

STATE OF MICHIGAN
IN THE 30TH JUDICIAL CIRCUIT
COUNTY OF INGHAM

MICHIGAN DEPARTMENT OF
ENVIRONMENTAL QUALITY, and
STEVEN E. CHESTER, Director of the
Michigan Department of Environmental
Quality,

File No. 03-1662-CE

Hon. James R. Giddings

Plaintiffs,

v

VREBA-HOFF DAIRY, LLC,

Defendant.

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INTERIM ORDER

At a session of said Court held in the courtroom, City of Lansing, Michigan,
on the 6 day of June, 2007.

Present: Honorable James R. Giddings
Circuit Court Judge

This Court finds that it is in the public interest to enter this Interim Order without
further litigation as the most appropriate means of resolving the allegations raised by

Plaintiffs in their Motion to Require Defendant to Appear and Show Cause and the Court's Order to Show Cause dated January 19, 2007. This Order also modifies a Consent Judgment previously entered between the Parties and executed by the Court on December 22, 2004 (Original Consent Judgment). Therefore, the terms of this Order supplement those in the Original Consent Judgment, and to the extent that any provisions of this Order are inconsistent with those in the Original Consent Judgment, the terms of this Order shall control.

NOW, THEREFORE, before taking any testimony, without any admission of fact or law by any party, and without adjudication or trial of any issue of fact or law, it is hereby ORDERED, ADJUDGED AND DECREED that the Original Consent Judgment is modified as follows:

III. STATEMENT OF PURPOSE

Paragraph A. 3. of this section is replaced by the following language:

install Enhanced Wastewater Treatment as defined in Section IX, Paragraphs

A. 1. and B. 1.

IV. DEFINITIONS

The following sentence is added to Section IV, Paragraph L.:

“Effective Date of this Interim Order” means the date that the Court enters this Interim Order;

Section IV, Paragraph M. is replaced by the following language:

“Enhanced Wastewater Treatment” means the treatment of Agricultural Waste as provided in Paragraphs A. 1. or B. 1. of Section IX.

The following Paragraph GG. is added:

“EarthMentor Treatment System” means the system to which Section IX, Paragraph B. 1. refers, commercially known as the EarthMentor® Natural Nutrient Reclamation and Treatment System. This term also includes any other treatment system that will produce the degree of Agricultural Waste treatment equivalent to that accomplished by the EarthMentor® Natural Nutrient Reclamation and Treatment System, as demonstrated by Defendant and agreed by MDEQ.

The following Paragraph HH is added:

“Average Cow,” is a unit of measurement equivalent to the number of animals expected to produce an average of approximately 16.6 gallons of manure per day (gpd) over a period of a calendar month. The number of Average Cows at the Dairy Operations is calculated by utilizing the following formula:

1. Add the (# of lactating cows x 17.7 gpd) + (# of dry cows x 13.6 gpd) + (# of heifers x 7.0 gpd) to calculate the gallons of manure produced per day;
2. Divide the gallons of manure produced per day by 16.6 gpd;
3. Perform steps 1 and 2 for each day of the calendar month;
4. Add the daily totals from step 2 for each day of the calendar month to obtain a monthly total; and
5. Divide the monthly total from step 4 by the number of days in the calendar month to calculate the Average Cows.

A calculation of the Average Cows present at the Dairy Operations shall exclude the number of animals producing an amount of manure equivalent to the manure voluntarily transported to an Off-site Treatment Facility (i.e., any transportation that is not imposed as a sanction under Section IX, Subsection C.), in an amount not to exceed 266.5 Average Cows.

The following Paragraph II is added:

"Off-site Treatment Facility" means a landfill, wastewater treatment plant, composting facility, EarthMentor Treatment System, or other waste treatment facility located on property separate from the Dairy Operations that possesses a license, permit, or other governmental approval (e.g., a letter from the Chief of the Water Bureau) allowing the facility to treat and/or dispose of Agricultural Waste and which is allowed to receive Agricultural Waste produced by Defendant's Dairy Operations. If the Off-site Treatment Facility is located in a state other than Michigan, then Defendant shall provide the MDEQ with a written statement from the appropriate agency within that state's government documenting that the state does not object to Agricultural Waste from the Dairy Operations being accepted by that Off-site Treatment Facility. Written statements of no objection shall be provided to the MDEQ prior to the transportation of any Agricultural Waste to an out-of-state Off-site Treatment Facility.

VII. PERMITTING REQUIREMENTS

Paragraph C. is replaced by the following language:

In the event any specific provisions in this Consent Judgment are in conflict with any specific provisions in any applicable NPDES permit, the provisions of this Consent Judgment, so long as it is in effect, shall control.

**VIII. COMPLIANCE ACTIVITIES RELATED TO THE
LAND APPLICATION OF LIQUID AGRICULTURAL WASTE**

Paragraph F. is replaced by the following language:

By 1 pm on the Friday prior to any week in which Defendant expects to land apply Agricultural Waste, Defendant shall notify MDEQ by facsimile of its intent to do so. By 8 am on each week day on which Defendant plans to land apply Agricultural Waste, Defendant shall provide MDEQ with a list by facsimile identifying the fields and subfields where land application is expected to occur that day and the proposed application rates in gallons (for liquids) or tons (for solids) per acre. Where Defendant expects to land apply Agricultural Waste on a weekend, Defendant shall provide such a list to MDEQ by facsimile by 1 pm on the previous Friday identifying the fields and subfields where land application is expected to occur during the weekend and the proposed application rates in gallons (for liquids) or tons (for solids) per acre. The notices and lists required by this paragraph shall be submitted to the WB Jackson District Office.

Paragraph G. is replaced by the following language:

Defendant shall not land apply any Agricultural Waste generated after the Effective Date of this Interim Order unless it has received Enhanced Wastewater Treatment.

Paragraph I is replaced by the following language:

Open pits used as waste storage structures shall at all times maintain a minimum 12 inches of freeboard along with additional capacity to contain all precipitation from a 25-year/24-hour storm that would be directed to the structure. Within 45 days of the Effective Date of this Judgment, Defendant shall install fixed markers on all waste storage structures or

devices to reflect both the 12 inch freeboard and 25-year/24-hour storm volumes to the extent not already installed at these levels on the Effective Date of this Order. All subsequent installations of storage structures or devices shall be marked in a similar manner. Defendant shall not be in violation of this paragraph if a precipitation event causes the waste to rise above the required level, provided that Defendant restores the freeboard and storm capacity to the required level during the next five consecutive days, weather and field conditions permitting. Defendant shall verbally notify the WB Jackson District Supervisor within 12 hours of the detection of any waste level exceeding the required freeboard. The provisions of this paragraph in no way prohibit the MDEQ from exercising any right it may have to demand immediate corrective action or any other remedies to which the MDEQ is entitled should Defendant's storage structures pose an imminent threat to human health or the environment.

The following sentence is added to the end of Paragraph M.:

Defendant agrees to revise the Storm Water Pollution Prevention Plans (SWPPPs) for the Dairy Operations within 30 days of the Effective Date of this Order and in addition, agrees to revise the SWPPPs every 6 months after the Effective Date of this Order until the EarthMentor Treatment Systems are installed at both Dairy Operations and all earth disturbances associated with the construction are permanently stabilized, to the extent SWPPP revisions are necessary to address changing circumstances.

Paragraph N. of the Original Consent Judgment is removed from the Judgment.

The following new Subsection N. is added to the end of Section VIII:

N. Best Management Practices.

1. Defendant shall, at a minimum, in addition to any conditions set forth within this Judgment, comply with the land application requirements set forth in the MDEQ General National Pollutant Discharge Elimination System (NPDES) Permit for Large CAFOs, Number MIG019000 (attached as Appendix A) at Part I. A. 4. b. 7) until MDEQ issues an NPDES permit for Vreba-Hoff Dairy I and Vreba-Hoff Dairy II. Where any specific provisions of Permit Number MIG019000 conflict with any specific provisions of this Judgment, the terms of this Judgment shall control.

Current total phosphorus data for fields and subfields identified within Defendant's most recently revised Comprehensive Nutrient Management Plan shall be submitted to the MDEQ within 30 days of the Effective Date of this Order along with a revised spreading plan for the 2007 growing season.

2. Practices Applicable to Liquid Agricultural Wastes Stored at the Dairies as of the Effective Date of this Interim Order. Any liquid Agricultural Waste that is land applied pursuant to Section IX, Paragraph B. 5. shall be irrigated on growing crops, which includes seeded fields, through a center pivot irrigation system or shall be land applied by another method complying with the CNMP. Defendant shall employ a 125-foot wide setback or a vegetated buffer of at least 40 feet from waters of the state, and shall not exceed a daily application rate of 8,000 gallons per acre. This waste shall not be land applied on soil that exceeds 75% of Available Water Capacity as described in Appendix B. This waste shall be incorporated into

the soil by the end of the working day or shall be irrigated on growing crops, which includes seeded fields. For purposes of this paragraph, the crop growing season ends on November 15, 2007.

3. Practices Applicable to Sand Bedding. Notwithstanding any other provision of this Judgment, Defendant may land apply the sand bedding used in the barns prior to the installation of the sand separation devices pursuant to Section IX, Paragraph B. 3. Prior to land application, Defendant shall dewater this waste on the compost pads at Vreba-Hoff Dairy I and Vreba-Hoff Dairy II. Defendant shall employ a 125-foot wide setback or a vegetated buffer of at least 40 feet from waters of the state, and shall not exceed an application rate of 34 tons per acre. This waste shall be incorporated into the soil by the end of the working day.

4. Practices Applicable to Liquid Agricultural Wastes Produced after the Effective Date of this Interim Order. Liquid Agricultural Waste produced after the Effective Date of this Interim Order shall be irrigated on growing crops, which includes seeded fields, through a center pivot irrigation system or shall be land applied using an alternative method that MDEQ determines is equivalent in application rate and uniformity of soil coverage. Defendant shall employ a 100-foot wide setback or a vegetated buffer of at least 35 feet from waters of the state, and shall not exceed an application rate equivalent to one-half inch per day and two inches per seven days. This waste shall not be land applied on soil that exceeds 75% of Available Water Capacity as described in Appendix B. For the purposes of this paragraph, the crop growing season begins on May 1 and ends on November 15.

IX. WASTEWATER TREATMENT CONSTRUCTION AND IMPLEMENTATION

Section IX is replaced by the following language:

A. Enhanced Wastewater Treatment with the Press Treatment System

1. The term “Enhanced Wastewater Treatment,” as used in Section IX, Subsection A., means (1) the treatment of all liquid manure from the freestall housing area, holding area, and parlor platform in the Press Treatment System, which consists of a press, clarifier, and thickener, (2) the composting of solids from the Press Treatment System, bedded pack manure, and waste feed, (3) aeration of liquid Production Area Waste, including liquids from the Press Treatment System, wash water from equipment, laundry and milk houses, and runoff contaminated with Silage Leachate, feed, or manure; and/or (4) transferring Agricultural Waste to an Off-site Treatment Facility.

2. Pursuant to the Original Consent Judgment, Defendant installed Enhanced Wastewater Treatment at Vreba-Hoff Dairy I and Vreba-Hoff Dairy II that incorporated the treatment techniques described in (1) through (3) of Section IX, Paragraph A. 1. To initiate these treatment techniques, Defendant submitted and MDEQ approved a work plan for Enhanced Wastewater Treatment that incorporated the Press Treatment System. As of the Effective Date of this Interim Order, this work plan is terminated.

3. Until the EarthMentor Treatment System starts operation at Vreba-Hoff Dairy I, Defendant shall treat all Agricultural Waste produced by Vreba-Hoff Dairy I after the Effective Date of this Interim Order by Enhanced Wastewater

Treatment as defined in Paragraph A. 1. of Section IX. During that time period, Defendant shall monthly treat in the Press Treatment System all liquid manure produced during that calendar month by the freestall housing areas, holding areas, and parlor platforms at Vreba-Hoff Dairy I. Notwithstanding the foregoing sentence, if the Enhanced Wastewater Treatment System is unable to treat all of the liquid manure produced in a calendar month because of a malfunction of the system, then the Defendant may have on hand no more than seven days of untreated manure from these sources at the end of the month, but shall treat this remaining manure by the 15th of the next month. Defendant shall keep daily logs of the amount of liquid manure processed by the Press Treatment System, as measured by the flow meter at the inlet to the system. Until the EarthMentor Treatment System starts operation at Vreba-Hoff Dairy II, the Agricultural Waste produced by Vreba-Hoff Dairy II shall either be treated by Enhanced Wastewater Treatment as defined in Paragraph A. 1. of Section IX at Vreba-Hoff Dairy I or stored in preparation for treatment by the EarthMentor Treatment Systems.

4. Defendant has constructed an agitation tank at Vreba-Hoff Dairy I for the purpose of agitating manure prior to treatment in the Press Treatment System. Defendant represents that the agitation tank is sized to promote adequate blending of manure and has the capacity to hold a minimum of 1.5 days of manure produced by Vreba-Hoff Dairy I. Defendant shall use the agitation tank or a device with equivalent effectiveness to agitate the manure as long as the Press Treatment System is in operation.

5. Defendant shall employ an operator for the Press Treatment System until such time as another treatment system replaces the Press Treatment System. This employee shall possess wastewater certifications in at least one of the following areas on the effective date of this Interim Order: land surface disposal, chemical clarification, air flotation, and concentrated animal feeding operations. This employee shall obtain the remaining certifications in the aforementioned areas as soon as practical.

6. As of the Effective Date of this Interim Order and until the Press Treatment System is replaced by an EarthMentor Treatment System, Defendant shall keep on hand the following replacement parts: shower pump; DAF feed pump; press pump; DAF solids pump; chemical pump; and cone bearing. Defendant has placed an order with the manufacturer for a spare screw shaft and screen cage assembly and shall keep these spare parts on hand once manufacturing is finished. Once a spare part is used in the system, Defendant shall obtain a replacement for the spare parts inventory within a reasonable period. Defendant shall keep a log showing the dates on which spare parts from the inventory were used in the system and then replaced in the inventory by replacement parts.

7. During the first eight full calendar weeks after the Effective Date of this Interim Order (the "Baseline Period"), Defendant shall collect and analyze at least 24 samples (including at least three samples during each week on three separate days) for concentrations of total phosphorus and total suspended solids in the final effluent of the Press Treatment System. These samples shall be collected following at least four hours of operation in which the Press Treatment System has processed

manure at a rate at least equal to the waste production rate of the animals on site. Samples shall be collected between 8 am and 5 pm on Monday through Friday, holidays excluded, while the Press Treatment System is operating under normal conditions and at a rate at least equal to the waste production rate of the animals on site. Defendant shall notify MDEQ at least two hours prior to sampling and, if requested by an MDEQ official on-site at the time of sampling, shall provide MDEQ with the opportunity to split the samples. These sample analyses shall be reported to MDEQ within 14 days after the close of the Baseline Period.

