



WPDES PERMIT

STATE OF WISCONSIN DEPARTMENT OF NATURAL RESOURCES

GENERAL PERMIT TO DISCHARGE UNDER THE WISCONSIN POLLUTANT DISCHARGE ELIMINATION SYSTEM

In compliance with the provisions of Chapter 283, Wisconsin Statutes, a facility or operation engaged in the

LAND APPLICATION OF BY-PRODUCT SOLIDS

and meeting the applicability criteria listed in this General Permit, is permitted to land apply materials contained in organic by-product solids

to approved spreading sites in Wisconsin

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

State of Wisconsin Department of Natural Resources
For the Secretary

By

Russell Rasmussen
Director, Bureau of Watershed Management

June 29, 2007
Date Permit Signed/Issued

PERMIT TERM: EFFECTIVE DATE - July 01, 2007

EXPIRATION DATE – June 30, 2012

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1 Applicability Criteria

1.1 Activities Covered

This permit is applicable to the discharge of by-product solids from an industrial, commercial or agricultural facility to a land spreading system as defined in s. NR 214.03(26), Wis. Adm. Code, provided that the by-product solids have been shown to have beneficial properties as a soil conditioner or fertilizer. For this permit, by-product solids are defined as materials from the aquaculture, animal product or food processing industries including, but not limited to, vegetable waste materials such as leaves, cuttings, peelings, cores and silage and readily degradable animal residuals, such as paunch manure. All land applied by-product solids shall not have a detrimental effect on soil characteristics or groundwater quality and shall primarily contain organic material and nutrients that can be utilized by crops.

1.2 Activities Not Covered

This permit may not be used for the land application of by-product solids with any of the following characteristics:

- the by product solids contain toxic or hazardous substances (such as metals, solvents, lubricants, biocides, pesticides, etc.), unless the permittee demonstrates to the Department that the discharge of such pollutants will be in such small quantities that no environmental pollution will result and the contaminants will not exceed groundwater standards established in ch. NR 140, Wis. Adm. Code;
- the by-product solids contain contaminants which the Department determines do not meet the requirements of s. NR 214.17(4), Wis. Adm. Code, and, therefore, may cause an exceedance of the groundwater standards established in ch. NR 140, Wis. Adm. Code;
- the by-product solids are regulated under the provisions of ch. NR 518, Wis. Adm. Code;
- the by-product solids are commingled dissimilar wastes from multiple facilities. Mixed waste contractors who were previously granted coverage under a general permit for the land application of by-product solids will continue to be covered and regulated under this general permit with separate outfalls for each of their customers until such time as the Department issues an individual permit, provided the contractor submits an application for an individual permit by no later than December 1, 2007.

2 Land Application Requirements for Spreading Sites

2.1 Department Approval for Application/Spreading Sites

The permittee is authorized to landspread by-product solids only on sites approved in writing by the Department. In the written site approval, the Department may include site specific use restrictions consistent with the provisions of NR 214.17(2) Wis. Adm. Code, and the permittee shall comply with these site specific use restrictions. The permittee shall not spread by-product solids on a site until the Department site approval is received. The Department may require that the permittee re-submit application site information for existing spreading sites to confirm that the spreading areas meet the criteria of part 2.2 of this permit. The permittee shall land apply by-product solids on all sites in compliance with the requirements of this permit.

The permittee shall request approval for additional sites using Land Application Site Evaluation Form 3400-53 or equivalent. The following information shall be submitted for each site: location maps showing nearby residences and wells, soil maps, soil analysis results, information on separation to groundwater and bedrock, and other information that demonstrates that by-product solids application on the site will comply with applicable requirements of NR 214.17, Wis. Adm. Code and the conditions of this permit.

