

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

Sections 4, 5, 8, and 9; Township 1 North, Range 4 East; Sections 25 and 26; Township 2 North; Range 4 East
Sections 8, 17, 20 and 21; Township 1 North, Range 6 East; Section 6; Township 10 North ; Range 19 West
Sections 25, 35, and 36; Township 2 North, Range 3 East; Sections 24, 25, 26; Township 1 North ; Range 5 East

under the name of

TRS Land Application Site

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: March 11, 2014
Expires: February 28, 2024**

Permit No. SW0640030568

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, the application and plan of operation approved, and the 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 modification, revocation and reissuance, or termination of this permit, or the notification of planned changes or anticipated noncompliance on the part of the permittee does not stay the applicability or enforceability of any condition of this permit.

C. SEVERABILITY

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

D. DUTIES AND REQUIREMENTS

1. Duty to Comply. The permittee shall comply with all conditions of this permit. Any noncompliance with this permit constitutes a violation of the solid waste law and regulations promulgated thereunder and is grounds for enforcement action, termination, revocation and reissuance, modification of this permit 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 or correct any adverse impact on the environment resulting from noncompliance with this permit.
4. Land Deed of Trust. The permittee shall maintain access rights to the property where the facility is located for the duration of this permit and shall provide the Department with a copy of any lease renewal or other document regarding continued access rights.

5. 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.
6. Duty to Provide Information. The permittee shall furnish to the Department of Environmental Quality (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.
7. 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 at reasonable times 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 compliance with this permit.
8. Transfer of Permits. This permit may not transferred to a new owner or permittee except upon the notification and approval of the Environmental Quality Permit Board or the Permit Board's designee. Such transfer must be approved prior to sale, conveyance, or assignment of the rights in the permit held by the permittee.

E. SITE SPECIFIC REQUIREMENTS

1. Authorized Waste.

The permittee is authorized to land apply the following sludges:

- a. Tyson Foods - Forrest, MS
Waste: Meat Product Processing

- b. Koch Foods of Mississippi – Forrest, MS
Waste: Coffee, Creamers and Fruit Product Processing
- c. Koch Foods, Inc. – Morton, MS
Waste: Meat Product Processing
- d. Sanderson Farms – Flowood, MS
Waste: Meat Product Processing
- e. Tyson Foods – Vicksburg, MS
Waste: Meat Product Processing
- f. Water Valley Poultry – Water Valley, MS
Waste: Meat Product Processing

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.d of this permit; and any other information deemed pertinent.

2. Area of Application.

- a. Sludges shall be land applied to the approved areas only as designated in the application in accordance with the locational restrictions of this permit and the applicable locational restrictions of the Mississippi Nonhazardous Waste Management Regulations. Approved areas include the following (all acreages excluding buffer distances):
 - 1. WBT- 1: 420 acres total
 - 2. WRE -1:144.2 acres total
 - 3. FB-1: 110.8 acres total
 - 4. AP-1: 17.5 acres total
 - 5. DB-1 : 62.1 acres total
 - 6. TM-1 : 141.8 acres total
 - 7. TM-2: 22.4 acres total

- 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 within 300 feet of any inhabited building, unless otherwise approved by the Department.
- d. In areas where the off-site view of the property is not restricted by natural or artificial screening, the buffer distance to the property line shall be at least 200 feet. No sludges shall be applied within 100 feet of the adjacent property boundaries.
- e. 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.
- b. Sludge shall be applied to the fields according to the approved plan of operation by one of the following two processes:
 - i. Sludge shall be applied by subsurface injection at a depth of 8 to 12 inches below the surface. DAF sludges must be applied using subsurface injection. Injection equipment shall be operated in a manner that prevents any injected sludge from flowing out of the trenches. No sludge shall be present on the ground surface following injection activities.
 - ii. Sludge shall be applied by surficial application followed by incorporation into the soil. Incorporation shall be performed for all sludge applied within the same day of application. 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. No sludge or other residue shall be applied to saturated ground.
- d. 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.
- e. The land application activities must be conducted in a manner that would prevent objectionable off-site odors.
- f. Food crops, feed crops, and fiber crops shall not be harvested for 30 days after application of sludge.
- g. Grazing of animals shall be strictly prohibited during operations and 30 days after application of sludge.
- h. The permittee shall maintain the soil pH of each receiving field at or above 6.5 unless otherwise approved by the Department.
- i. The inclement weather storage tank shall be located and constructed in accordance with the approved permit application.
- j. The annual loading rate for cadmium shall not exceed 0.45 pounds/acre/year.

4. Monitoring, Records and Reporting.

Until otherwise directed 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:
 - i. The dates, exact place and time of sampling or measurements;
 - ii. The individuals who performed the sampling or measurements;
 - iii. The date(s) analyses were performed;

- iv. The individual(s) who performed the analyses;
 - v. The analytical techniques or methods used; and
 - vi. 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 concentrations.
- 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.