8. Starting during the first full calendar month after the Baseline Period and continuing for as long as the Press Treatment System is operated, Defendant shall collect and analyze at least four samples per month (including at least one sample during each full week of the month) for concentrations of total phosphorus and total suspended solids in the final effluent of the Press Treatment System. The sample analyses for each month shall be reported to MDEQ by the fifteenth of the next month. For two full calendar months following the Baseline Period, the monthly average concentrations of total phosphorus and total suspended solids in the final effluent of the Press Treatment System shall not exceed 135% of the average concentrations in the samples collected and analyzed during the Baseline Period. After these two calendar months, the monthly average concentrations of total phosphorus and total suspended solids in the final effluent of the Press Treatment System shall not exceed 120% of the average concentrations in the samples collected and analyzed during the Baseline Period.

B. Enhanced Wastewater Treatment with the EarthMentor Treatment Systems

1. Defendant has elected to install an EarthMentor Treatment System at both Vreba-Hoff Dairy I and Vreba-Hoff Dairy II to increase Defendant's capacity to treat Agricultural Waste. This system shall treat all types of liquid Agricultural Waste, including leachate-contaminated storm water. A diagram of the EarthMentor Treatment System to be installed at each Dairy Operation is attached as Appendix C and includes approximate locations of treatment components, direction of flow, approximate storage structure capacity, and waste inputs. These diagrams are provided solely for illustrative purposes to assist in the understanding of the Interim Order, and do not impose additional requirements under this Judgment. Defendant agrees to include additional diagrams with the submittal of the Engineer's Certification required within Paragraph E. 2. of Section XXI. Once an EarthMentor Treatment System is in operation at a dairy, Enhanced Wastewater Treatment at that dairy shall consist of the following treatment methods: (1) any treatment technique producing a liquid product meeting the treatment standards of Section IX, Paragraph B. 7; (2) composting of solid Agricultural Waste; (3) treatment of semi-solids for pathogens in compliance with Section IX, Paragraph B. 8.; and/or (4) transferring Agricultural Waste to an Off-site Treatment Facility.

2. The EarthMentor Treatment Systems include components that shall be constructed by the following deadlines:

- a. Start construction of manure processing building at Vreba-Hoff Dairy II: June 30, 2007;

- b. Start construction of manure processing building at Vreba-Hoff Dairy I: June 30, 2007;
- c. Finish construction of primary treatment cell at Vreba-Hoff Dairy II and submit all necessary certifications to the MDEQ detailing this construction in accordance with USDA-NRCS-Michigan 313, dated November 2005: July 1, 2007;
- d. Finish construction of primary treatment cell at Vreba-Hoff Dairy I and submit all necessary certifications to the MDEQ detailing this construction in accordance with USDA-NRCS-Michigan 313, dated November 2005: August 1, 2007;
- e. Finish construction of manure processing building at Vreba-Hoff Dairy II: August 20, 2007;
- f. Finish construction of manure processing building at Vreba-Hoff Dairy I: August 20, 2007;
- g. Start operation of primary treatment cell at Vreba-Hoff Dairy II: September 15, 2007;
- h. Start operation of primary treatment cell at Vreba-Hoff Dairy I: September 15, 2007; and
- i. Finish construction of secondary treatment cells at Vreba-Hoff Dairy I and II and submit all necessary certifications to MDEQ detailing this construction in accordance with USDA-NRCS-

Michigan 313, dated November 2005: when needed to store treated effluent from primary treatment cells.

Defendant may change or replace the system, provided it still meets the definition of an EarthMentor Treatment System in Section IV, Paragraph GG.

3. As part of the EarthMentor Treatment Systems, Defendant shall, not later than August 20, 2007, construct a sand separation device at both Vreba-Hoff I and at Vreba-Hoff II for the purpose of separating sand from the manure prior to treatment in subsequent stages of the EarthMentor Treatment Systems. Sand used as bedding in the barns subsequent to the installation of the EarthMentor Treatment Systems shall not be land applied or composted, except for residual amounts of sand that are not practical to remove with the sand separation devices. Any residual amounts of sand shall be treated pursuant to Section IX, Paragraph B. 7. or 8.

4. All Agricultural Waste produced by Vreba-Hoff Dairy I and Vreba-Hoff Dairy II after the Effective Date of this Interim Order shall be treated by Enhanced Wastewater Treatment as defined in Paragraph A. 1. or Paragraph B. 1. of Section IX. Defendant shall also provide Enhanced Wastewater Treatment as defined in Section IX, Paragraph B. 1. for all untreated liquid manure stored by Defendant as of the Effective Date of this Interim Order at Vreba-Hoff Dairy I and Vreba-Hoff Dairy II. This manure consists of the contents of (1) the concrete cell (identified as B1 and B2 on App. C) and north storage structure (identified as H1 on App. C) at Vreba-Hoff Dairy I and the two concrete storage structures (identified as A, B, C, D, E, F, and H on App. C) and the former leachate treatment structure (identified as H on App. C) at Vreba-Hoff Dairy II, (except for the residual sand that shall be treated in

accordance with Section VIII, Paragraph N. 3. and land applied), and (2) the manure storage structure on Packard Road.

5. The leachate and treated liquids stored in the leachate treatment structure (identified as D on App. C) and the treated effluent structure (identified as I on App. C) at Vreba-Hoff Dairy I as of the Effective Date of this Interim Order shall be used as processing water in the EarthMentor Treatment System at the dairies, except that Defendant may land apply not more than 23.5 million gallons of this waste prior to the operation of the EarthMentor Treatment System. Defendant may land apply leachate, storm water, and treated effluent produced after the Effective Date of this Interim Order so long as those wastes are not commingled with wastes retained in the leachate storage structures or treated effluent structure as of the Effective Date of this Interim Order. Defendant shall assure that commingling of wastes does not occur by certifying that these structures have been emptied and are reasonably clean. Upon operation of the EarthMentor Treatment Systems, leachate and contaminated storm water shall be treated within the EarthMentor Treatment Systems. The Water Bureau Chief may authorize the land application of additional waste where Defendant demonstrates that such additional application is necessary to complete construction of an Agricultural Waste treatment system, prevent violations of freeboard requirements, or prevent the overflow of Agricultural Waste treatment or storage structures.

6. Once the EarthMentor Treatment System is operable, Defendant shall employ an operator for the system who has a wastewater certification in at least one of the following areas: A-1d Impoundments; A-1f Land Surface Disposal; C-1c

Stabilization Ponds; concentrated animal feeding operations. Defendant shall employ an operator who is certified in the remaining aforementioned areas as soon as practical. Should Defendant choose to utilize aeration in any of the treatment structures or cells, then the additional certification C-1b for Aerated Lagoons would be required in addition to those certifications identified above.

7. No more than 10 days prior to irrigating liquids from an EarthMentor Treatment System and every 7 days thereafter during the application period, Defendant shall collect and analyze a sample of the liquids for concentrations of ammonia nitrogen, total kjehldahl nitrogen, and total volatile solids for the purpose of demonstrating compliance with the treatment standards of this paragraph. The analyses of these samples shall be reported to MDEQ by facsimile on the day Defendant receives them. Defendant shall not land apply liquids from the treatment cells of the EarthMentor Treatment System if the liquids contain concentrations of ammonia nitrogen in excess of 300 milligrams per liter, total kjehldahl nitrogen in excess of 300 milligrams per liter, or total volatile solids in excess of 1500 milligrams per liter.

8. Defendant may land apply semi-solids from the EarthMentor Treatment System only if one of the following conditions are met to control exposure to pathogens: (1) laboratory analyses of seven samples of the semi-solids collected no more than 60 days prior to land application shows that the geometric mean of the density of fecal coliform is less than either (a) two million Most Probable Number per gram of total solids (dry weight basis) or (b) two million Colony Forming Units per gram of total solids (dry weight basis); (2) laboratory analyses of seven samples of

the semi-solids demonstrate that the density of fecal coliform has been reduced by at least a 2-log factor (a 100-fold reduction) from that found in the semi-solids at the time that the addition of Agricultural Waste into the treatment basin of the EarthMentor Treatment System has ceased; this sampling may be reduced in frequency based on the uniformity of past sampling results or eliminated if past sampling results demonstrate that Defendant's treatment methodology reliably produces compliant results; (3) the EPA Pathogen Equivalency Committee recommends that the method for pathogen reduction employed by Defendant be considered equivalent to one of the Class A or B alternatives listed in 40 CFR 503.32; or (4) the semi-solids comply with one of the Class A or Class B alternatives listed in 40 CFR 503.32. Any sample analyses collected pursuant to this paragraph shall be reported to MDEQ by the fifteenth of the month following the sample collection.

9. Defendant shall utilize at least one of the following vector reduction methods when land applying semi-solids from the EarthMentor Treatment System: (1) injection of the semi-solids; (2) incorporation of the semi-solids by the end of the working day; or (3) one of the methods described in 40 CFR 503.33.

10. When processing Agricultural Waste produced after the Effective Date of this Interim Order by Vreba-Hoff Dairy I and Vreba-Hoff Dairy II, no Agricultural Waste shall be allowed to bypass any component of the EarthMentor Treatment System that is designed to treat that waste as identified in Appendix C.

11. After an EarthMentor Treatment System is operational at Vreba-Hoff Dairy I or Vreba-Hoff Dairy II, all Agricultural Waste produced after the Effective

Date of this Interim Order during a calendar month by that dairy shall be fully treated or in the process of treatment by the end of that month.

C. Remedies for Failures of Treatment Systems

1. If Defendant fails to treat the amount of Agricultural Waste required by Paragraphs A. 3. or B. 11. of Section IX during a month, Defendant shall, not later than the 15th calendar day of the next month, transport the amount of waste equivalent to the prior month's shortfall (minus any amount allowed to be stored at the end of the month pursuant to Section IX, Paragraph A. 3.) to an Off-site Treatment Facility. Any portion of the amount allowed to be stored at the end of the preceding month pursuant to Section IX, Paragraph A. 3. that is not treated by the 15th of the subsequent month shall be transported to an Off-site Treatment Facility not later than the 30th calendar day of that month.

2. If Defendant fails to transport the amount of Agricultural Waste required by Paragraph C. 1. of Section IX during a month, Defendant shall during the next month remove from the dairies the number of Average Cows that produce the amount of manure equivalent to the waste that was required to be, but was not, transported during the prior month.

3. For each day on which Defendant irrigates liquids in violation of Paragraph B. 7. of Section IX, Defendant shall within two days transport the amount of Agricultural Waste equivalent to the manure produced per day by 50 lactating cows (i.e., 885 gallons) to an Off-site Treatment Facility.

4. For each day of irrigation for which Defendant has failed to transport the amount of Agricultural Waste required by Paragraph C. 3. of Section IX,

Defendant shall remove the Average Cows producing the amount of manure equivalent to that of 50 lactating cows (i.e., 885 gallons) from the dairies within seven days.

5. For each day on which Defendant fails to maintain the freeboard levels that this Judgment requires in the manure storage or treatment structures, Defendant shall within two days transport the amount of Agricultural Waste necessary to restore the required freeboard and an additional amount equivalent to the manure produced per day by 50 lactating cows (i.e., 885 gallons) to an Off-site Treatment Facility.

6. For each day of freeboard violations for which Defendant has failed to transport the amount of Agricultural Waste required by Paragraph C. 5. of Section IX, Defendant shall remove animals producing the amount of manure equivalent to that of 50 lactating cows (i.e., 885 gallons) from the dairies within seven days.

7. Any reduction in the number of Average Cows at the Dairy Operations that occurs as a result of this Subsection C. of Section IX shall result in an equivalent reduction in the number of Average Cows allowed within Paragraph E. of Section XXI, until an equivalent number of Average Cows are allowed to return. Defendant may return an equivalent number of Average Cows that were removed in accordance with this Subsection C. of Section IX by supplying to the MDEQ a written certification that Defendant treated and disposed of Agricultural Waste as required by this Judgment for a minimum of 60 consecutive days following animal removal. At that time, total Average Cows may be adjusted upwards to the levels allowed by Subsection E. of Section XXI.

8. Within 30 days of the Effective Date of this Order, Defendant shall provide MDEQ with evidence of financial assurance in the amount of \$400,000 for the purposes of paying for the transportation and treatment of wastewater pursuant to Subsection C. of Section IX.

XI. REPORTING

The following sentence is added to the end of Paragraph A.:

If Defendant is unable to talk to or leave a voicemail for the WB Jackson District Supervisor upon calling the Supervisor, Defendant may submit a written notification with the required information by facsimile to the Supervisor in lieu of verbal notification.

Subsection B on the submittal of monthly progress reports is amended to add a new

B. 6., B. 7., B. 8., and B. 9. as follows:

6. Copies of application logs for all Agricultural Waste, regardless of form, applied to land during the preceding month.

7. Copies of the wastewater treatment certified operator's log for the Press Treatment System and the EarthMentor Treatment Systems for the preceding month.

8. For the purposes of monitoring compliance with the terms of this Order, Defendant shall keep daily records of the numbers of animals present at the Dairy Operations by type of animal (i.e. number of lactating cows, dry cows, and heifers), any reduction in animals or transportation of Agricultural Waste performed to comply with the Average Cow limitations of Section XXI, Paragraphs E. 1. to 3. or sanctions set forth within Section IX, Subsection C., volumes of manure treated by the Press Treatment System as measured by the flow meter at the inlet to the system,

and the volumes of manure from the barns successfully introduced into the EarthMentor Treatment Systems. Defendant shall weekly record the available operating volume in each waste storage or treatment structure at the Dairy Operations as indicated by the depth gauges.

9. Monthly progress reports and other reports submitted to provide data on facility operations, standards development, or effluent or semi-solids quality shall bear the signature of a designated representative of Defendant and shall contain the following certification statement, "I certify under penalty of law that I have personally examined and am familiar with the information submitted herein and based on my inquiry of those individuals immediately responsible for obtaining the information, I believe that submitted information is true, accurate, and complete. I am aware that there are significant penalties for submitting false information."

XIV. NOTICES

In Paragraph A., the following contact person is designated to receive notices in lieu of Charles R. Bappert:

Jack A. Van Kley
Van Kley & Walker, LLC
132 Northwoods Blvd., Suite C-1
Columbus, OH 43235
(614) 431-8900

XVI. DELAYS IN PERFORMANCE, EXTENSION REQUESTS AND FORCE MAJEURE

The second sentence of Paragraph B. is replaced by the following language:

For this Judgment's purpose, Force Majeure means an occurrence or non-occurrence of the requirements under this Judgment arising from causes beyond the control of Defendant

and for which Defendant is without fault for the occurrence or non-occurrence, including, but not limited to: an act of God; any MDEQ review of submissions required under this Judgment exceeding 30 days; and the acts or omissions of a third party not under contractual obligations to Defendant that could not have been avoided or overcome through Defendant's due diligence and that resulted in a delay of performance of an obligation under this Judgment.