2.2 Land Application Separation Distances, Slopes and Floodplains

- The permittee shall not land apply by-product solids closer than 500 feet from an inhabited dwelling, except this separation distance may be reduced to a distance of less than 500 feet but greater than 200 feet if the owners and occupants of the affected dwelling give written consent and the by-product solids are incorporated into the soil.
- The permittee shall not land apply by-product solids closer than 1000 feet from a well serving a community public water supply well.
- The permittee shall not land apply by-product solids closer than 250 feet to a potable water supply well that is not a community public water supply well.
- The permittee shall not land apply by-product solids on sites located in floodways.
- The permittee shall not land apply by-product solids on any site located in a floodplain when there is surface ponding or flooding.
- The permittee shall not land apply by-product solids closer than 200 feet from any surface water, except that the by-product solids may be applied no closer than 100 feet from the nearest surface water if there is a vegetative buffer strip at least 20 feet wide between the surface water and the nearest edge of land application.
- The permittee shall not land apply by-product solids at any location where the separation between the land surface and bedrock or groundwater table is less than 36 inches, except that the permittee may, with written approval from the Department for that specific site, apply an approved amount of by-product solids during April through September on land with at least 18 inches separation to bedrock or groundwater.
- The permittee shall not land apply by-product solids at any time on land that has a slope of greater than 12%.
- The permittee shall not apply by-product solids on land with a slope greater than 2% when the ground is frozen or snow-covered, except that the permittee may, when authorized in the Department's site approval, apply by-product solids on land with slopes between 2% and 6% when the ground is frozen or snow-covered.

3 Reporting Requirements

3.1.1 Land Application Characteristic Report

The analytical results from testing of by-product solids that are land applied shall be reported annually on the Characteristic Report Form 3400-49. All by-product solids analysis results shall be reported on a dry weight basis. The report shall be submitted no later than January 31, following each year waste is land applied. The permittee may monitor any parameter more frequently than the minimum requirement of this permit.

3.1.2 Land Application Report

The annual total loading for the land application of by-product solids to each field spreading site shall be submitted on the Land Application Report Form 3400-55 by January 31, following each year waste is land applied.

4 By-Product Solids Land Application Requirements

The discharge shall be limited to land application of by-product solids to Department approved spreading sites. During periods of discharge, the permittee shall comply with the monitoring requirements, reporting requirements and limitations specified below.

| Monitoring Requirements and Effluent Limitations | | | | | |
|--|------------|-----------------|------------------|--------------|---------------------|
| Parameter | Limit Type | Limit and Units | Sample Frequency | Sample Type | Notes |
| Land Application Rate | | Tons/day | Daily | Daily Record | Keep record on site |
| Solids Total | | Percent, dry wt | Quarterly | Composite | |
| Nitrogen, Total Kjeldahl | | Percent, dry wt | Quarterly | Composite | |
| Chloride | | Percent, dry wt | Quarterly | Composite | |
| Phosphorus | | Percent, dry wt | Annual | Composite | |

| Daily Log Requirements | | | | |
|--|-------|---------------|------------------|-------------|
| All discharge and monitoring activity shall be documented on log sheets. Completed log sheets shall be kept in the spreading vehicle for a minimum of seven days following application. After the seven-day period, the original log sheets shall be kept by the permittee as described under "Records Retention" in the Standard Requirements of this permit, and if requested, made available to the Department. | | | | |
| Parameters | Limit | Units | Sample Frequency | Sample Type |
| DNR Site Number(s) | - | Number | Daily | Log |
| Number of Acres on the Site to Which By-Product Solids are Applied | - | Acres | Daily | Log |
| Application Rate | - | Tons/Acre/Day | Daily | Calculated |

| Annual Reporting Requirements and Limitations | | | | |
|---|---------------------------------------|-------------------------|---------------------|--------------|
| By no later than January 31 st of each year the permittee shall submit an Annual Report (Form 3400-55) providing the following information for the previous calendar year. | | | | |
| Parameters | Limit | Units | Reporting Frequency | Sample Type |
| DNR Site Number(s) | - | Number | Annual | Record |
| Number of Acres on the Site to Which By-product Solids are Land Applied | - | Acres | Annual | Record |
| Total Amount Per Site | - | Pounds or Tons | Annual | Total Annual |
| Total Kjeldahl Nitrogen per Site | 165, or alternate approved in writing | Pounds/Acre/Year | Annual | Calculated |
| Total Chloride per Site | 340 | Pounds/Acre per 2 Years | Annual | Calculated |

4.1.1 Sampling

Representative samples shall be collected of the by-product solids to be land applied. When the by-product solids are large pieces, a large sample should be collected and ground to a homogenous slurry for analysis.

