

STATE OF MISSISSIPPI SOLID WASTE MANAGEMENT PERMIT

TO OPERATE A SOLID WASTE MANAGEMENT FACILITY IN
ACCORDANCE WITH THE REGULATIONS GOVERNING
SOLID WASTE MANAGMENT

THIS CERTIFIES THAT

Terra Renewal Services, Inc.

has been granted permission to operate a solid waste management facility

located at

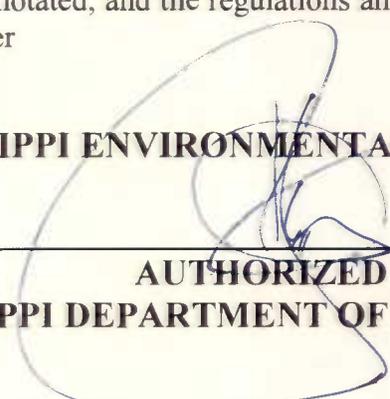
Section 4; Township 3N; Range 3W
Sections 1, 2, 3, 11, 14, 26, 33, 34, 35; Township 4N; Range 3W
Sections 28, 33, 34, 35; Township 5N; Range 3W
in Hinds County

under the name of

Hinds County Land Application Sites

This permit is issued in accordance with the provisions of the Mississippi
Code Annotated, and the regulations and guidelines adopted and promulgated
thereunder

MISSISSIPPI ENVIRONMENTAL QUALITY PERMIT BOARD



AUTHORIZED SIGNATURE

MISSISSIPPI DEPARTMENT OF ENVIRONMENTAL QUALITY

Issued: AUG 28 2014

Expires: JUL 31 2024

Permit No. SW0250030570

CONDITIONS

A. EFFECT OF PERMIT

The permittee shall operate the solid waste management facility in accordance with the Mississippi Nonhazardous Waste Management Regulations (state regulations), applicable federal regulations, and conditions of this permit.

B. PERMIT ACTIONS

This permit may be modified, revoked and reissued, or terminated for noncompliance with the terms and conditions of the permit. The filing of a request for a permit modification, revocation and reissuance, or termination or the notification of planned changes or anticipated noncompliance on the part of the permittee does not stay the applicability or enforceability of any permit condition.

C. SEVERABILITY

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

D. DUTIES AND REQUIREMENTS

1. Duty to Comply. The permittee shall comply with all conditions of this permit. Any permit noncompliance constitutes a violation of the solid waste law and regulations promulgated thereunder and is grounds for enforcement action, permit termination, revocation and reissuance, modification, or for denial of a permit renewal application.
2. Duty to Reapply. If the permittee wishes to continue an activity allowed by this permit after the expiration date of this permit, the permittee must submit a complete application for a new permit at least 180 days before this permit expires.
3. Duty to Mitigate. The permittee shall take all reasonable steps to minimize, prevent, or correct any adverse impact on human health or the environment resulting from noncompliance with this permit.
4. Proper Operation and Maintenance. The permittee shall at all times properly operate and maintain all equipment and systems which are installed or used by the permittee to achieve compliance with the conditions of this permit and application as submitted and approved by the Department of Environmental Quality (Department).

5. Duty to Provide Information. The permittee shall furnish to the Department, within a reasonable time, any relevant information which the Department may request to determine whether cause exists for modifying, revoking and reissuing, or terminating this permit, or to determine compliance with this permit.
6. Inspection and Entry. The permittee shall allow an authorized representative of the Department upon the presentation of credentials and other documents as may be required by law to:
 - a. Enter on the permittee's premises where a regulated activity is located or conducted, or where records must be kept under the conditions of this permit;
 - b. Have access to and copy at reasonable times any records that must be kept under the conditions of this permit;
 - c. Inspect at reasonable times any facilities, equipment, practices, or operations regulated or required under this permit;
 - d. Sample or monitor at reasonable times for the purposes of assuring permit compliance.
7. Transfer of Permits. This permit is not transferable to any person except after notice to and approval of the Mississippi Environmental Quality Permit Board. The Permit Board may require modification or revocation and reissuance of the permit to change the name of the permittee and incorporate such other requirements as may be necessary.

E. SITE SPECIFIC REQUIREMENTS

1. Authorized Waste.

The permittee is authorized to land apply the following sludges:

- a. Koch Foods (2 facilities) in Morton, MS
Waste: Pretreatment DAF skimmings from poultry processing operations
- b. River Valley Animal Feeds facility in Forest, MS
Waste: Pretreatment DAF skimmings and digested poultry wastewater solids
- c. Peco Foods facility in Tuscaloosa, AL
Waste: Wastewater residuals from food processing operations
- d. Sanderson Farms facility in Flowood, MS
Waste: Wastewater residuals from poultry processing operations