The following sentence is added to the end of Paragraph D.:

If Defendant is unable to talk to or leave a voicemail for the WB Jackson District Supervisor upon calling the Supervisor, Defendant may submit a written notification with the required information by facsimile to the Supervisor in lieu of verbal notification.

XVII. DISPUTE RESOLUTION

Section XVII is replaced by the following language:

A. Dispute resolution procedures stated under this section shall be the exclusive mechanism to resolve disputes arising under this Judgment. It is anticipated that there may be disputes over the imposition of sanctions and/or injunctive relief for the alleged failure to comply with the Judgment, MDEQ's approvals, approvals with modifications, or disapprovals under Section XV of the Original Consent Judgment, or other subjects. The parties shall first informally negotiate any dispute that arises under this Judgment. The informal negotiation period shall not exceed 10 days from the date of written notice by any party that a dispute has arisen. The parties may extend this period by agreement. After the period for informal negotiation ends, the MDEQ shall, as soon as practicable, provide Defendant with a written statement setting forth its proposed resolution.

B. If the parties fail to informally resolve a dispute, then the dispute shall be resolved in accordance with the MDEQ-proposed resolution unless, within 10 days after receiving the proposed resolution, Defendant files a petition for resolution with this Court setting forth the disputed matter, the parties' efforts to resolve it, the relief requested, and the schedule, if any, within which the dispute must be resolved to ensure the Judgment's implementation.

C. At the time of filing of a petition for resolution with this Court as set forth in the previous paragraph, a copy will also be mailed to the Dispute Resolution Facilitator (DRF), who will assist in attempting to negotiate a resolution. The DRF's compensation shall be the responsibility of the Defendant. Former Circuit Court Judge, Mr. Lawrence Glazer, will serve as the DRF, and negotiations will proceed as described in this Court's March 9, 2007 Order Referring this Case to Facilitative Mediation. The DRF, however, shall within seven days after concluding the negotiations, submit a written recommendation to this Court for settlement in the event the parties are unable to agree. This recommendation shall be binding on the parties, unless a party files a written objection with the Court within seven days after receiving the DRF's recommendation. In that event, this Court will set the matter for a contested hearing.

D. Filing a dispute resolution petition with this Court shall not postpone any of Defendant's obligations under this Judgment. Filing such a petition shall, however, stay payment of stipulated fines as to the disputed matter until the dispute's final resolution. Notwithstanding the invocation of the dispute resolution, stipulated fines, with any applicable interest, shall accrue from the first day of any failure or

refusal to comply with any term or condition of this Judgment that is subject to the stipulated fine provisions of Section XIX. In the event that Defendant does not prevail on a disputed issue, stipulated fines and any applicable interest shall be paid within 10 days of the Court's final decision and the expiration of any appeal period for that decision. Failure to make payment within 10 days after the final decision constitutes a violation of this Judgment and subjects Defendant to stipulated fines as defined herein. Defendant shall not be assessed stipulated fines for disputes resolved in its favor.

E. Notwithstanding this section, Defendant shall, in accordance with the deadline in Section XIX, Paragraph B. of the Original Consent Judgment, pay that portion of a demand for stipulated fines that is not disputed in accordance with and in the waiver provided in this section, as appropriate.

F. Plaintiffs reserve the right to pursue a separate enforcement action against Defendant for any violation of any provision of applicable federal and state law, rule, regulation, permit, or administrative order that may also be a violation of this Judgment. Plaintiffs, however, are limited to pursuing one enforcement option for the same violation.

XVIII. REIMBURSEMENT OF COSTS AND PAYMENT OF CIVIL FINES

The following new Paragraph D is added to Section XVIII:

D. Defendant agrees to pay to the State of Michigan **\$180,000** as civil fines, stipulated penalties, and costs to resolve violations of the Original Consent Judgment alleged in the MDEQ's brief in support of its Motion to Show Cause filed with the Court on January 19, 2007. This sum also resolves civil liability for

violations alleged to have occurred subsequent to January 19, 2007, including violations set forth in MDEQ Notice Letters dated March 14, 2007; March 21, 2007; and April 11, 2007 along with any other alleged violations known to the MDEQ as of the Effective Date of this Order. Payment shall be made in six installments of \$30,000 every 30 days starting no later than 30 days after the Engineer's Certification to be submitted in accordance with Section XXI, Paragraph E. 2. Each payment made payable to the State of Michigan and mailed to the MDEQ-Revenue Control Unit, P.O. Box 30657, Lansing, Michigan 48909-8157. To ensure proper credit, all payments must bear the Payment Identification Number WTR-3007. Late payments shall subject Defendant to an interest penalty applied in accordance with Section 600.6013 of the Revised Judicature Act, MCL 600.6013.

The following Paragraph E. is also added to Section XVIII:

Pursuant to Mediator Glazer's May 8, 2007 recommendation, Defendant shall make additional payments to the state of Michigan equal to \$150 per Average Cow added to its total herd at the Dairy Operations up to 1,000 Average Cows. Payments shall be made within 90 days of the addition of animals in accordance with Section XXI, Subsection E. and documented in Monthly Progress Reports submitted pursuant to Section XI, Paragraph B.

The following Paragraph F. is added to Section XVIII:

On May 11, 2007, Defendant removed animals producing the amount of manure equivalent to that of 50 lactating cows (i.e., 885 gallons) from the dairies due to the alleged unauthorized land application of untreated manure. In the event Defendant land applies untreated manure in the future, Defendant shall remove animals producing the amount of manure equivalent to that of 200 lactating cows for each day during which it land applies

untreated manure. The return of animals producing the amount of manure equivalent to those removed on May 11, 2007 or removed pursuant to this paragraph may occur upon Defendant supplying to the MDEQ a written certification that untreated manure was not land applied for a period of at least consecutive 60 days subsequent to the removal of animals.

XIX. STIPULATED FINES

Subsection A. is revised as follows:

Paragraph 1. is deleted.

Paragraph 3. is replaced with the following language:

Defendant agrees to pay stipulated penalties for Unlawful Discharges as follows:

a) Discharges for which the MDEQ provides competent evidence of a violation of Rule 50, Physical Characteristics, of Michigan's Water Quality Standards (Rule 323.1050 of the Michigan Administrative Code) attributable to Defendant shall result in a stipulated penalty of \$1,000 per day of Unlawful Discharge. This stipulated penalty shall also apply to any discharge to the ground caused by an overflow of a storage structure provided that the MDEQ provided competent evidence of the discharge to the ground.

b) Discharges for which the MDEQ provides competent analytical data demonstrating a violation of a non-numeric standard of the Water Quality Standards (except for Rule 323.1050) attributable to Defendant's acts or omissions shall result in a stipulated penalty of \$5,000 per day of Unlawful Discharge.

c.) Discharges for which the MDEQ provides competent analytical data demonstrating a violation of a numeric standard of the Water Quality Standards

attributable to Defendant's acts or omissions shall result in a stipulated penalty of \$10,000 per day of Unlawful Discharge.

XXI. GENERAL PROVISIONS

The following sentence is added to the end of Paragraph C.:

This provision applies to land application areas listed in Defendant's certified CNMPs and facilities at the dairies' Dairy Operations existing on the date of this Interim Order (except for the manure storage structure located on Packard Road), constructed pursuant to this Interim Order, or approved by MDEQ in writing subsequent to this Interim Order. The manure storage structure on Packard Road may be used to store Agricultural Waste until the earlier of 32 months after the Effective Date of this Interim Order or when all Agricultural Waste in it is treated in the EarthMentor Treatment Systems. At that time, Defendant shall close the Packard Road structure in accordance with an MDEQ-approved closure plan unless a groundwater quality discharge permit has been issued for the structure or unless such a permit is no longer required for the structure due to a change in use, regulatory amendment, or other reason making the permit requirement inapplicable.

Paragraph D. is replaced with the following:

Settlement. This Interim Order constitutes a full civil settlement and satisfaction of all violations of the Original Consent Judgment alleged in the MDEQ's brief in support of its Motion to Show Cause filed with the Court on January 19, 2007. This Interim Order also resolves all civil liability for violations of the Original Consent Judgment or Part 31 of the NREPA and its rules alleged to have occurred prior to or subsequent to January 19, 2007, up to the Effective Date of this Order, including violations set forth in MDEQ Notice Letters dated March 14, 2007; March 21, 2007; and April 11, 2007 along with any other alleged

violations known to the MDEQ as of the Effective Date of this Order. As of the Effective Date of this Order, the MDEQ represents that it is unaware of any pending claim for natural resources damages related to Defendant's activities.

A new Subsection E. is added as follows:

Herd Size. The Parties agree to Mediator Glazer's May 8, 2007 recommendation with respect to the management of herd size at the Dairy Operations. Specifically, Mediator Glazer established the current herd as 6,533 actual cows. The allowable number of Average Cows shall be as follows, except that the allowable numbers of Average Cows at any given time shall be adjusted downward to correspond with any herd reductions required at that time in accordance with Section IX, Subsection C. or Section XVIII, Paragraph F. Defendant may at any time, at its sole discretion, reduce its herd size to a greater degree than specified below:

1. Within 30 days of the Effective Date of this Order, Defendant shall reduce the herd to 6,266.5 Average Cows.
2. Upon written certification by a licensed professional engineer that the EarthMentor Treatment Systems for each Dairy Operation are constructed as designed and capable of treating Agricultural Waste produced (Engineer's Certification), the herd size may increase to no more than 6,466.5 Average Cows. The Engineer's Certification shall also include updated diagrams of the EarthMentor Treatment Systems to include as-built locations of treatment components (including transfer lines, pumps, and other appurtenances relied upon for waste treatment), direction of flow, storage capacity, and waste inputs.

3. Defendant shall not exceed the herd size set forth at Paragraph 2, above, until Defendant presents to MDEQ representative sample analysis, collected from the primary treatment cell (identified as G on App. C for Vreba-Hoff Dairy I and II) of each EarthMentor Treatment System at the point when this cell is at normal operating capacity and ready to transfer wastewater to a secondary treatment cell (identified as H1, H2, and I on App. C for Vreba-Hoff Dairy I and as H and I on App. C for Vreba-Hoff Dairy II), or from a secondary treatment cell, that demonstrates that the treatment standards set forth in Section IX, Paragraph B. 7 have been achieved. Upon demonstrating to the satisfaction of the Court that the treatment standards have been met, the Court shall allow Defendant, consistent with the recommendations of Mediator Glazer, to increase the herd size to no more than 7,266.5 Average Cows by adding no more than 100 Average Cows in any 30-day period, not to exceed a total increase of 800 Average Cows. The MDEQ reserves any right it has to challenge any such expansion to protect public health and the environment.

4. Defendant shall not add additional cows beyond those set forth above until Defendant documents that the EarthMentor Treatment System is operating through all stages and that all outputs (semi-solids and irrigation water) are meeting standards. Defendant is then free to populate the facility with animals by utilizing the existing buildings consistent with normal animal husbandry practices subject only to the limitation of construction of additional freestalls set forth below.

5. Defendant agrees to refrain from constructing additional structures for the purpose of housing animals or additional freestalls for a period of 10 years

commencing upon the Effective Date of this Order, except for replacement structures that do not increase the animal holding capacity at the combined Dairy Operations. The Dairy Operations currently have 7,470 freestalls, combined. The Parties agree that the most appropriate means of providing for this commitment, which extends beyond the life of this Interim Order, is by a settlement agreement.

XXIII. TERMINATION

This section is replaced with the following language:

This Judgment shall remain in full force and effect until the later of November 15, 2009 or the date on which all Untreated Agricultural Waste present at the Dairy Operations as of the Effective Date of this Interim Order has been treated or transported in accordance with this Judgment.



Hon. James R. Giddings
Circuit Court Judge

Dated: June 6, 2007
s:cases/vreba-hoffII/final interim order 6-6-07

PERMIT NO. MIG019000

MICHIGAN DEPARTMENT OF ENVIRONMENTAL QUALITY
NATIONAL POLLUTANT DISCHARGE ELIMINATION SYSTEM

LARGE CONCENTRATED ANIMAL FEEDING OPERATIONS GENERAL PERMIT

In compliance with the provisions of the Federal Water Pollution Control Act, as amended (33 U.S.C. 1251 et seq; the "Federal Act"), Michigan Act 451, Public Acts of 1994, as amended (the "Michigan Act"), Parts 31 and 41, and Michigan Executive Orders 1991-31, 1995-4 and 1995-18, large concentrated animal feeding operations (large CAFO), as defined in this permit, are authorized to operate facilities specified in individual "certificates of coverage" in accordance with the conditions set forth in this general permit (the "permit").

The applicability of this permit shall be limited to large CAFOs, as defined in this permit, not required to get individual permits and to other animal feeding operations that request coverage under the permit for which the Michigan Department of Environmental Quality (the Department) determines that this permit is appropriate for the applicant's operation. Upon issuance of this permit the Department will cease issuing certificates of coverage (COCs) under CAFO General Permits No. MIG440000 and MIG010000, except for COCs issued under MIG440000 for applications received by September 1, 2005.

In order to constitute a valid authorization, this permit must be complemented by a certificate of coverage (COC) issued by the Department. The following will be identified in the COC (as appropriate):

- The rainfall event size (25-year 24-hour or 100-year 24-hour rainfall) and magnitude at the production area.
- The date by which existing CAFOs shall attain six months storage (Part I.A.4.a.1)
- The date by which existing storage structures shall meet NRCS Practice Standard No. 313 (Part I.A.4.a.2)b)B)ii)
- The date by which the permittee shall have an operator certified by the Department.
- The date by which the permittee shall submit the approved CNMP as required by Part I.A.5.

All contact with the Department required by this permit shall be to the Department representative indicated in the certificate of coverage, and all Department approvals specified in this permit shall be by the Department representative indicated in the certificate of coverage, unless specified otherwise.

In accordance with Section 324.3120 of the Michigan Act, the permittee shall make payment of an annual permit fee to the Department for each October 1 the permit is in effect regardless of occurrence of discharge. The permittee shall submit the fee in response to the Department's annual notice. The fee shall be postmarked by January 15 for notices mailed by December 1. The fee is due no later than 45 days after receiving the notice for notices mailed after December 1. Fees paid in accordance with the Michigan Act are not refundable. Failure to pay annual permit fees is a violation of this permit and may result in the revocation of permit coverage.

COCs and other documents related to applications for coverage under this permit will be posted on the Department website for a period of fourteen days prior to issuance. Any person may file comments with the Department on these documents. Any person may request a public hearing on the proposed COC. The Department may reject as untimely any comments or public hearing requests filed after the fourteen day public notice period.

