited to, domestic septage; scum or solids removed in primary, secondary, or advanced wastewater treatment processes; and a material derived from sewage sludge. Sewage sludge does not include ash generated during the incineration of sewage sludge or grit and screenings generated during preliminary treatment of domestic sewage in a treatment works. (Note: The disposal of grit and screenings are not regulated under this permit. They should be disposed of in accordance with applicable State (or Tribal, if applicable) and local regulations.)

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Sewage sludge body for the purpose of this permit is an individual or discrete lagoon cell, sewage sludge cell, pile of sewage sludge, long-term treatment pile, compost pile, drying bed, storage pile, etc., that contains sewage sludge and/or material derived from sewage sludge.

Specific oxygen uptake rate (SOUR) is the mass of oxygen consumed per unit time per unit mass of total solids (dry weight basis) in the sewage sludge.

Treat or treatment of sewage sludge is the preparation of sewage sludge for final use or disposal. This includes, but is not limited to, thickening, stabilization, and dewatering of sewage sludge. This does not include storage of sewage sludge.

Total solids are the materials in the sewage sludge that remain as residue if the sewage sludge is dried at 103 to 105 degrees Celsius.

Treatment works are either Federally owned, publicly owned, or privately owned devices or systems used to treat (including recycle and reclamation) either domestic sewage or a combination of domestic sewage and industrial waste of a liquid nature.

Unstabilized solids are organic materials in sewage sludge that have not been treated in either an aerobic or anaerobic treatment process.

Upset means an exceptional incident in which there is unintentional and temporary noncompliance with technology based permit effluent limitations because of factors beyond the reasonable control of the permittee. An upset does not include noncompliance to the extent caused by operational error, improperly designed treatment facilities, inadequate treatment facilities, lack of preventive maintenance, or careless or improper operation.

Vector attraction is the characteristic of sewage sludge that attracts rodents, flies, mosquitos or other organisms capable of transporting infectious agents.

Volatile solids is the amount of the total solids in sewage sludge lost when the sewage sludge is combusted at 550 degrees Celsius for 15-20 minutes in the presence of excess air.

SECTION VI: APPROVED METHODS FOR THE ANALYSIS OF SEWAGE SLUDGE (40 CFR PART 503)

Parameter	Analysis Method a/
Arsenic	SW-846 Method 6010B b/ SW-846 Method 6020 b/ EPA Method 200.7 EPA Method 200.9
Cadmium	SW-846 Method 6010B b/ SW-846 Method 6020 b/ EPA Method 200.7 EPA Method 200.9
Copper	SW-846 Method 6010B b/ SW-846 Method 6020 b/ EPA Method 200.7 EPA Method 200.9
Lead	SW-846 Method 6010B b/ SW-846 Method 6020 b/ EPA Method 200.7 EPA Method 200.9
Mercury	EPA Method 200.7

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Molybdenum	SW-846 Method 6010B b/ SW-846 Method 6020 b/ EPA Method 200.7
Nickel	SW-846 Method 6010B b/ SW-846 Method 6020 b/ EPA Method 200.7 EPA Method 200.9
Selenium	SW-846 Method 6010B b/ SW-846 Method 6020 b/ EPA Method 200.7 EPA Method 200.9
Zinc	SW-846 Method 6010B b/ SW-846 Method 6020 b/ EPA Method 200.7
Fecal Coliform (MPN only; MF not allowed under this permit)	SM-18th Method 9221 E (MPN) Appendix F, EPA/625/R-92/013 EPA Method 1680 EPA Method 1681
Salmonella bacteria	EPA Method 1682
Helminth Ova	Appendix I, EPA/625/R-92/013
Enteric Viruses	Appendix H, EPA/625/R-92/013
Nitrate (as N)	SM-18th Method 4500-NO_3^- SW-846 Method 9056 SW-846 Method 9210
Nitrite (as N)	SM-18th Method 4500-NO_2
Nitrate/Nitrite	EPA Method 1685 EPA Method 1686
Ammonia (as N)	SM-18th Method 4500-NH_3 EPA Method 1689 EPA Method 1690
Organic Nitrogen	Value calculated TKN minus NH3-N
Total Kjeldahl Nitrogen (TKN)	SM-18th Method 4500-N_{org} EPA Method 1687 EPA Method 1688
Total Solids	SM-18th Method 2540 G EPA Method 1684
Total Volatile Solids	SM-18th Method 2540 G
pH	SW-846 Method 9040C SW-846 Method 9045D
Specific Oxygen Uptake Rate in Biosolids	EPA Method 1683

a/ The references for the specified analytical methods are listed below:
EPA/626/R-92/013 means *Environmental Regulations and Technology, Control of Pathogens and Vector Attraction in Sewage Sludge (Including Domestic Septage) Under 40 CFR Part 503*, EPA Publication EPA/625/R-92/013, Revised October 1999. Use the indicated appendix. A copy of the document can be downloaded in PDF format from the National Risk Management Research Laboratory Web page at http://www.epa.gov/ORD/NRMRL/pubs/625r92013/625r92013.htm.

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SM-18th means *Standard Methods for the Examination of Water and Wastewater*, 18th Edition, 1992, American Public Health Association, 1015 15th Street, NW., Washington, DC 20005.

SW-846 means *Test Methods for Evaluating Solid Waste, Physical/Chemical Methods*, EPA publication SW-846 Third Edition (September 1986), Update I (July 1992), Update II (September 1994), Update IIA (August 1993), Update IIB (January 1995), and Update III (December 1996). Available from the National Technical Information Service, 5285 Port Royal Road, Springfield, VA 22161.

All methods except those in *Standard Methods for the Examination of Water and Wastewater* can be found at http://water.epa.gov/scitech/methods/cwa/index.cfm or http://water.epa.gov/scitech/methods/cwa/other.cfm.

Older Methods (i.e AA Furnace methods may also be utilized with permission of the permitting authority.

b/ All samples must be digested using SW-846 Method 3050B, 3051A or 3052 or equivalent (using equivalent to 1 gram dry weight) prior to analysis by any of the procedures indicated. The AA direct Aspiration analyses are applicable at moderate concentration levels in clean complex matrix systems. AA Furnace methods can increase sensitivity if matrix effects are not severe. Inductively Coupled Plasma (ICP) methods are applicable over a broad linear range and are especially sensitive for refractory elements.

Preventing Pollution is the Best Solution

The Environmental Protection Agency encourages you to consider pollution prevention alternatives. In some cases pollution prevention may allow you to avoid the need to discharge pollutants which would otherwise require permit limitations -- or even avoid the need for permits altogether! Pollution prevention can:

- ☑ Save Money
- ☑ Reduce Waste
- ☑ Aid Permit Compliance
- ☑ Protect Our Environment
- ☑ Improve Corporate Image
- ☑ Reduce Liability

EPA is helping industries save money, reduce waste and protect our environment through pollution prevention. EPA staff can provide pollution prevention assistance through telephone consultations, technical workshops and seminars, and informational publications. They can also put you directly in touch with local support networks and national pollution prevention resources.

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