4.1.2 Chloride Loading Requirements for By-Product Solids

The total pounds of chloride applied shall be limited to 340 pounds per acre for any 2 consecutive years. Calculate the chloride loading as follows:

$$\text{For Wet Solids: } \frac{\text{lbs of wet by-products} \times \% \text{solids} \times \% \text{chloride}}{\text{acres land applied} \times 100 \times 100} = \text{lbs chloride/acre}$$

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

4.1.3 Nitrogen Loading Requirements for By-Product Solids

The total number of pounds of nitrogen that may be land applied per acre per year shall not exceed the nitrogen needs of the crop minus any other nitrogen added to the land application site, including fertilizer or manure. Nitrogen applied can be calculated on the basis of plant available nitrogen, as long as the release of nitrogen from the organic material is credited to future years. The Total Kjeldahl Nitrogen (TKN) applied each year from all sources shall not exceed 165 pounds per acre per year on any site, except when alternate numerical nitrogen loading limits are approved in writing via the Department's land application management plan approval. Calculate nitrogen loading as follows:

$$\text{For Wet Solids: } \frac{\text{lbs of wet by-products} \times \% \text{solids} \times \% \text{TKN}}{\text{acres land applied} \times 100 \times 100} = \text{lbs TKN/acre}$$

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

4.1.4 Carbon to Nitrogen Ratio

In addition to the limitation on nitrogen, the total quantity of by-product solids applied to the soil shall be within acceptable agricultural practices with respect to the carbon to nitrogen ratio.

5 Land Application Management Plan

5.1 Operate Consistent With an Approved Management Plan

The permittee shall operate and maintain the by-products solids land application system to meet the conditions of this permit in accordance with a management plan approved by the Department as provided in s. NR 214.17(6), Wis. Adm. Code. A copy of the management plan shall be retained by the permittee and the plan shall be available for Department inspection. Whenever the permittee intends to make operational changes affecting the character, quality or quantity of the by-product solids land applied, the management plan shall be amended and such amended plan shall be submitted to the Department for approval prior to implementing such changes.

5.2 Initial Submittal of the Management Plan

If a by-product solids land application management plan has not been approved by the Department prior to the reissuance of this permit, the permittee shall submit a management plan to the Department for approval not more than 60 days after the date of reissuance of this permit or not more than 60 days after the date that coverage under this permit was granted, whichever is later. If, when coverage is granted under this reissued permit, it is determined that a previously approved management plan must be amended to comply with the conditions of this permit or s. NR 214.17(6), Wis. Adm. Code, the permittee shall submit an amended land application management plan to the Department not more than 60 days after the date that coverage under this reissued permit was granted.

6 Operational Requirements

The permittee shall meet all the following requirements when land-applying byproduct solids:

- The volume of by-product solids applied on any portion of a site shall not have a detrimental effect on soil characteristics or structure.
- There shall be no runoff from the site of liquids contaminated by the by-product solids material. If contaminated runoff occurs, all by-product solids land application on the site shall cease immediately.
- The by-product solids distribution system shall be operated so the solids are uniformly applied over the spreading area and there are no overloaded areas.
- By-product solids shall be plowed, disked, injected, or otherwise incorporated in the surface soil layer within the time period specified in the management plan. The management plan approval may specify that certain by-product solids need to be incorporated into the soil as soon as possible to prevent nuisance conditions, such as attraction of nuisance animals, transmission of disease, or the release of objectionable odors from solids decomposition.
- If it becomes necessary to temporarily stockpile by-product solids at a spreading site, the stockpiled material must be land applied within 72 hours or sooner if specified in the approved management plan.
- Vehicles used for transporting or land applying the byproduct solids shall be capable of preventing the waste from spilling or leaking onto areas not approved for spreading.
- By-product solids containing viable pathogens, such as those from meat or poultry processing operations, may not be applied on sites used for growing crops that may be consumed raw by humans.

7 Standard Requirements

7.1 NR 205, Wisconsin Administrative Code

The conditions in ss. NR 205.07(1) and NR 205.07(3), Wis. Adm. Code, are included by reference in this permit. The permittee shall comply with all of these requirements, except for s. NR 205.07(1)(n), which does not apply to facilities covered under general permits. Selected s. NR 205.07 requirements are listed below for convenience.

7.2 Spill Reporting for Hazardous Substances

The permittee shall immediately notify the Department of an accidental release or spill of any hazardous substance to the environment as specified in ch. NR 706 and s. NR 205.07(3)b, Wis. Adm. Code. The Department shall be notified via the 24-hour toll free spills hotline (1-800-943-0003).

7.3 Duty to Halt or Reduce Activity

Upon failure or impairment of treatment facility operation, the permittee shall as required in s. NR 205.07(3)(e), Wis. Adm. Code and to the extent necessary to maintain compliance with its permit, curtail production or by-product solids application or both until the treatment facility operations are restored or an alternative method of treatment is provided.

7.4 Permit Noncompliance Reporting

As specified in s. NR 205.07(1)(s), Department notification is required within 24 hours of becoming aware of permit noncompliance.