The terms and conditions of this general permit shall apply to an individual facility on the effective date of a certificate of coverage for the facility. The Department may grant a contested case hearing on this general permit in accordance with the Michigan Act. Any person to whom this permit is not acceptable may file a sworn petition with the Office of Administrative Hearings of the Michigan Department of Environmental Quality, setting forth the conditions of the permit which are being challenged and specifying the grounds for the challenge. The Department may reject any petition filed more than 60 days after issuance as untimely. The Department may grant a contested case hearing on the certificate of coverage issued to an individual facility under this general permit in accordance with Rule 2192(c) (Rule 323.2192 of the Michigan Administrative Code).

The provisions of this permit are severable. After notice and opportunity for a hearing, this permit may be modified, suspended or revoked in whole or in part during its term in accordance with applicable laws and rules. This general permit shall take effect immediately upon the date of issuance.

This general permit shall expire at midnight, April 1, 2010.

Issued November 18, 2005.


William Creal, Chief
Permits Section, Water Bureau

PART I

Section A. Effluent Limitations and Monitoring Requirements

1. Authorized Discharges and Overflows

During the period beginning on the effective date of this permit, and lasting until the expiration of this permit, the permittee is authorized to discharge the following, provided that the discharge does not cause or contribute to a violation of Michigan's Water Quality Standards:

- a. Large CAFO waste in the overflow from the storage structures identified in Part I.A.4.a. below, when all of the following conditions are met:
 - 1) These structures are properly designed, constructed, operated and maintained.
 - 2) Either chronic or catastrophic precipitation events cause an overflow of the storage structures to occur.
 - 3) The production area is operated in accordance with the requirements of this permit.
- b. Runoff from precipitation events from land application areas and areas listed in Part I.A.4.b.8) that are managed in accordance with the Nutrient Management Plan (NMP)(see Part I.A.4., below).

This permit does not authorize any discharge to the groundwaters. Such discharge may be authorized by a groundwater discharge permit issued pursuant to the Michigan Act.

2. Monitoring Discharges and Overflows from Storage Structures

The discharge authorized in Part I.A.1.a., above, shall be monitored four times daily (every six hours) by the permittee as specified below on any day when there is a discharge:

<u>Parameter</u>	<u>Units</u>	<u>Sample Type</u>
Overflow Volume (at storage structure)	MGD	Report Total Daily Volume
Discharge to Surface Waters Volume	MGD	Report Total Daily Volume
Overflow Observation (at storage structure)	---	Report Visual Condition of the Overflow
Discharge to Surface Waters Observation	---	Report Unusual Characteristics (see below)

Any unusual characteristics of the discharge at the point of discharge to surface waters (i.e., unnatural turbidity, color, oil film, odor, floating solids, foams, settleable solids, suspended solids, or deposits) shall be reported concurrently with the discharge reporting required in Part II.B.2. and included in the discharge report required by Part I.B.1.

3. Prohibited Discharges

During the period beginning on the effective date of this permit, and lasting until the expiration of this permit, the permittee is prohibited from having any dry weather discharge or discharging any large CAFO waste and/or runoff that doesn't meet the requirements of Part I.A.1. An overflow that causes the washout or collapse of the storage structure dikes, sides or walls is not an authorized discharge. Discharges from land application that does not meet the requirements of Part I.A.1. or that violate Water Quality Standards are prohibited.

4. Nutrient Management Plan (NMP)

The permittee shall implement the following requirements.

- a. Large CAFO Waste Storage Structures
 - 1) Volume Design Requirements

The permittee shall have large CAFO waste storage structures in place and operational that are designed, constructed, maintained and operated to contain the total combined volume of all of the following:

 - a) All large CAFO waste generated from the operation of the large CAFO in a six-month or greater time period (including normal precipitation and runoff in the production area during the same time period). This is the operational volume of the storage structure.
 - b) All production area waste from the rainfall event size specified below.
 - A) The permittee shall use the 25-year 24-hour rainfall event for cattle, horses and sheep and existing swine, poultry & veal. Existing means populated prior to January 30, 2004.

PART I

Section A. Effluent Limitations and Monitoring Requirements

- B) The permittee shall use the 100-year 24-hour rainfall event for new swine, poultry & veal. New means populated on or after January 30, 2004.

The magnitude of the rainfall event will be specified in the certificate of coverage. This is an emergency volume to be kept available to contain large rainfall events.

- c) An additional design capacity of a minimum of 12 inches of freeboard for storage structures that are subject to precipitation caused runoff. For storage structures that are not subject to precipitation caused runoff, the freeboard shall be a minimum of 6 inches. This is the freeboard volume.

Records documenting the current design volume of any large CAFO waste storage structures, including volume for solids accumulation, design treatment volume, total design volume, and approximate number of days of storage capacity shall be kept with the permittee's CNMP for a minimum of five years. For existing CAFOs, the COC will specify the date by which the permittee shall attain six months storage volume capacity, but that date shall be no more than three years after the COC issuance date.

2) Physical Design & Construction Requirements

a) Depth Gauge

Large CAFO waste storage structures shall include an easily visible, clearly marked depth gauge. Clear, major divisions shall be marked to delineate each of the three volumes specified above in Part I.A.4.a.1).

b) Structural Design

Records documenting the current structural design, including as built drawings and specifications, of any large CAFO waste storage structures, whether or not currently in use, shall be kept with the permittee's CNMP until such structure is permanently closed in accordance with Part I.B.2.

A) New Storage Structures (constructed after the effective date of the COC)

Except as otherwise required by this permit, large CAFO waste storage structures shall, at a minimum, be constructed in accordance with NRCS standards, set forth in Conservation Practice Standard No. 313, Waste Storage Facility, dated June, 2003.

B) Existing Storage Structures

i) In a permit application for coverage under this permit the applicant shall either:

- (1) Provide documentation through an evaluation by a professional engineer that each storage structure is constructed in accordance with NRCS standards, set forth in Conservation Practice Standard No. 313, Waste Storage Facility, dated June, 2003, or
- (2) For each storage structure, demonstrate environmental performance equivalent to NRCS standards, set forth in Conservation Practice Standard No. 313, Waste Storage Facility, dated June, 2003. The demonstration shall be accomplished through an evaluation by a professional engineer. Applicants verified under the Livestock System of the Michigan Agriculture Environmental Assurance Program (MAEAP) may submit the "Evaluation of Existing Components" for review by the Department. After review of the evaluation, the Department will notify the applicant if additional information is necessary to complete the application.

- ii) If the applicant cannot provide the documentation or demonstration required by (1) or (2) above, the applicant may request that the COC specify a date by which the permittee shall provide storage structures that attain (1) above, but that date shall be no more than three years after the COC issuance date.

3) Inspection Requirements

The permittee shall inspect the large CAFO waste storage structures a minimum of one time weekly year-round. A record of the inspections shall be maintained by the permittee and kept with the CNMP for a period of five years. These inspections shall include all of the following:

- a) The large CAFO waste dikes for cracking, inadequate vegetative cover, woody vegetative growth, evidence of overflow, leaks, seeps, erosion, slumping, animal burrowing or breakthrough, and condition of the storage structure liner.
- b) The depth of the large CAFO waste in the storage structure and the available operating volume as indicated by the depth gauge.
- c) The collection system, lift stations, mechanical and electrical systems, transfer stations, control structures and pump stations to assure that valves, gates and alarms are set correctly and all are properly functioning.

PART I**Section A. Effluent Limitations and Monitoring Requirements****4) Operation & Maintenance Requirements**

The permittee shall implement a Storage Structure Operation & Maintenance Program that incorporates all of the following management practices. The permittee shall initiate steps to correct any condition that is not in accordance with the Storage Structure Operation & Maintenance Program. A copy of the program shall be kept with the CNMP.

- a) In the event that a rainfall event causes the level of large CAFO waste in the storage structure to rise above the maximum operational volume level and enter the emergency volume level, the Department shall be notified. The level in the storage structure shall be reduced within one week, unless a longer time period is authorized by the Department (the removed large CAFO waste shall be land applied in accordance with this permit or the Department shall be notified if another method of disposal is to be used) and the emergency volume shall be restored.
- b) At some point in time during the period of November 1 to December 31 of each year, there shall be a minimum available operational volume in the large CAFO waste storage structures equal to the volume of large CAFO waste generated from the operation of the large CAFO in a six-month or greater time period (including normal precipitation and runoff in the production area during the same time period). The date of this occurring shall be recorded with the CNMP.
- c) Vegetation shall be maintained at a height not more than 6 inches above the ground on large CAFO waste dikes and the vegetation shall have sufficient density to prevent erosion.
- d) Dike damage caused by erosion, slumping or animal burrowing shall be corrected immediately and steps taken to prevent occurrences in the future.
- e) The integrity of the large CAFO waste storage structure liner shall be protected. Liner damages shall be corrected immediately and steps taken to prevent future occurrences.
- f) Problems with the collection system, lift stations, mechanical and electrical systems, transfer stations, control structures and pump stations shall be corrected as soon as possible. Records of these inspections and records documenting any actions taken to correct deficiencies shall be kept with the CNMP for a minimum of five years. Deficiencies not corrected within 30 days must be accompanied by an explanation of the factors causing the delayed correction.

b. Best Management Practices Requirements

The following are designed to achieve the objective of preventing unauthorized discharges to waters of the State from production areas and from land application activities.

1) Conservation Practices

The permittee shall maintain specific conservation practices near production areas and land application areas that are sufficient to control the runoff of pollutants to surface waters of the State in quantities that may cause or contribute to a violation of water quality standards. These practices shall be consistent with NRCS Conservation Practices.

2) Divert Clean Water

The permittee shall design and implement structures and management practices to divert clean storm water and floodwaters to prevent contact with contaminated portions of the production areas. Clean storm water may include roof-runoff, runoff from adjacent land, and runoff from feed or silage storage areas where such runoff has not contacted feed, silage or silage leachate.

3) Prevent Direct Contact of Animals with Waters of the State

There shall be no access of animals to surface waters of the State at the production area of the large CAFO. The permittee shall develop and implement appropriate controls to protect water quality by preventing access of animals to waters of the State.

4) Animal Mortality

The permittee shall handle and dispose of dead animals in a manner that prevents contamination of waters of the State and in accordance with PA 239 of 1982, as amended, Bodies of Dead Animals Act (BODA). Mortalities must not be disposed of in any liquid large CAFO waste storage structure. Records of mortality management and practices shall be kept with the permittee's CNMP for a minimum of five years.

PART I

Section A. Effluent Limitations and Monitoring Requirements

5) Chemical Disposal

The permittee shall prevent introduction of hazardous or toxic chemicals (for purposes of disposal) into large CAFO waste storage structures. Examples of hazardous and toxic chemicals are pesticides and petroleum products/by-products.

6) Inspection, Proper Operation and Maintenance

The permittee shall implement an inspection, operation and maintenance program that includes periodic visual inspection, proper operation, and maintenance of all large CAFO waste handling equipment including piping and transfer lines, and all runoff management devices (e.g., cleaning separators, barnyards, catch basins, screens,) to prevent unauthorized discharges to surface water and to groundwater. Specific inspection requirements include all of the following:

- a) Weekly visual inspections of all clean storm water and floodwater diversion devices.
- b) Daily visual inspections of water lines, including drinking water and cooling water lines, and aboveground piping and transfer lines.
- c) Any deficiencies found as a result of inspections shall be corrected as soon as possible.
- d) Records of these inspections and records documenting any actions taken to correct deficiencies shall be kept with the CNMP for a minimum of five years. Deficiencies not corrected within 30 days must be accompanied by an explanation of the factors causing the delayed correction.

7) Land Application of Large CAFO Waste

a) Field-by-Field Assessment

The permittee shall conduct a field-by-field assessment of all land application areas. Each field shall be assessed prior to use for land application of large CAFO waste. This assessment shall determine the form, source, amount, timing, rate and method of application of large CAFO waste and will demonstrate that land application of large CAFO waste is in accordance with field specific nutrient management practices that ensures appropriate agricultural utilization of the nutrients in the large CAFO waste and will not result in unauthorized discharges. The assessment shall identify field specific conditions including soil type, locations of tile outlets, tile risers and tile depth, and offsite conditions such as buffers and distance or conveyance to surface waters. Any new fields shall be assessed prior to their use for land application activities and the Department shall be notified of the new fields prior to their use. All assessments shall be kept in the Land Application Log. An assessment for a particular field can be deleted from the Land Application Log once that field is no longer used for land application.

b) Field Inspections

Prior to conducting land application of large CAFO waste to fields determined to be suitable under Part I.A.4.b.7)a) above, the permittee shall perform the following inspections at the indicated frequency to ensure that unauthorized discharges do not occur as a result of the land application of large CAFO waste. Records of inspections, monitoring and sampling required by this section shall be recorded in the Land Application Log required by Part I.A.4.b.7)g).

A) Large CAFO waste shall be sampled a minimum of once per year to determine nutrient content and analyzed for total Kjeldahl nitrogen (TKN), ammonium nitrogen, and total phosphorus. Large CAFO waste shall be sampled in a manner that produces a representative sample for analysis. Guidance for large CAFO waste sampling protocols can be found in Bulletin NCR 567 available from Michigan State University Extension. Analytical methods shall be as required by Part II.B.13. The results shall be used to determine land application rates. Record the nutrient levels, analysis methods used and basis for determining land application rates.

B) Soils at land application sites shall be sampled a minimum of once every three years to determine phosphorus levels and the results shall be used to determine land application rates. Sample soil using an 8 inch vertical core, and take 20 or more cores in a random pattern spread evenly over each uniform field area. A uniform field area shall be no greater than 20 acres or it can be up to 40 acres if that field has one soil map unit and has been managed as a single field for the last ten years. The 20 cores shall be composited into one sample and analyzed using the Bray P1 method. Alternate methods may be used upon approval of the Department. Record the phosphorus levels. Additional information on soil sampling can be found in Michigan State University Extension Bulletins E2904 and E498.

PART I

Section A. Effluent Limitations and Monitoring Requirements

C) The permittee shall inspect each field no earlier than 48 hours prior to each land application of large CAFO waste to that field to evaluate the current suitability of the site for application. This inspection shall include, at a minimum, the state of all tile outlets, evidence of soil cracking, the moisture holding capacity of the soil, crop maturity, and the condition of designated conservation practices (i.e., grassed waterways, buffers, diversions). Keep written records of the results and findings of all inspections.

D) The permittee shall visually inspect all tile outlets draining a given field immediately prior to the land application of large CAFO wastes to that field. Tile outlets shall be inspected again upon the completion of the land application to the field, or at the end of the working day should application continue on that field for more than one day (include written descriptions of tile inspections, and observe and compare color and odor before and after land application).

E) All tiled fields to which large CAFO wastes have been applied in the prior 30 days shall be visually inspected within 24 hours after the first rain event of one-half inch or greater, for signs of a discharge of large CAFO waste. Keep written descriptions of tile inspections. If an inspection reveals a discharge with color, odor, or other characteristics indicative of an unauthorized discharge of large CAFO waste, then permittee shall immediately notify the Department of the suspected unauthorized discharge in accordance with the reporting procedures contained in Part II.B.2.

