STATE OF MISSISSIPPI
SOLID WASTE MANAGEMENT PERMIT

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

THIS CERTIFIES THAT

the City of Vicksburg

has been granted permission to operate a solid waste management facility

located at

Sections 13 and 14, Township 18 North, Range 04 East;

Sections 7 and 18, Township 18 North, Range 05 East

under the name of

Vicksburg Biosolids Beneficial 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: DEC 10 2012
Expires: NOV 30 2022

Permit No. SW0750030473

15391 PER20120001

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. LAND APPLICATION SITE SPECIFIC CONDITIONS

1. Authorized Waste.

   The permittee is authorized to land apply municipal wastewater sludges generated only at the City of Vicksburg Municipal Wastewater Treatment Plant (NPDES Permit No. MS0022381). No other waste material shall be mixed with or added to this sludge and land applied without the written consent of the Department.

2. Area of Application.

   a. Sludge shall be land applied to the approved areas only. Approved areas, as defined in the permit application, consist of the following:

I. Site #1, Fields 1-5 (on Simrall property) of approximately 487.46 acres (excluding buffer zones and other unused areas), located in Sections 13 and 14, Township 18 North, Range 4 East, and in Section 18, Township 18 North, Range 5 East, Warren County;

II. Site #4, Field 6 (on Simrall property) of approximately 136.01 acres (excluding buffer zones and other unused areas), located in Section 7, Township 18 North, Range 5 East, Warren County.

b. No sludges shall be applied on wetland areas, unless in accordance with U. S. Army Corps of Engineers requirements.

c. Setback distances from property lines, ponds, and intermittent streams or drainage ditches as indicated in the permit application shall be maintained.

d. No sludges shall be applied within 300 feet of any inhabited building, unless otherwise approved by the Department.

e. No sludges shall be applied within 250 feet of the banks of any river, lakes, stream, or reservoir.

f. No sludges shall be applied within 1000 feet of any church.

3. Operating Conditions.

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

a. Access to the application sites shall be controlled to prohibit unauthorized access during operation and also for at least 12 months following the final application.

b. Actual application area boundaries as identified in the application shall be clearly marked and maintained. At a minimum, the corners of the actual application area shall be marked by minimum 3 foot high markers, unless otherwise approved by the Department. The markers may be concrete posts, metal pipes, weather treated wood posts, metal fence posts, or other markers as approved by the Department. The posts shall be minimum 2 inches in diameter (except for the metal fence posts) and shall be placed in the ground to a sufficient depth to facilitate permanence.

c. The sludge may be either injected below the land surface of the sites or surface applied followed by incorporation, unless otherwise approved by the Department.

d. One of the vector attraction reduction requirements in 40 CFR 503.33(b)(1)-(10) shall be met when sludge is land applied at the site.

e. No sludges shall be applied to saturated ground.

f. No contaminant shall be allowed to enter any surface water as a result of rainfall runoff which causes a violation of any water quality standard established by the Department.

g. Necessary measures shall be taken to prevent objectionable offsite odors.

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

i. Grazing by animals shall be strictly prohibited during operation and for 30 days after application of sludge.

j. Application of sludge at the sites shall be discontinued in the event the permittee fails to maintain a valid land agreement from the landowners.

k. Prior to application of sludge during the period from November through April, soil borings at locations and time approved by the Department shall be conducted to demonstrate that the seasonal high water table is at a depth of at least 3 feet below the zone of injection, unless otherwise approved by the Department. Should this condition be met, application via only direct injection may be used.

4. Monitoring, Records and Reporting.

a. The permittee shall conduct sampling, monitoring, and reporting events, as described in Section E.4 of this permit, until otherwise directed by the Department.

b. Samples taken for the purpose of monitoring shall be representative of the applied sludge and of the soil on which sludge was applied. Frequency and parameters for monitoring of sludge and soil are listed in paragraph E.4.l.1 and E.4.m, respectively, of the permit.

c. 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.

d. Records of monitoring information shall include:

i. The dates, specific locations, 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.

e. The permittee shall not land apply the sewage sludge if the concentration of any pollutant (dry weight basis) in the sewage sludge exceeds the following ceiling concentration:

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

f. Prior to land application, seven samples of the sewage sludge from each source shall be collected and analyzed for the density of fecal coliform. In accordance with the Class B pathogen requirements, the geometric mean of the density of fecal coliform in the samples must be less than either 2,000,000 Most Probable Number per gram of total solids (dry weight basis) or 2,000,000 Colony

Forming Units per gram of total solids (dry weight basis) before the sludge can be land applied.

g. The permittee shall not exceed the following annual application rates for Plant Available Nitrogen (PAN) in accordance with the cover crop as listed below:

Crop	Maximum P.A.N. (Lbs/Acre/Year)
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

Other cover vegetation can be grown, if approved by the Department. Sludge application in excess of the annual rates as listed above for the purpose of double cropping shall be prohibited.

h. The permittee shall not exceed an annual application rate for cadmium of 0.45 lbs/acre/year, unless otherwise stated in the state regulations.

i. The permittee shall not exceed the following cumulative pollutant loading rates during the life of the site:

Cumulative Pollutant Loading Rates

Pollutant	pounds per acre
Arsenic	36
Cadmium	34
Chromium	2676
Copper	1338
Lead	267
Mercury	15
Molybdenum	16
Nickel	374
Selenium	89
Zinc	2497

j. 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.

k. Soil pH shall be maintained at or above 6.5 for all fields receiving sludge, unless otherwise approved by the Department.

l. The permittee shall prepare the following information for sludges from each source:

1. The analyses for sludge from the source as stated in paragraph E.1 of this permit. 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, percent solids and the density of fecal coliform. The frequency of monitoring sludge shall meet the requirements in 40 CFR 503.16.

2. The following signed and dated certification statement at a frequency of at least once a year provided there is no occurrence of any noncompliance:

"I certify, under penalty of law that the Class B pathogen requirement in paragraph E.4.f and the vector attraction reduction requirement in paragraph E.3.d of the site specific conditions of Permit No. SW0750030473 have been met. This determination has been made under my direction and supervision in accordance with the system designed to ensure that qualified personnel properly gather and evaluate the information used to determine that all the site specific conditions of the permit have been met. I am aware that there are significant penalties for false certification including the possibility of fine and imprisonment."

In the event of any noncompliance, the permittee shall notify the Department as soon as possible. Thereafter, the permittee shall submit this certification statement at a frequency as approved by the Department.

3. A description of compliance with the Class B pathogen requirements in paragraph E.4.f of this permit.

4. A description of compliance with the vector attraction reduction requirement in paragraph E.3.d of this permit.

m. The permittee shall annually, during the month of December, obtain at least one composite soil sample from each 50 acres of application area of the permitted sites on which sludge was applied in such a manner so that at a minimum one composite sample is obtained from each field receiving sludge. Each composite sample shall be made out of at least 9 (nine) evenly spaced soil samples. 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, and total zinc. Annual soil sampling would not be necessary for any year during which no sludge has been land applied.

n. The permittee shall submit to the Department an annual report no later than February 28 of each year indicating the results of all monitoring required pursuant to paragraphs E.3.k, E.4.j, E.4.l, and E.4.m above, including a summary of all monitoring results. The report should also include the total quantity of sludge applied to each field, the quantity of PAN, organic nitrogen that will mineralize and become available as PAN in subsequent years, arsenic, cadmium, chromium, copper, lead, mercury, molybdenum, nickel, selenium, and zinc applied to each field in lbs/acre/year and the total cumulative amount of each metal in lbs/acre calculated by using all data from past sludge application on each field.