7.5 Bypassing

As specified in s. NR 205.07(1)(u) & (v), Wis. Adm. Code, any bypass or overflow of discharges regulated by this permit around a settling, filtration or treatment system is prohibited unless there were no feasible alternatives to the bypass, the bypass is necessary to prevent severe injury or property damage, and the permittee notified the Department as required in s. NR 205 (1)(u)3, Wis. Adm. Code.

7.6 Planned Changes

The permittee shall report to the Department any facility expansion, production increase or process modifications which will result in new, different or increased discharges of pollutants as set forth in s. NR 205.07(3)(c), Wis. Adm. Code.

7.7 Inspection and Entry

The permittee shall allow an authorized representative of the Department, upon the presentation of credentials, to enter the permittee's premises, have access to records, and inspect and monitor the discharge as described in s. NR 205.07(1)(d), Wis. Adm. Code.

7.8 Authorized Signature

Reports, records, and monitoring results required by this permit shall be signed by the permittee's authorized representative or, in his or her absence, as specified in s. NR 205.07(1)(g), Wis. Adm. Code.

7.9 Water Quality Sampling and Testing Procedures

Sampling and laboratory testing procedures shall be performed as specified in s. NR 205.07(1)(p), Wis. Adm. Code and as set forth below. Sampling and analysis of effluent samples shall be performed as specified in chapters NR 218

and NR 219, Wis. Adm. Code, respectively and shall be performed by a laboratory certified or registered in accordance with the requirements of ch. NR 149, Wis. Adm. Code.

7.10 Retention and Submittal of Reports, Records, and Monitoring Results

The permittee shall retain records of all monitoring required by this permit and report monitoring results as set forth in s. NR 205.07(1)(f) and (r), Wis. Adm. Code. Reports (including storm water inspection reports), records, and monitoring results required by this permit shall be retained by the permittee for the duration of this permit or three years after this information is generated, whichever is longer.

7.11 Recording of Results

For each effluent measurement or sample taken, the permittee shall record the following information as required in s. NR 205.07(1)(e), Wis. Adm. Code:

- The date, exact place, method and time of sampling or measurements,
- The individual who performed the sampling or measurements,
- The date of the analysis and the individual who performed the analysis,
- The analytical techniques or methods used, and the results of the analysis.

7.12 More Frequent Monitoring

If the permittee monitors any parameter more frequently than required by the permit, using test procedures specified in ch. NR 204 or 219, Wis. Adm. Code, or as specified in the permit, the results of this monitoring shall be included in the calculation and reporting of the data submitted in the discharge monitoring report.

7.13 Conventions for the Reporting and Use of Low Level Results

The permittee shall use the following conventions when reporting effluent monitoring results: (a) non-detected pollutant results shall be reported as < (less than) the value of the analytical method's limit of detection; (b) pollutant concentrations equal to or greater than the limit of detection, but less than the limit of quantitation, shall be reported and the limit of quantitation shall be specified; and (c) a zero value may be substituted for any non-detected pollutant result for the purposes of calculating an average or a mass discharge.

7.14 Continuation of an Expired General Permit

As provided in s. NR 205.08(9), Wis. Adm. Code, the terms and conditions of this general permit shall continue to apply until this general permit is reissued or revoked or until an individual permit is issued for the discharge to which the general permit applied. The status of expired general permits and forms for requesting continued permit coverage can be accessed at <http://dnr.wi.gov/org/water/wm/ww/gpindex/gpinfo.htm>.

7.15 Severability

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

8 Summary of Reports Due

FOR INFORMATIONAL PURPOSES ONLY

| Description | Date | Page |
|--------------------------------------|---|------|
| Characteristic Report Form 3400-49 | January 31, following each year waste is land applied | 2 |
| Land Application Report Form 3400-55 | January 31, following each year waste is land applied | 2 |

Monitoring results obtained during the specified reporting period shall be summarized and reported on the forms listed above or other reporting form or system approved by the Department (including an electronic land application reporting system when available for General WPDES permits). When submitting a paper discharge monitoring reporting form, the original (and one copy if required on the reporting form) shall be submitted to the return address printed on the form. A copy of the land application report forms submitted or an electronic file of the report shall be retained.

Any plans or specifications for industrial pretreatment and industrial wastewater systems shall be submitted to the Bureau of Watershed Management, 101 South Webster Street, P.O. Box 7921, Madison, WI 53707-7921.