F) The permittee shall inspect all land application equipment daily during use for leaks, structural integrity, and proper operation and maintenance. Land application equipment shall be calibrated annually to ensure proper application rates. Maintain written records of inspections and calibrations.

c) Rates

The permittee shall land apply large CAFO waste in accordance with land application rates developed on a field-specific basis (1) to prevent dry weather discharges, (2) to prevent wet weather discharges that cause or contribute to a violation of water quality standards; and (3) that do not exceed the capacity of the soil and the planned crops to assimilate nutrients; and are quantified and based on the most limiting nutrient in the soil (phosphorus or nitrogen), type of crop, realistic crop yield goals, soil type, and all nutrient inputs in addition to those from large CAFO waste.

The permittee shall comply with all of the following nutrient application limitations:

- A) Phosphorus
- i) If the Bray P1 soil test is 150 parts per million (PPM) or more large CAFO waste applications shall be discontinued until nutrient use by crops reduces phosphorus test levels to less than 150 PPM.
 - ii) If the Bray P1 soil test level is 75 PPM to 149 PPM, large CAFO waste applications shall be reduced to an annual rate where large CAFO waste phosphorus added does not exceed the phosphorus removed by the harvested crop. If this rate is impractical due to spreading equipment or crop production management, an annual quantity of large CAFO waste phosphorus equal to the amount of phosphorus removed by two crop years can be used for the first crop year (except where applied to shallow soils over bedrock). No additional phosphorus can be applied for the second crop year.
 - iii) If the Bray P1 soil test level is less than 75 PPM application rates shall be based on nitrogen as specified in B), below.

If the Department allows the use of methods other than Bray P1, the Department may revise the soil phosphorus limitations specified above.

B) Nitrogen

The annual rate of large CAFO waste application shall not exceed the nitrogen fertilizer recommendation (removal value for legumes) for the first crop year grown after the large CAFO waste is applied.

d) Prohibitions

- A) Large CAFO waste shall not be applied on land that is flooded or saturated with water at the time of land application.
- B) Large CAFO waste shall not be applied during rainfall events.

PART I

Section A. Effluent Limitations and Monitoring Requirements

C) Large CAFO waste shall not be surface applied without incorporation to frozen or snow covered ground except in accordance with the Department 2005 Technical Standard for the Surface Application of Large CAFO Waste on Frozen or Snow-Covered Ground Without Incorporation or Injection (page 25 of this permit).

D) Large CAFO waste application shall be delayed if rainfall exceeding one-half inch, or less if a lesser rainfall event is capable of producing an unauthorized discharge, is forecasted by the National Weather Service within 24 hours of the time of the planned application. Forecast models to be used can be found on the internet at <http://www.nws.noaa.gov/mdl/synop/products.shtml>. Model data to be used for one-half inch shall be:

- i) GFS MOS (MAV) Forecast Graphics: If the 24H Prob. \geq 0.50 in. is 70% or greater for the land application location then land application shall be delayed until the 24H Prob. \geq 0.50 in. is less than 70%.
- ii) GFS MOS (MEX) Text Message by Station Forecast: If the Q24 is 4 or greater then land application shall be delayed until the Q24 is less than 4. The station to be used shall be that which is closest to the land application area. If no station is close, then use the closest 2 or 3 stations.

Different model data shall be used if it is determined that rainfall less than $\frac{1}{2}$ " on a particular field is capable of causing an unauthorized discharge. For example: using the 24hr Prob. \geq .25" and a Q24 rating of 3 or greater may be appropriate on higher risk fields. If the NWS website is revised and the required forecast models are not available, the permittee shall contact the Department for information on which forecast models to use. Instructions for using this website are available from the Department. Other forecast services may be used upon approval of the Department.

e) Methods

Large CAFO waste shall be subsurface injected or incorporated into the soil within 24 hours of application. Large CAFO waste subsurface injected into frozen or snow covered ground shall have substantial soil coverage of the applied large CAFO waste. The following exceptions apply:

- A) Injection or incorporation may not be feasible where large CAFO wastes are applied to pastures or forage crops, such as alfalfa, wheat stubble or where no-till practices are used. Large CAFO waste may not be applied to pastures or forage crops, such as alfalfa, wheat stubble or where no-till practices are used where large CAFO waste may enter waters of the state.
- B) On ground that is frozen or snow-covered, large CAFO waste may be surface applied and not incorporated within 24 hours only if there is a field-by-field demonstration, in accordance with the Department 2005 Technical Standard for the Surface Application of Large CAFO Waste on Frozen or Snow-Covered Ground Without Incorporation or Injection (page 25 of this permit), showing that such land application will not result in a situation where large CAFO waste may enter waters of the state. Demonstrations shall be kept with the Land Application Log and submitted to the Department prior to use of the field.

f) Setbacks

The permittee shall comply with any of the following setback requirements:

- A) Large CAFO waste shall not be applied closer than 100 feet to any down-gradient surface waters, open tile line intake structures, sinkholes, agricultural well heads, or grassed waterways, ditches and swales that are conduits to surface waters.
- B) The permittee may substitute the 100-foot setback required in A), above, with a 35-foot wide vegetated buffer. Large CAFO waste shall not be applied within the 35-foot buffer.

g) Land Application Log

The results of land application inspections, monitoring, testing and record keeping shall be recorded in a "Land Application Log" which shall be kept up-to-date and with the CNMP. Log records shall be kept for a minimum of five years. The permittee shall document in the log in writing, as a minimum, records required by Part I.A.4.b.7) and all of the following information and inspection results:

- A) The time, date, quantity, method, location and application rate for each location at which large CAFO wastes are land applied.
- B) Expected and actual crop yields for each field receiving large CAFO waste.

PART I

Section A. Effluent Limitations and Monitoring Requirements

- C) Calculations showing the total nitrogen and phosphorus to be applied to each field, including sources other than large CAFO waste.
 - D) The total amount of nitrogen and phosphorus actually applied to each field including sources other than large CAFO waste, including documentation of calculations for the total amount applied.
 - E) A written description of weather conditions at time of application and for 24 hours prior to and following application based on visual observation.
 - F) Printouts of weather forecasts from the time of land application. Weather forecasts may also be saved as electronic files in which case the files do not need to be physically located in the log, but the log shall reference the location where the files are stored.
- 8) Non-Production Area Storm Water Management
The permittee shall implement practices including preventative maintenance, good housekeeping, and periodic inspections of at least once per year, to minimize and control pollutants in storm water discharges associated with the following areas:
- a) Immediate access roads and rail lines used or traveled by carriers of raw materials, waste material, or by-products used or created by the facility.
 - b) Sites used for handling material other than large CAFO waste.
 - c) Refuse sites.
 - d) Sites used for the storage and maintenance of material handling equipment.
 - e) Shipping and receiving areas.

5. Comprehensive Nutrient Management Plan (CNMP)

The CNMP shall apply to both production areas and land application areas and shall be a written document that describes the practices, methods and actions the permittee takes to meet all of the requirements of the Nutrient Management Plan, Part I.A.4.*

- a. Approval
The CNMP shall be approved by a Certified CNMP Provider.
- b. Submittal and Contents
The CNMP shall be submitted to the Department* by the date specified in the certificate of coverage. The CNMP submitted to the Department shall include:
 - 1) Large CAFO Waste Storage Structures - ensure adequate storage capacity of production area waste and CAFO process wastewater [Section A.4.a.]
 - a) Volume Design Requirements [Section A.4.a.1]
Records documenting current design volume of any large CAFO waste storage structures, including volume for solids accumulations, design treatment volume, total design volume, and approximate number of days of storage capacity.
 - b) Physical Design and Construction Requirements [Section A.4.a.2]
Records documenting the current structural design including as built drawings and specifications, of any large CAFO waste storage structures, whether or not currently in use.
 - c) Inspection Requirements [Section A.4.a.3]
Weekly inspection plan for waste storage structures.
 - d) Operation and maintenance [Section A.4.a.4]
Storage Structure Operation and Maintenance Plan.
 - 2) Best Management Practices Requirements [Section A.4.b.]
 - a) Divert Clean Water [Section A.4.b.1]
Identify structures and management practices used to divert clean water from the production area.
 - b) Prevent direct contact of confined animals with waters of the state in the production area [Section A.4.b.2]
Identify appropriate controls used to prevent animal access to waters of the state in the production area.

PART I

Section A. Effluent Limitations and Monitoring Requirements

- c) Animal Mortality [Section A.4.b.3]
Identify appropriate practices that ensure proper management of mortalities in accordance with PA 239 of 1982, as amended, BODA.
- d) Chemical Disposal [Section A.4.b.4]
Identify appropriate practices that ensure chemicals and other contaminants handled at the CAFO are not disposed of in any production area, CAFO process wastewater, or storm water storage or treatment system.
- e) Inspection, Proper Operation and Maintenance [Section A.4.a.5]
Provide an inspection, operation, and maintenance program for large CAFO wastewater and runoff handling equipment and management devices.
- f) Land application of Large CAFO Waste [Section A.4.b.7]
Provide a land application plan that includes:
 - A) Field-by-field assessment of all land application areas.
 - B) Testing of production area waste and soils at land application sites.
 - C) Field Inspections prior to and following land application.
 - D) Inspections of land application equipment.
 - E) Field specific application rates for large CAFO wastes.
 - F) Appropriate prohibitions for land application.
 - G) Methods of application.
 - H) Setback requirements for each field.
- g) Non-Production Area Storm Water Management [Section A.4.a.8]
Identify appropriate non-production area storm water management practices.

c. Annual Review and Report

The permittee shall annually review the CNMP and update the CNMP as necessary to meet the requirements of Part I.A.4.

The permittee shall submit an annual report for the preceding January 1 through December 31 (calendar year) to the Department by April 1 of each year. The annual report shall be submitted on a form provided by the Department. The annual report shall include, but is not limited to, all of the following:

- 1) The average number of animals, maximum number of animals at any one time, and the type of animals, whether in open confinement or housed under roof (beef cattle, broilers, layers, swine weighing 55 pounds or more, swine weighing less than 55 pounds, mature dairy cows, dairy heifers, veal calves, sheep and lambs, horses, ducks, turkeys, other).
- 2) Estimated amount of total large CAFO waste generated by the large CAFO in the previous 12 months (tons or gallons).
- 3) Estimated amount of total large CAFO waste transferred to other persons by the large CAFO in the previous 12 months (tons or gallons).
- 4) Total number of acres for land application covered by the CNMP developed in accordance with this permit.
- 5) Total number of acres under control of the large CAFO that were used for land application of large CAFO waste in the previous 12 months.
- 6) A field specific spreading plan which identifies where and how much large CAFO waste will be applied to fields for the upcoming 12 months. The plan must account for all large CAFO waste expected to be generated in the upcoming 12 months.
- 7) The Land Application Log.
- 8) A statement indicating whether the current version of the large CAFO's CNMP was developed or approved by a certified CNMP provider.
- 9) A summary of all production area waste and CAFO process wastewater discharges from the production area that have occurred in the previous 12 months, including date, time, and approximate volume.

PART I

Section A. Effluent Limitations and Monitoring Requirements

d. CNMP Revisions

Prior to a significant change in the operation of the large CAFO, whenever there is an unauthorized discharge (see Parts I.A.1 and I.A.3.), or if the Department determines that the CNMP is inadequate in preventing pollution, the CNMP shall be revised and the revisions approved by a Certified CNMP Provider. Within ninety (90) days of a significant change, an unauthorized discharge or a Department requested revision; the revised portions of the CNMP shall be submitted to the Department with a copy of the Certified CNMP Provider certification that the revised CNMP has been approved.

Significant change includes, but is not limited to, any of the following:

- 1) An increase in the number of animals that is greater than or equal to 10% of the number identified in the CNMP.
- 2) An increase in the number of animals that results in a decrease in the waste storage capacity time, as identified in the CNMP, by one month or greater.
- 3) An increase in the number of animals where the large CAFO waste generated by the livestock requires more land for its application than is available at the time of the increase.
- 4) A decrease in the number of acres available for land application, where the large CAFO waste generated requires more land for application than will be available after the decrease.

* The Department recognizes that CNMPs are developed pursuant to programs other than the National Pollutant Discharge Elimination System (NPDES). The CNMP developed under this permit may follow the same format as the CNMP outline dated August 10, 2000 available at www.maeap.org or from the Department. If that CNMP outline is followed then the CNMP submitted to the Department may omit portions, such as animal inputs, not related to compliance with permit requirements.

PART I**Section B. Other Requirements****1. Reporting of Overflows and Discharges from Large CAFO Waste Storage Structures and Land Application**

If, for any reason, there is an overflow from large CAFO waste storage structures and/or a discharge of pollutants to a surface water of the State from large CAFO waste storage structures, production areas, or land application areas, the permittee shall report the overflow and/or discharge to the Department in accordance with the reporting procedures contained in Part II.B.2. Discharges to surface waters shall also be reported to the Clerk of the local unit of government and the county health department. In addition, the permittee shall keep a copy of the report together with the approved CNMP. The report shall include all of the following information:

- a. A description of the overflow and/or discharge and its cause, including a description of the flow path to the surface water of the State.
- b. The period of overflow and/or discharge, including exact dates and times, the anticipated time it is expected to continue, and steps taken or planned to reduce, eliminate and prevent recurrence of the overflow and/or discharge.
- c. Monitoring results as required by Part I.A.2.
- d. In the event of a discharge through tile lines, the permittee shall identify and document, for field(s) from which the discharge occurred, the location of tile and depth of tile. The permittee shall also document field conditions at the time of the discharge, determine why the discharge occurred and how to prevent future discharges.
- e. If the permittee believes that the discharge is an authorized discharge, then the permittee shall include a demonstration that the discharge meets the requirements of Part I.A.1.a. and/or Part I.A.1.b., as appropriate.

2. Closure of Structures and Facilities

The following conditions shall apply to the closure of lagoons, large CAFO waste storage structures, earthen or synthetic lined basins, other manure and wastewater facilities, and silage facilities (collectively referred to as "structure(s)" for the remainder of this Part):

No structure shall be permanently abandoned. Structures shall be maintained at all times until closed in compliance with this section. All structures must be properly closed if the permittee ceases operation. In addition, any structure that is not in use for a period of twelve consecutive months must be properly closed unless the permittee intends to resume use of the structure at a later date, and either: (a) maintains the structure as though it were actively in use, to prevent compromise of structural integrity and assure compliance with final effluent limitations, or (b) removes large CAFO waste to a depth of one foot or less and refills the structure with clean water to preserve the integrity of the synthetic or earthen liner. In either case, the permittee shall conduct routine inspections, maintenance, and record-keeping as though the structure were in use. The permittee shall notify the Department in writing prior to closing structures, or upon making a determination that the structures will be maintained as specified in (a) or (b) above. Prior to restoration of use of the structure, the permittee shall notify the Department in writing and provide the opportunity for inspection.