- e. Tyson Foods facility (CERES) in Vicksburg, MS
Waste: Pretreatment DAF skimmings from poultry processing operations
- f. Tyson Foods facility in Carthage, MS
Waste: Digested poultry wastewater solids
- g. Griffin Industries facility in Byram, MS
Waste: Wastewater residuals from poultry processing operations
- h. Water Valley Poultry facility in Water Valley, MS
Waste: Pretreatment DAF skimmings from poultry processing operations
- i. Ferguson Grease Services facility in Leland, MS
Waste: Restaurant rinse water residuals
- j. Foster Farms facility in Demopolis, AL
Waste: Wastewater residuals from poultry processing operations

The Department may approve sludges from new sources, restricted to food recycling, food processing, and animal food processing operations specifically, after having received and reviewed written documentation of the name and address of the generator, compliance with either Class A or Class B pathogen requirements in 40 CFR 503.32 by the generator, if applicable; the sludge analysis for all parameters listed under paragraph E.4.e of this permit; and any other information deemed pertinent.

2. Area of Application.

- a. Sludges shall be land applied to the approved areas only. Approved areas as designated in the application include the following (all acreages exclude buffer zones):
 - 1) Thomas Traxler Sites along Kay Broadwater Road (321.4 total acres)
 - a) VT-1 – 12.8 acres located in Section 33, Township 4N, Range 3W
 - b) VT-2 – 105 acres located in Section 33, Township 4N, Range 3W
 - c) VT-3 – 43 acres located in Sections 33 and 34, Township 4N, Range 3W
 - d) VT-4 – 41 acres located in Sections 33 and 34, Township 4N, Range 3W
 - e) VT-5 – 12.8 acres located in Section 4, Township 3N, Range 3W

- f) VT-6 – 24.8 acres located in Section 4, Township 3N, Range 3W
 - g) VT-7 – 6.6 acres located in Section 4, Township 3N, Range 3W
 - h) VT-8 – 88.2 acres located in Section 26 and 35, Township 4N, Range 3W
- 2) David Barton Sites (732.6 total acres)
- a) DB-1 – 281.6 acres located in Sections 1, 2, and 11, Township 4N and Section 35, Township 5N, Range 3W
 - b) DB-2 – 299.6 acres located in Sections 2, 3, and 11, Township 4N and Section 34, Township 5N, Range 3W
 - c) DB-3 – 86.2 acres located in Section 11, Township 4N, Range 3W
 - d) DB-4 – 21 acres located in Section 11, Township 4N, Range 3W
 - e) DB-5 – 44.2 acres located in Sections 11 and 14, Township 4N, Range 3W
- 3) Dale G. Wright Site, DW-1 – 29.6 acres located in Section 33, Township 5N, Range 3W
- 4) T.G. Wright Sites, TW-1 and TW-2 – 76.6 acres located in Sections 28 and 33, Township 5N, Range 3W

The total allowable area designated for waste application as described by the permit application is 1160.2 acres.

- b. No sludges shall be applied on wetland areas, unless such application is conducted in accordance with requirements of the U. S. Army Corps of Engineers and/or U.S.D.A. Soil Conservation Service.
- c. No sludges shall be applied in any location such that active or inactive hydrocarbon wells or water wells would be present beneath the actual application area without proper demonstration that the well has been adequately plugged.
- d. No sludges shall be applied within 0.5 mile of a public water supply intake structure in a surface water body or within 1000 feet of any existing public water supply well.
- e. No sludges shall be applied within 300 feet of any inhabited building, unless otherwise approved by the Department.

- f. No sludges shall be applied within applied within 0.5 mile of any licensed school, licensed day-care center, licensed hospital, or licensed nursing home or within 1000 feet of any church unless approved by the Department. A smaller setback distance may be allowed only if a written agreement is obtained from the owner or appropriate representative stating that a smaller setback is acceptable.
- g. All buffer distances from the edge of waste application to the property line shall be at least 200 feet.
- h. The following approximate areas located within the 100-year flood plain shall be avoided during the period from November through April unless approved for land application on a case-by-case basis:
 - 1) VT-2 – southernmost tip of the property
 - 2) VT-3 – eastern half of the property
 - 3) VT-4 – the entire property
 - 4) VT-5 – the northern portion of the property
 - 5) VT-6 – the northernmost tip of the property
 - 6) VT-8 – the southernmost tip of the property
 - 7) DB-1 – northwestern portion of the property
 - 8) DB-2 – northwestern portion of the property, but restriction applies to entire field based upon soil characteristics
 - 9) DW-1 – southern half of the property

The boundaries of these areas to avoid shall be determined based on the delineation of the 100-year flood plain according to the submitted FEMA flood plain maps.

- i. No sludges shall be applied by subsurface injection within 100 feet of the banks of any river, stream, lake, reservoir or coastal water. For sludges which are surficially applied, a minimum buffer distance of 250 feet shall be maintained between the land application area and the banks of any river, stream, lake, reservoir or coastal water. The Department reserves the right to modify these buffer distances should the conditions of the operation warrant such change.