The permittee shall accomplish closure by removing all waste materials to the maximum extent practicable. This shall include agitation and the addition of clean water as necessary to remove the waste materials. The permittee shall utilize as guidance the closure techniques contained in NRCS Conservation Practice Standard No. 360, Closure of Waste Impoundments. All removed materials shall be utilized or disposed of in accordance with the permittee's approved CNMP, unless otherwise authorized by the Department.

Unless the structure is being maintained for possible future use in accordance with the requirements above, completion of closure for structures shall occur as promptly as practicable after the permittee ceases to operate or, if the permittee has not ceased operations, 12 months from the date on which the use of the structure ceased, unless otherwise authorized by the Department.

3. Standards, Specifications and Practices

The published standards, specifications and practices referenced in this permit are those which are in effect at the time of permit issuance, unless otherwise provided by law. NRCS Conservation Practice Standards referred to in this permit are currently contained in Section IV, Practice Standards and Specifications, of the Michigan NRCS Field Office Technical Guide.

PART I

Section B. Other Requirements

4. Facility Contact

The "Facility Contact" was specified in the application. The permittee may replace the facility contact at any time, and shall notify the Department in writing within 10 days after replacement (including the name, address and telephone number of the new facility contact).

- a. The facility contact shall be any of the following (or a duly authorized representative of this person):
 - For a corporation, a principal executive officer of at least the level of vice president, or a designated representative, if the representative is responsible for the overall operation of the facility from which the discharge described in the permit application or other NPDES form originates.
 - For a partnership, a general partner.
 - For a sole proprietorship, the proprietor.
 - For a municipal, state, or other public facility, either a principal executive officer, the mayor, village president, city or village manager or other duly authorized employee.
- b. A person is a duly authorized representative only if both of the following requirements are met:
 - The authorization is made in writing to the Department by a person described in paragraph a. of this section.
 - 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 facility (a duly authorized representative may thus be either a named individual or any individual occupying a named position).

Nothing in this section obviates the permittee from properly submitting reports and forms as required by law.

5. Expiration and Reissuance

In order to maintain permit coverage, as required by Part I.B.6., under this or another permit beyond this permit's expiration date, the permittee shall submit a written request to the Department on or before October 1, 2009. A person holding a valid certificate of coverage under an expired general permit shall continue to be subject to the terms and conditions of the expired permit until the permit is terminated, revoked, or reissued.

If this permit is modified or reissued, the permittee shall: a) request coverage under the modified or reissued permit, b) apply for an individual NPDES permit, or c) request termination of authorization. Lacking an adequate response, the permittee's authorization shall expire on the effective date of the reissued or modified permit.

If this permit is terminated or revoked, all authorizations under the permit shall expire on the date of termination or revocation.

If the permittee continues to operate and is a CAFO then the permittee is obligated to maintain permit coverage except where the permittee need not seek continued permit coverage as allowed in Part I.B.6.

6. Duty to Maintain Permit Coverage

No later than 180 days before the expiration of the permit, the permittee must submit an application to renew its permit. However, the permittee need not seek continued permit coverage or reapply for a permit if both of the following apply:

- a. The facility has ceased operation or is no longer a CAFO.
- b. The permittee has demonstrated to the satisfaction of the Department that there is no remaining potential for a discharge of large CAFO waste that was generated while the operation was a CAFO.

7. Requirements for Land Application Not Under the Control of the large CAFO Permittee

In cases where large CAFO waste is sold, given away or otherwise transferred to another person (recipient) such that the land application of that large CAFO waste is no longer under the operational control of the large CAFO owner or operator that generates the large CAFO waste (generator), a manifest shall be completed and used to track the transfer and use of the large CAFO waste.

PART I

Section B. Other Requirements

- a. Prior to transfer of the large CAFO waste, the large CAFO owner or operator shall do all of the following:
- 1) Prepare a manifest for tracking the large CAFO waste before transferring the large CAFO waste.
 - 2) Designate on the manifest the recipient of the large CAFO waste.
- b. The generator shall use a manifest form which is approved by the Department and which provides for the recording of all of the following information:
- 1) A manifest document number.
 - 2) The generator's name, mailing address, and telephone number.
 - 3) The name and address of the recipient of the large CAFO waste.
 - 4) The nutrient content of the large CAFO waste to be transferred, in sufficient detail to determine the appropriate land application rates.
 - 5) The total quantity by units of weight or volume and the number and size of the loads or containers used to transfer that quantity of large CAFO waste.
 - 6) A statement that informs the recipient of his/her responsibility to properly manage the land application of the large CAFO waste as necessary to assure there is no illegal discharge of pollutants to waters of the State.
 - 7) The following certification by the generator: "I hereby declare that the large CAFO waste is accurately described above and is suitable for land application."
 - 8) Other certification statements as may be required by the Department.
 - 9) The address or other location description of the site or sites used by the recipient for land application or other disposal or use of the large CAFO waste.
 - 10) Signatures of the generator and recipient with dates of signature.
- c. The generator shall do all of the following with respect to the manifest:
- 1) Sign and date the manifest certification prior to transfer of the large CAFO waste.
 - 2) Obtain a dated signature of the recipient on the manifest and the date of acceptance of the large CAFO waste.
 - 3) Retain a copy of the signed manifest.
 - 4) Provide a signed copy to the recipient.
 - 5) Advise the recipient of his or her responsibilities to complete the manifest and, if not completed at time of delivery, return a copy to the generator within 30 days after completion of the land application or other disposal or use of the large CAFO waste.
- d. One manifest may be used for multiple loads or containers of the same large CAFO waste transferred to the same recipient. The manifest shall list separately each address or location used by the recipient for land application or other disposal or use of the large CAFO waste. Each different address or location listing shall include the quantities of large CAFO waste transferred to that location and dates of transfer.
- e. The generator shall not sell, give away or otherwise transfer large CAFO waste to a recipient if any of the following are true:
- 1) The recipient fails or refuses to provide accurate information on the manifest in a timely manner.
 - 2) The use or disposal information on the manifest indicates improper land application, use or disposal;
 - 3) The generator learns that there has been improper land application, use or disposal of the manifested large CAFO waste.
 - 4) The generator has been advised by the Department that the Department or a court of appropriate jurisdiction has determined that the recipient has improperly land applied, used, or disposed of a manifested large CAFO waste.
- f. If the generator has been prohibited from selling, giving or otherwise transferring large CAFO waste to a particular recipient under Part I.B.7.e., above, and the generator wishes to resume selling, giving or otherwise transferring large CAFO waste to that particular recipient, then the one of the following shall be accomplished:
- 1) For improper paperwork only, such as incomplete or inaccurate information on the manifest, the recipient must provide the correct, complete information.
 - 2) For improper land application, use or disposal of the large CAFO waste by the recipient, the generator must demonstrate, in writing, to the Department that the improper land application, use or disposal has been corrected, and the Department has provided approval of the demonstration.
- g. All manifests shall be kept on-site with the large CAFO owner or operator's CNMP for a minimum of five years and made available to the Department upon request.
- h. The requirements of Part I.B.7. do not apply to quantities of large CAFO waste less than one pickup truck load, one cubic yard, or one ton per recipient per day.

PART II

Section A. Definitions

Animal feeding operation (AFO) means a lot or facility that meets both of the following conditions:

1. Animals, other than aquatic animals, have been, are, or will be stabled or confined and fed or maintained for a total of 45 calendar days or more in any 12-month period.
2. Crops, vegetation, forage growth, or post-harvest residues are not sustained in the normal growing season over the portion of the lot or facility where animals are confined.

Two or more AFOs under common ownership are considered to be a single AFO if they adjoin each other or if they use a common area or system for the disposal of wastes. Common area includes land application areas.

CAFO process wastewater means water directly or indirectly used in the operation of a large CAFO for any of the following:

1. Spillage or overflow from animal or poultry watering systems.
2. Washing, cleaning, or flushing, pens, barns, manure pits, or other AFO facilities.
3. Direct contact swimming, washing, or spray cooling of animals.
4. Dust control.
5. Any water which comes into contact with, or is a constituent of, any raw materials, products, or byproducts including manure, litter, feed, milk, eggs, or bedding.

Catastrophic precipitation event is equal to or greater in size than a 25-year or 100 year (as applicable), 24-hour rainfall event. Catastrophic events include tornadoes, hurricanes, or other catastrophic conditions that would cause an overflow from the large CAFO waste storage structure that is designed, constructed, operated, and maintained to meet all the requirements of this permit.

Certified CNMP Provider is a person that attains and maintains certification requirements through a program approved by the United States Department of Agriculture Natural Resources Conservation Service (NRCS).

Chronic precipitation event is a series of wet weather conditions, including snowmelt, that precludes reducing the volume of large CAFO waste storage structures and that cause an overflow from the large CAFO waste storage structure that is designed, constructed, operated, and maintained to meet all the requirements of this permit.

CNMP means Comprehensive Nutrient Management Plan and is the plan developed by the permittee to implement the requirements of the NMP.

Department means the Michigan Department of Environmental Quality.

Discharge as used in this permit means the addition of any waste, waste effluent, wastewater, pollutant, or any combination thereof to any surface water of the state.

Incorporation means a mechanical operation that physically mixes the surface applied large CAFO waste into the soil so that a significant amount of the surface applied large CAFO waste is not present on the land surface within one hour after mixing. Incorporation also means the soaking into the soil of "liquids being used for irrigation water" such that liquids and significant solid residues do not remain on the land surface. "Liquids being used for irrigation water" are contaminated runoff, milk house waste, or liquids from large CAFO waste treated to separate liquids and solids. "Liquids being used for irrigation water" does not include untreated liquid manures.

Land application means spraying or spreading of biosolids, large CAFO waste, wastewater and/or derivatives onto the land surface, injecting below the land surface, or incorporating into the soil so that the biosolids, large CAFO waste, wastewater and/or derivatives can either condition the soil or fertilize crops or vegetation grown in the soil.

Land application area means land under the control of an AFO owner or operator, whether it is owned, rented, leased, or subject to an access agreement to which large CAFO waste is or may be applied. Land application area includes land not owned by the AFO owner or operator but where the AFO owner or operator has control of the land application of large CAFO waste.

Large CAFO waste means CAFO process wastewater, manure, production area waste or any combination thereof.

Large concentrated animal feeding operation or large CAFO is an AFO that stables or confines as many as or more than the numbers of animals specified in any of the following categories:

1. 700 mature dairy cattle (whether milked or dry cows).
2. 1000 veal calves.
3. 1,000 cattle other than mature dairy cows or veal calves. Cattle includes heifers, steers, bulls, and cow/calf pairs.
4. 2,500 swine each weighing 55 pounds or more.

PART II

Section A. Definitions

5. 10,000 swine each weighing less than 55 pounds.
6. 500 horses.
7. 10,000 sheep or lambs.
8. 55,000 turkeys.
9. 30,000 laying hens or broilers, if the AFO uses a liquid manure handling system.
10. 125,000 chickens (other than laying hens), if the AFO uses other than a liquid manure handling system.
11. 82,000 laying hens, if the AFO uses other than a liquid manure handling system.

As used in this permit the term "large CAFO" includes any animal feeding operation that request coverage under the permit for which the Department determines that this permit is appropriate for the applicant's operation. A large CAFO includes both production areas and land application areas.

Manure means animal excrement and is defined to include bedding, compost and raw materials or other materials commingled with animal excrement or set aside for disposal.

New Large CAFO means a large CAFO that is newly built and was not in production (i.e., animals were not on site) prior to February 27, 2004. New Large CAFO also means existing facilities where, due to expansion in production, the process or production equipment is totally replaced or new processes are added that are substantially independent of an existing source at the same site, after February 27, 2004. This does not include replacement due to acts of God or upgrades in technology that serve the existing production.

NMP means Nutrient Management Plan and is the requirements in the permit that set forth conditions to assure that water quality standards are met.

NRCS means the Natural Resources Conservation Service of the United States Department of Agriculture.

Overflow means the discharge of large CAFO waste resulting from the filling of large CAFO waste storage structures beyond the point at which no more large CAFO waste, or storm water can be contained by the structure.

Production area is the portion of the large CAFO that includes all areas used for animal product production activities. This includes, but is not limited to: the animal confinement area, the manure storage area, the raw materials storage area, and the waste containment areas. The animal confinement area includes open lots, housed lots, feedlots, confinement houses, stall barns, free stall barns, milk rooms, milking centers, cowyards, barnyards, medication pens, walkers, animal walkways, and stables. The manure storage area includes lagoons, runoff ponds, storage sheds, stockpiles, under house or pit storages, liquid impoundments, static piles, and composting piles. The raw materials storage area includes feed silos, silage bunkers, and bedding materials. The waste containment area includes settling basins, and areas within berms and diversions which separate uncontaminated storm water. Also included in the definition of "production area" is any egg washing or egg processing facility, and any area used in the storage, handling, treatment, or disposal of mortalities. Production area does not include pasture lands (Pasture land is land that is primarily used for the production of forage upon which livestock graze. Pasture land is characterized by a predominance of vegetation consisting of desirable forage species. Sites such as loafing areas, confinement areas, or feedlots which have livestock densities that preclude a predominance of desirable forage species are not considered pasture land.). Production areas do not include land application areas.

Production area waste means manure and any waste from the production area and any precipitation (e.g., rain or snow) which comes into contact with, or is contaminated by, manure or any of the components listed in the definition for "production area". Production area waste does not include water from land application areas.

Realistic crop yield goals means crop yield goals established based on soil productivity potential and the crop management practices utilized. A realistic crop yield goal is one which is achievable in three out of five crop years. If the goal is not achieved in at least three out of five years, then the goal shall be re-evaluated and revised.

Regional Administrator is the Region 5 Administrator, U.S. EPA, located at R-19J, 77 W. Jackson Blvd., Chicago, Illinois 60604.

Silage leachate means a liquid, containing organic constituents, that results from the storage of harvested plant materials, which usually have a high water content.

Waste storage structure means both pond-type storage structures and fabricated storage structures.

Tile means a conduit, such as corrugated plastic tubing, tile, or pipe, installed beneath the ground surface to collect and/or convey drainage water.

PART II

Section A. Definitions

Vegetated buffer means a narrow, permanent strip of dense perennial vegetation established parallel to the contours of and perpendicular to the dominant slope of the field for the purposes of slowing water runoff, enhancing water infiltration, and minimizing the risk of any potential nutrients or pollutants from leaving the field and reaching surface waters.

Water Quality Standards means the Part 4 Water Quality Standards developed under Part 31 of Act No. 451 of the Public Acts of 1994, as amended, being Rules 323.1041 through 323.1117 of the Michigan Administrative Code.

25-year, 24-hour rainfall event or 100-year, 24-hour rainfall event means the maximum 24-hour precipitation event with a probable recurrence interval of once in 25 years or 100 years, respectively, as defined by the "Rainfall Frequency Atlas of the Midwest", Huff and Angel, Illinois State Water Survey, Champaign, Bulletin 71, 1992, and subsequent amendments, or equivalent regional or state rainfall probability information developed there from.

PART II

Section B. Reporting Requirements

1. Retained Self-Monitoring Requirements

The permittee shall maintain with the CNMP a year-to-date log of inspection, monitoring and record keeping results required by this permit and, upon request, provide such log for inspection to the staff of the Department. Such inspection, monitoring and record keeping results shall be submitted to the Department upon request.

The permittee shall certify, in writing, to the Department, on or before April 1st of each year, that: 1) all retained self-monitoring requirements have been complied with and a year-to-date log has been maintained; and 2) the application on which this permit is based still accurately describes the animal feeding operation.

2. Discharge and Noncompliance Reporting

Compliance with all applicable requirements set forth in the Federal Act, Parts 31 and 41 of the Michigan Act, and related regulations and rules is required. All instances of discharge or noncompliance shall be reported as follows:

- a. 6-hour reporting – Any discharge shall be reported, verbally, as soon as practicable but no later than 6 hours from the time the permittee becomes aware of the discharge. A written report shall also be provided within five (5) days.
- b. other reporting - The permittee shall report, in writing, all other instances of noncompliance not described in a. above at the time monitoring reports are submitted; or, in the case of retained self-monitoring or inspection results or records, within five (5) days from the time the permittee becomes aware of the noncompliance.

Written reporting shall include: 1) a description of the discharge and/or cause of noncompliance and steps taken to correct the noncompliance; and 2) the period of noncompliance, including exact dates and times; or, if not corrected, the anticipated time the noncompliance is expected to continue, and the steps taken to reduce, eliminate and prevent recurrence of the noncomplying discharge. All reporting shall be to all of the following: the Department, the clerk of the local unit of government and the county health department. Verbal reporting to the Department after regular working hours shall be made by calling the Department's 24-hour Pollution Emergency Alerting System telephone number, 1-800-292-4706 (calls from out-of-state dial 1-517-373-7660). Verbal reporting to the clerk of the local unit of government and the county health department after regular working hours shall be made as soon as those agencies are next open for business unless those agencies provide after hours contact information.

3. Spill Reporting

The permittee shall immediately report any release of any polluting material which occurs to the surface waters or groundwaters of the state, unless the permittee has determined that the release is not in excess of the threshold reporting quantities specified in the Part 5 Rules (Rules 324.2001 through 324.2009 of the Michigan Administrative Code), by calling the Department at the number identified on the cover page of this permit, or if the notice is provided after regular working hours call the Department's 24-hour Pollution Emergency Alerting System telephone number, 1-800-292-4706 (calls from out-of-state dial 1-517-373-7660).

Within ten (10) days of the release, the permittee shall submit to the Department a full written explanation as to the cause of the release, the discovery of the release, response (clean-up and/or recovery) measures taken, and preventative measures taken or a schedule for completion of measures to be taken to prevent reoccurrence of similar releases.

4. Anticipated Noncompliance

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

5. Transfer of Ownership or Control

In the event of any change in control or ownership of facilities from which this authorization applies, the permittee shall notify the succeeding owner or controller of the existence of this permit by letter, a copy of which shall be forwarded to the Department at least 30 days prior to the actual transfer of ownership or control.

PART II

Section B. Reporting Requirements

6. Records Retention

All records, reports, documents, logs and information resulting from the requirements of this permit including all records of analyses performed and calibration and maintenance of instrumentation and recordings from continuous monitoring instrumentation shall be retained for a minimum of five (5) years, or longer if requested by the Department.

7. Notification of Changes in Discharge

The permittee shall notify the Department, in writing, within 10 days of knowing, or having reason to believe, that any activity or change has occurred or will occur which would result in the discharge of: 1) detectable levels of chemicals on the current Michigan Critical Materials Register, priority pollutants or hazardous substances set forth in 40 CFR 122.21, Appendix D, or the Pollutants of Initial Focus in the Great Lakes Water Quality Initiative specified in 40 CFR 132.6, Table 6, which were not acknowledged in the application or listed in the application at less than detectable levels; 2) detectable levels of any other chemical not listed in the application or listed at less than detection, for which the application specifically requested information; or 3) any chemical at levels greater than five times the average level reported in the complete application (see the first page of this permit for the date(s) the complete application was submitted). Any other monitoring results obtained as a requirement of this permit shall be reported in accordance with the compliance schedules.

8. Changes in Facility Operations

Any anticipated action or activity, including but not limited to facility expansion, production increases, or process modification, which will result in new or increased loadings of pollutants to the receiving waters must be reported to the Department by a) submission of an increased use request (application) and all information required under Rule 323.1098 (Antidegradation) of the Water Quality Standards or b) by notice if the following conditions are met: 1) the action or activity will not result in a change in the types of wastewater discharged or result in a greater quantity of wastewater than currently authorized by this permit; 2) the action or activity will not result in violations of the effluent limitations specified in this permit; 3) the action or activity is not prohibited by the requirements of Part II.B.9.; and 4) the action or activity will not require notification pursuant to Part II.B.7. Following such notice, the permit may be modified according to applicable laws and rules to specify and limit any pollutant not previously limited.

9. Bioaccumulative Chemicals of Concern (BCC)

Consistent with the requirements of Rules 323.1098 and 323.1215 of the Michigan Administrative Code, the permittee is prohibited from undertaking any action that would result in a lowering of water quality from an increased loading of a BCC unless an increased use request and antidegradation demonstration have been submitted and approved by the Department.

10. Availability of Reports

Except for data determined to be confidential under Section 308 of the Federal Act and Rule 2128 (Rule 323.2128 of the Michigan Administrative Code), all reports submitted in accordance with the terms of this permit shall be available for public inspection at the offices of the Department and the Regional Administrator. As required by the Federal Act, effluent data shall not be considered confidential. Knowingly making any false statement on any such report may result in the imposition of criminal penalties as provided for in Section 309 of the Federal Act and Sections 3112, 3115, 4106 and 4110 of the Michigan Act.

11. Representative Monitoring and Sampling

Monitoring shall be representative of the monitored activity. Samples and measurements taken as required herein shall be representative of both the large CAFO waste that is applied to the land and the soils that receive the large CAFO waste.

12. Additional Monitoring by Permittee

If the permittee monitors any pollutant at the location(s) designated herein more frequently than required by this permit, using approved analytical methods as specified above, the results of such monitoring shall be kept in accordance with the retained self-monitoring requirements of Part II.B.1. Such increased frequency shall also be indicated.

Monitoring required pursuant to Part 41 of the Michigan Act or Rule 35 of the Mobile Home Park Commission Act (Act 96 of the Public Acts of 1987) for assurance of proper facility operation shall be submitted as required by the Department.

PART II**Section B. Reporting Requirements****13. Test Procedures**

Test procedures for the analysis of pollutants shall conform to regulations promulgated pursuant to Section 304(h) of the Federal Act (40 CFR Part 136 - Guidelines Establishing Test Procedures for the Analysis of Pollutants), unless specified otherwise in this permit. Requests to use test procedures not promulgated under 40 CFR Part 136 for pollutant monitoring required by this permit shall be made in accordance with the Alternate Test Procedures regulations specified in 40 CFR 136.4. These requests shall be submitted to the Chief of the Permits Section, Water Bureau, Michigan Department of Environmental Quality, P.O. Box 30273, Lansing, Michigan, 48909-7773. The permittee may use such procedures upon approval.

The permittee shall periodically calibrate and perform maintenance procedures on all analytical instrumentation at intervals to ensure accuracy of measurements. The calibration and maintenance shall be performed as part of the permittee's laboratory Quality Control/Quality Assurance program.

PART II**Section C. Management Responsibilities****1. Duty to Comply**

All discharges authorized herein shall be consistent with the terms and conditions of this permit. The discharge of any pollutant identified in this permit more frequently than or at a level in excess of that authorized shall constitute a violation of the permit.

It is the duty of the permittee to comply with all the terms and conditions of this permit. Any noncompliance with the Effluent Limitations, Special Conditions, or terms of this permit constitutes a violation of the Michigan Act and/or the Federal Act and constitutes grounds for enforcement action; for permit termination, revocation and reissuance, or modification; or denial of an application for permit renewal.

2. Operator Certification

The permittee shall have the waste control facilities under direct supervision of an operator certified at the appropriate level for the facility certification by the Department, as required by Section 3110 of the Michigan Act. The permittee shall provide the Department, in writing, the contact information for the certified operator(s).

3. Facilities Operation

The permittee shall, at all times, properly operate and maintain all treatment or control facilities or systems installed or used by the permittee to achieve compliance with the terms and conditions of this permit.

4. Adverse Impact

The permittee shall take all reasonable steps to minimize any adverse impact to the surface waters or groundwaters of the state resulting from noncompliance with any requirement specified in this permit.

5. Containment Facilities

The permittee shall provide facilities for containment of any accidental losses of polluting materials in accordance with the requirements of the Part 5 Rules (Rules 324.2001 through 324.2009 of the Michigan Administrative Code).

6. Right of Entry

The permittee shall allow the Department, any agent appointed by the Department or the Regional Administrator, upon the presentation of credentials and following appropriate biosecurity protocols:

- a. a. to enter upon the permittee's premises where an effluent source is located, production areas, land application areas or any place in which any records are required to be kept under the terms and conditions of this permit.
- b. b. at reasonable times to have access to and copy any records required to be kept under the terms and conditions of this permit; to inspect process facilities, treatment works, monitoring methods and equipment regulated or required under this permit; and to sample any discharge of pollutants.

PART II

Section C. Management Responsibilities

7. Requirement to Obtain Individual Permit

The Department may require any person who has authorization by a certificate of coverage and this permit, to apply for and obtain an individual NPDES permit if any of the following circumstances apply:

- a. The discharge is a significant contributor to pollution as determined by the Department on a case-by-case basis.
- b. The permittee is not complying or has not complied with the conditions of this permit.
- c. A change has occurred in the availability of demonstrated technology or practices for the control or abatement of waste applicable to the point source discharge.
- d. Effluent standards and limitations are promulgated for point source discharges subject to this permit.
- e. The Department determines that the criteria under which the permit was issued no longer apply.

Any person may request the Department to take action pursuant to the provisions of Rule 2191 (Rule 323.2191 of the Michigan Administrative Code).

8. Signatory Requirement

All applications, reports, or information submitted to the Department shall be signed and certified as specified in Rule 2114 (Rule 323.2114 of the Michigan Administrative Code).

9. Need to Halt or Reduce Activity 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 conditions of this permit.

PART II

Section D. Activities Not Authorized by This Permit

1. Discharge to the Groundwaters

This permit does not authorize any discharge to the groundwaters. Such discharge may be authorized by a groundwater discharge permit issued pursuant to the Michigan Act.

2. Civil and Criminal Liability

Nothing in this permit shall be construed to relieve the permittee from civil or criminal penalties for noncompliance, whether or not such noncompliance is due to factors beyond the permittee's control, such as accidents, equipment breakdowns, or labor disputes.

3. 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 may be subject under Section 311 of the Federal Act except as are exempted by federal regulations.

4. State 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 law or regulation under authority preserved by Section 510 of the Federal Act.

5. Property Rights

The issuance of this permit does not convey any property rights in either real or personal property, or any exclusive privileges, nor does it authorize violation of any federal, state or local laws or regulations, nor does it obviate the necessity of obtaining such permits or approvals as may be required by law.

PART III

Permit Requirements Summary

This is an informational summary of permit requirements and is provided only as a guide to assist in understanding the permit. This summary does not replace or supercede the permit, nor is it a substitute for reading and understanding the permit.

Inspections/Sampling/Records/Reporting

“Log” refers to the Land Application Log required by Part I.A.4.b.7)g)

<u>Activity</u>	<u>Minimum Frequency</u>	<u>Report to/ Keep with</u>	<u>Permit location, Part ~</u>
Authorized discharge monitoring	4 times daily during discharge	DEQ	I.A.2.
Waste storage structures	Weekly	CNMP	I.A.4.a.3)
Emergency volume level reporting	Each event	DEQ	I.A.4.a.4)a)
Minimum 6 months operational volume	Once per year in November or December	CNMP	I.A.4.a.4)b)
Waste handling equipment	Daily or weekly	CNMP	I.A.4.b.6)
Field assessments	Prior to land application	Log	I.A.4.b.7)a)
Waste nutrient content	Yearly	Log	I.A.4.b.7)b)A)
Soil fertility	Every 3 years	Log	I.A.4.b.7)b)B)
Field inspections prior	0-48 hours before Application	Log	I.A.4.b.7)b)C)
Tile outlets	Prior and after application	Log	I.A.4.b.7)b)D)
Tiled field Inspections after	After 0.5 inch rain	Log	I.A.4.b.7)b)E)
Land application equipment	Daily during use	Log	I.A.4.b.7)b)F)
Technical standard demos	Prior to land application	Log	I.A.4.b.7)e)B)
CNMP	per COC due date	DEQ	I.A.5.b.
Annual report	April 1 of each year	DEQ	I.A.5.c.
CNMP revisions	Within 90 days of revision	DEQ	I.A.5.d.
All discharges to surface waters	Each discharge	DEQ	I.B.1.
Closing structures	Not Applicable	DEQ	I.B.2.
Facility contact	Within 10 days of change	DEQ	I.B.4.
Manifest	Prior to transfer of waste	On farm	I.B.7.

PART III

Permit Requirements Summary

<u>Activity</u>	<u>Minimum Frequency</u>	<u>Report to/ Keep with</u>	<u>Permit location, Part ~</u>
Retained self monitoring Certification	April 1 of each year	DEQ	II.B.1.
Spill reporting	Immediately upon release	DEQ	II.B.3.
Transfer of ownership or control	30 days prior to transfer	DEQ	II.B.5.

Records only

<u>Activity</u>	<u>Location of records</u>	<u>Permit location, Part ~</u>
Waste storage design volume	CNMP	I.A.4.a.1)
Waste storage structural design	CNMP	I.A.4.a.2)b)
Storage structure O&M Program	CNMP	I.A.4.a.4)
Mortality management	CNMP	I.A.4.b.4)
Waste nutrient levels, analytical methods, basis for land application rates	Log	I.A.4.b.7)b)A)
Time, date, quantity, method, location and application rate	Log	I.A.4.b.7)g)A)
Expected crop yield	Log	I.A.4.b.7)g)B)
Total nitrogen and phosphorus calculations for each field	Log	I.A.4.b.7)g)C)
Total nitrogen and phosphorus applied to each field	Log	I.A.4.b.7)g)D)
Land application weather conditions	Log	I.A.4.b.7)g)E)
Printout of weather forecasts (may use electronic storage)	Log	I.A.4.b.7)g)F)

PART IV

**Technical Standard for the Surface Application of
Concentrated Animal Feeding Operations Waste on Frozen or Snow-Covered Ground Without
Incorporation or Injection**

When Concentrated Animal Feeding Operation (CAFO) waste is surface-applied to frozen or snow-covered ground, without incorporation or injection, and that application is followed by rainfall or temperatures rising above freezing, the CAFO waste can run off into lakes, streams, or drains. Documented evidence shows that this runoff can cause resource damage to the surface waters of the state. Therefore, in accordance with Title 40 of the Code of Federal Regulations, Section 123.36, Establishment of Technical Standards for Concentrated Animal Feeding Operations, and State Rule 323.2196(5), CAFO Permits, the Michigan Department of Environmental Quality, Water Bureau, establishes the following Technical Standard. This Technical Standard shall be used for field-by-field assessments, as required by National Pollutant Discharge Elimination System permits issued to CAFOs, to assure that the land application of CAFO waste to frozen or snow-covered ground, without incorporation or injection, will not result in CAFO waste entering the waters of the state.