3. Operating Conditions.

The permittee shall operate the facility in accordance with the following:

- a. Access to fields utilized for land application shall be reasonably controlled to restrict unauthorized personnel from entering the land application areas during operation and also for at least 12 months following the final application.
 - b. Sludge shall be applied to the fields according to the approved plan of operation by one of the following two processes:
 - 1) Sludge shall be applied by subsurface injection at a depth of 8 to 12 inches below the surface.
 - 2) Sludge shall be applied by surficial application followed by immediate incorporation into the soil. Surficial application shall be performed in such a way as to prevent any sludge whatsoever from being exposed on the ground surface after incorporation.
 - c. The land application activities must be conducted in a manner that would prevent objectionable off-site odors, vectors, and other off-site nuisances.
 - d. No sludge or other residue shall be applied to saturated ground. Saturation may be determined by digging a hole one-foot deep at the lowest point of the application area and observing for 30 minutes. If water appears in the hole, the soil is considered to be saturated.
 - e. No contaminant shall be allowed to enter any surface water or groundwater as a result of runoff or infiltration such that a violation of any water quality standard established by the Department occurs.
 - f. Food crops, feed crops, and fiber crops shall not be planted for 30 days after application of sludge.
 - g. The permittee shall maintain the soil pH of each receiving field at or above 6.5 unless otherwise approved by the Department.
 - h. Grazing of animals shall be strictly prohibited during operations and 30 days after application of sludge.
4. Monitoring, Records and Reporting.

Unless otherwise approved by the Department, the permittee shall conduct sampling, monitoring and reporting activities as follows:

- a. Sludge and soil samples taken for the purpose of monitoring shall be representative.

- b. The permittee shall retain records of all monitoring information, including copies of all reports and records required by this permit, for the operating life of the facility.
- c. Records of monitoring information shall include:
 - 1) The dates, exact place and time of sampling or measurements;
 - 2) The individuals who performed the sampling or measurements;
 - 3) The date(s) analyses were performed;
 - 4) The individual(s) who performed the analyses;
 - 5) The analytical techniques or methods used; and
 - 6) The results of such analyses.
- d. The permittee shall not land apply the sludge if the concentration of any pollutant (dry weight basis) in the sludge exceeds the following ceiling concentrations:

<u>Pollutant</u>	<u>Ceiling Concentration (milligrams per kilogram)</u>
Arsenic	75
Cadmium	85
Chromium	3000
Copper	4300
Lead	840
Mercury	57
Molybdenum	75
Nickel	420
Selenium	100
Zinc	7500

- e. Prior to land application, the permittee shall provide an appropriate demonstration that the 40 CFR 503.32 pathogen reduction requirements are not applicable or necessary or shall comply with either of the aforementioned Class A or Class B pathogen reduction requirements.
- f. The permittee shall not exceed the following annual application rates for Plant Available Nitrogen (PAN) in accordance with the cover crop as listed below:

<u>Crop</u>	<u>Maximum P.A.N. (Lbs/Acre/Year)</u>
Bahia Grass	160
Bermuda Grass	300
Fescue	120
Cotton	180
Corn	240
Clover, Alfalfa, Vetch	450
Grain Sorghum	180
Silage Sorghum	300
Millet	150
Rye Grass	220
Soybeans	300
Wheat	135

- g. The permittee shall not exceed an annual application rate for cadmium of 0.45 lbs/acre/year.
- h. The permittee shall not exceed the following cumulative pollutant loading rates during the life of the site:

Cumulative Pollutant Loading Rates

<u>Pollutant</u>	<u>Pounds Per Acre</u>
Arsenic	36
Cadmium	34
Chromium	2676
Copper	1338
Lead	267
Mercury	15
Molybdenum	16
Nickel	374
Selenium	89
Zinc	2497

- i. The permittee shall maintain records listing the date(s) and areas on which sludge was applied, the quantity and source of sludge applied, and the types of crops grown on each area.
- j. The permittee shall obtain analyses for each source of sludge accepted at a minimum of once per year. The analyses (on dry weight basis) must include pH, TKN, ammonia-nitrogen, nitrate-nitrogen, total arsenic, total cadmium, total chromium, total copper, total lead, total mercury, total molybdenum, total nickel,

total selenium, total zinc, oil and grease concentrations, fecal coliform, salmonella and percent solids.

- k. The permittee shall annually obtain at least one composite soil sample from each field of the permitted site on which sludge was applied. The soil samples shall be analyzed for pH, nitrate, total arsenic, total cadmium, total chromium, total copper, total lead, total mercury, total molybdenum, total nickel, total selenium, total zinc, and oil and grease.

- l. The permittee shall submit to the Department an annual report no later than February 28 of the following calendar year indicating the results of all monitoring required pursuant to paragraph i, j and k above. The annual report shall include the total quantity of sludge applied to each field, the soil analysis from each field, and the quantity of plant available nitrogen (PAN), arsenic, cadmium, chromium, copper, lead, mercury, molybdenum, nickel, selenium and zinc and oil and grease applied to each field in lb/acre/year.