Based on the frozen and/or snow-covered conditions, the minimal settling and breaking down of the waste during these conditions, and the inability to predict or control snowmelt and rainfall, there are no practices that can ensure the runoff from fields with surface-applied waste on frozen or snow-covered ground will not be polluted. This standard assumes that surface runoff from snowmelt and/or rainfall will occur, and that the runoff will be polluted if CAFO waste is surface-applied on frozen or snow-covered ground. Therefore, the way to prevent these discharges is to apply CAFO waste only to fields, or portions of fields, where the runoff will not reach surface waters.

A field-by-field assessment must be completed, and all of the following requirements must be met and documented:

1. The Natural Resources Conservation Service's Manure Application Risk Index (MARI)* has been completed to identify fields, or portions of fields, that scored 37 or lower on the MARI.
2. An on-site field inspection of the entire field, or portion of field, that scored 37 or lower under the MARI has been completed. The inspection will take into consideration the slope and location of surface waters, tile line risers, and other conduits to surface water.
3. Based on the on-site field inspection, the Comprehensive Nutrient Management Plan (CNMP) will include documentation on topographic maps, the fields or portions of fields where the runoff will not flow to surface waters, and designate those areas as the only areas authorized for surface application without incorporation to frozen or snow-covered ground.
4. The findings of the inspection and documentation in the CNMP will be approved by a certified CNMP provider.

This assessment must be incorporated into the CNMP, and submitted as part of the CNMP Executive Summary each year.

* Grigar, J., and Lemunyon, J. A Procedure for Determining the Land Available for Winter Spreading of Manure in Michigan. NRCS publication. (Available on the MDEQ NPDES website)

ORIGINAL SIGNED

Richard A. Powers, Chief
Water Bureau

April 19, 2005

Date

Appendix B to rule 901:10-2-14 Available Water Capacity (AWC)

Practical Soil Moisture Interpretations for Various Soils Textures and Conditions to Determine Liquid Waste Volume Applications not to exceed AWC.

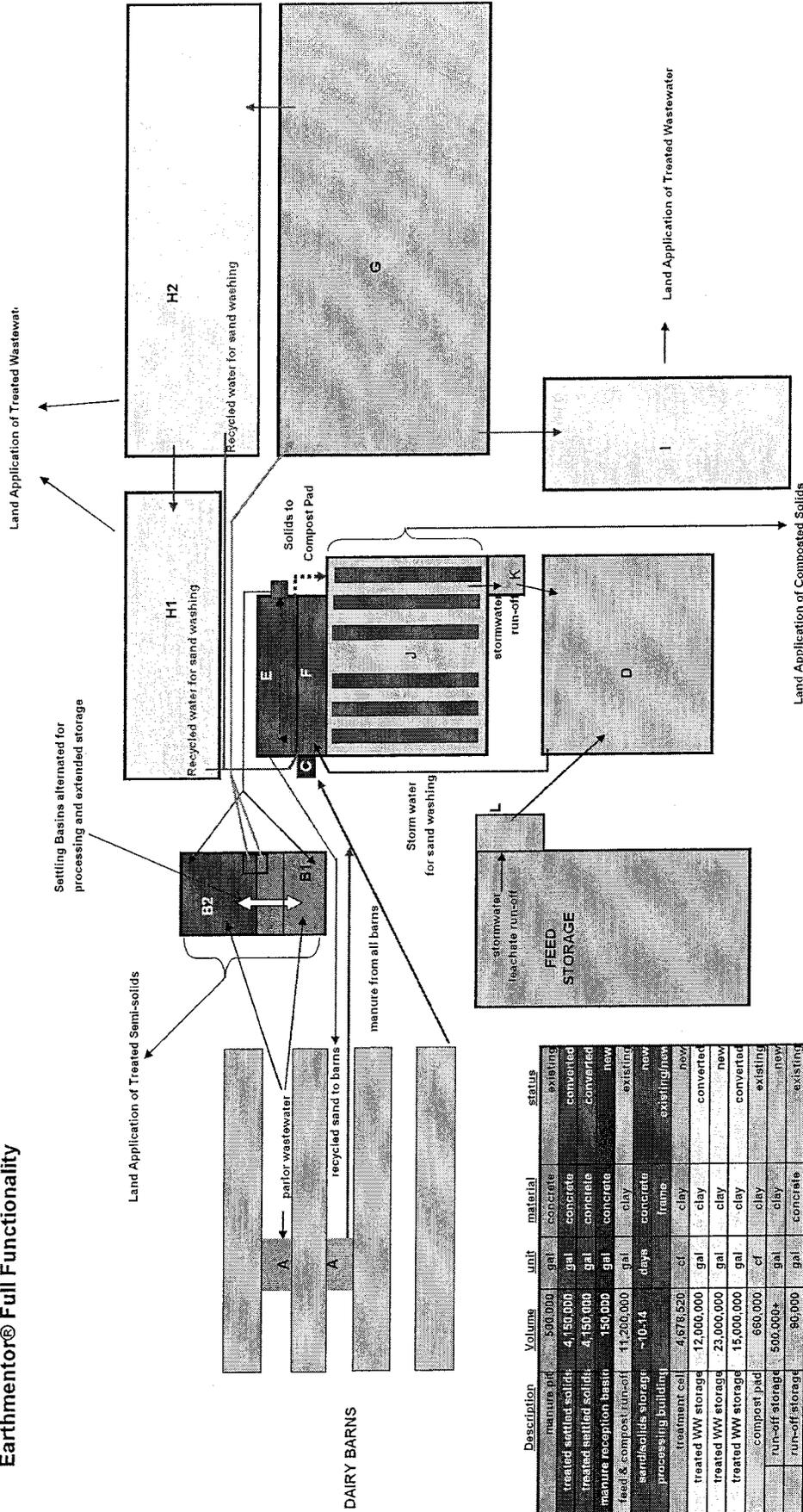
This table shall be used to determine the AWC at the time of application and the liquid volume in gallons that can be applied not to exceed the AWC. To determine the AWC in the upper 8 inches use a soil probe or similar device to evaluate the soil to a depth of 8 inches.

For land application, liquid manure application may also be calculated by converting acres per inch to gallons per acre. This conversion is based on the following formula: 1 acre – inch equals 27,156 gallons per acre.

Available Moisture in the Soil	Sands and Loamy Sands	Sandy Loam and Fine Sandy Loam	Very Fine Sandy Loam, Loam, Silt Loam, Silty Clay Loam	Sandy Clay, Silty Clay, Clay, Fine and Very Fine Textured Soils
< 25% Soil Moisture	Dry, loose and single-grained; flows through fingers.	Dry and loose; flows through fingers.	Powdery dry; in some places slightly crusted but breaks down easily into powder.	Hard, baked and cracked; has loose crumbs on surface in some places.
Amount to Reach AWC	20,000 gallons/ac	27,000 gallons/ac	40,000 gallons/ac	27,000 gallons/ac
25-50% or Less Soil Moisture	Appears to be dry; does not form a ball under pressure.	Appears to be dry; does not form a ball under pressure.	Somewhat crumbly but holds together under pressure.	Somewhat pliable; balls under pressure.
Amount to Reach AWC	15,000 gallons/ac	20,000 gallons/ac	30,000 gallons/ac	20,000 gallons/ac
50 - 75 % Soil Moisture	Appears to be dry; does not form a ball under pressure.	Balls under pressure but seldom holds together.	Forms a ball under pressure; somewhat plastic; slicks slightly under pressure.	Forms a ball; ribbons out between thumb and forefinger.
Amount to Reach AWC	10,000 gallons/ac	13,000 gallons/ac	20,000 gallons/ac	13,000 gallons/ac
75% to Field Capacity	Sticks together slightly; may form a weak ball under pressure.	Forms a weak ball that breaks easily, does not stick.	Forms ball; very pliable; slicks readily if relatively high in clay.	Ribbons out between fingers easily; has a slick feeling.
Amount to Reach AWC	5,000 gallons/ac	7,000 gallons/ac	11,000 gallons/ac	7,000 gallons/ac
100% Field Capacity	On squeezing, no free water appears on soil, but wet outline of ball on hand.	On squeezing, no free water appears on soil, but wet outline of ball on hand.	On squeezing, no free water appears on soil, but wet outline of ball on hand.	On squeezing, no free water appears on soil, but wet outline of ball on hand.
Above Field Capacity	Free water appears when soil is bounced in hand.	Free water is released with kneading.	Free water can be squeezed out.	Puddles: free water forms on surface

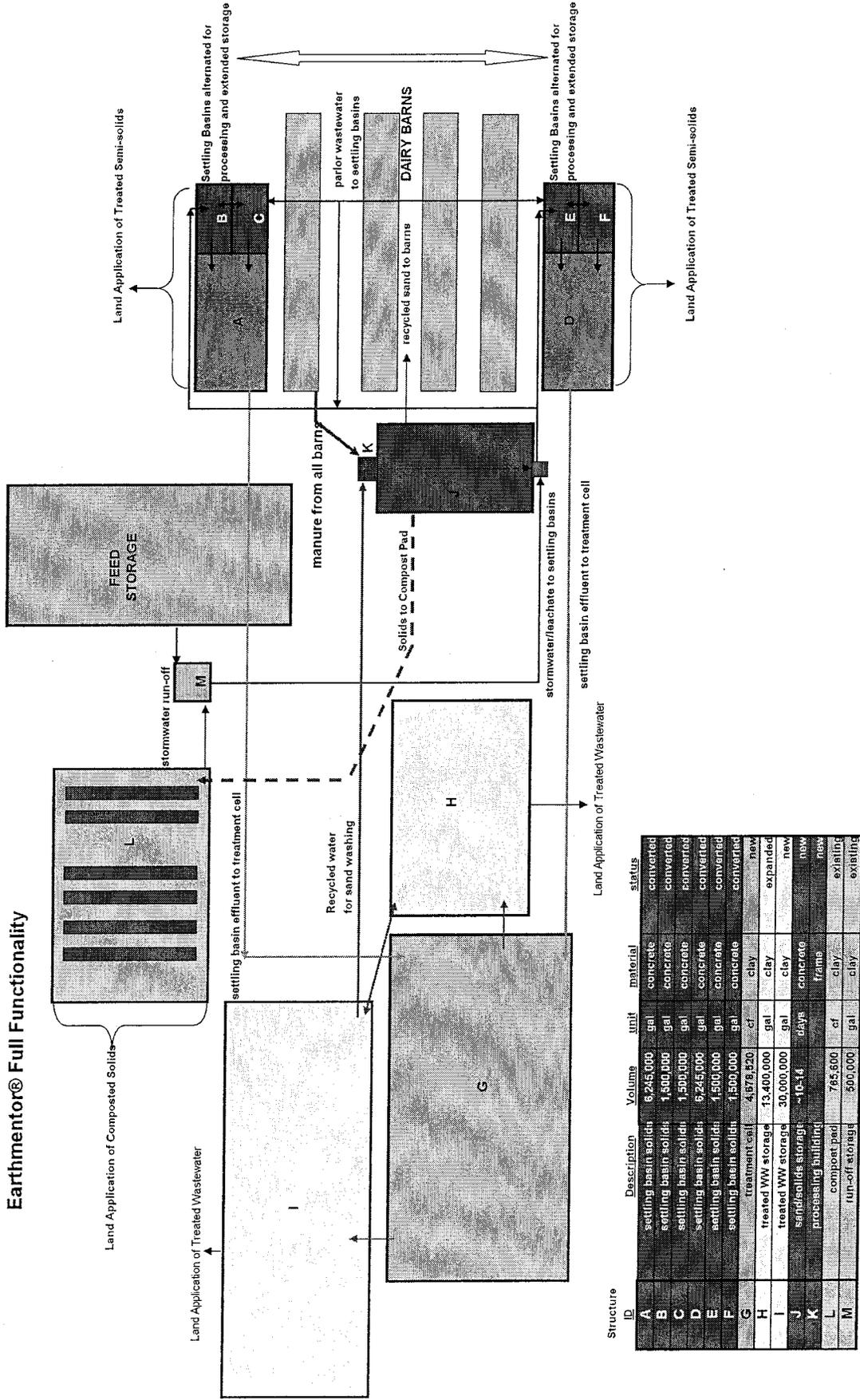
Note: Liquid manure applications to tiled fields must be less than or equal to 13,576 gal/ac.

VREBA HOFF DAIRY 1
Earthmentor® Full Functionality



Structure ID	Description	Volume	unit	material	status
A	manure pad	300,000	gal	concrete	existing
B1	treated settled solids	4,750,000	gal	concrete	converted
B2	treated settled solids	4,450,000	gal	concrete	converted
C	manure reception basin	150,000	gal	concrete	new
D	feed & compost run-off	11,200,000	gal	clay	existing
E	settling basins	~10-14	days	concrete	new
F	settling basins			concrete	existing/new
G	treatment cell	4,878,520	cf	clay	new
H1	treated WW storage	12,000,000	gal	clay	converted
H2	treated WW storage	23,000,000	gal	clay	new
I	treated WW storage	15,000,000	gal	clay	converted
J	compost pad	600,000	cf	clay	existing
K	run-off storage	500,000+	gal	clay	new
L	run-off storage	80,000	gal	concrete	existing

VREBA HOFF DAIRY II Earthmentor® Full Functionality



Structure ID	Description	Volume	unit	material	status
A	settling basin solids	6,245,000	gal	concrete	converted
B	settling basin solids	1,500,000	gal	concrete	converted
C	settling basin solids	1,500,000	gal	concrete	converted
D	settling basin solids	6,245,000	gal	concrete	converted
E	settling basin solids	1,500,000	gal	concrete	converted
F	settling basin solids	1,500,000	gal	concrete	converted
G	treatment cell	4,578,520	cf	clay	new
H	treated WW storage	13,400,000	gal	clay	expanded
I	treated WW storage	30,000,000	gal	clay	new
J	land/solids storage	-10-14	days	concrete	new
K	processing building			frame	new
L	compost pad	765,600	cf	clay	existing
M	run-off storage	600,000	gal	clay	existing