RATIONALE FOR PROPOSED RENEWAL AND EXPANSION

Northeast Mississippi Solid Waste Management Authority

Northeast Mississippi Regional Landfill

Tippah County

Solid Waste Permit No. SW0700010433

Date of Application: November 20, 2019

1. FACILITY INFORMATION

Facility Name: Northeast Mississippi Regional Landfill

Facility Owner: Northeast Mississippi Solid Waste Management Authority

Facility Address: 2491 County Road 302

Walnut, MS 38683

Permit No.: SW0700010433

SIC Code: 4953

Permit Writer: Trent Jones

Waste Division: Solid Waste Permitting Branch

1. NATURE OF BUSINESS AND CURRENT CONDITIONS

The Northeast Mississippi Solid Waste Management Authority currently owns the Northeast Mississippi Regional Landfill (locally known as the Buck Run Landfill). This municipal solid waste landfill was originally permitted in February 1995 and is authorized to accept and dispose of nonhazardous solid wastes from residential, commercial and industrial sources. The originally permitted landfill disposal area consisted of 31.9 acres and was increased to 82 acres upon approval of an expansion application in October 2006. The landfill is currently operated by a contract operator, Waste Services of Northeast Mississippi, Inc. a subsidiary of Waste Connections, Inc.

1. PROPOSED SOLID WASTE PERMITTING ACTION

The applicant, the Northeast Mississippi Solid Waste Management Authority (Authority), has submitted a solid waste permit application to renew the existing solid waste management permit and increase the total, permitted disposal area available for the landfill by 72.7 acres. The new total landfill disposal area for the Northeast Mississippi Regional Landfill will be 154.7 acres.

1. LOCATION INFORMATION AND ACCESS ROUTES

The Northeast Mississippi Regional Landfill is located on property owned by the Northeast Mississippi Solid Waste Management Authority. The landfill is situated south of Mississippi Highway 72, approximately 2 miles west of the town of Walnut in Sections 1 and 2, Township 2 South, Range 3 East and Section 36, Township 1 South, Range 3 East of Tippah County.

Access to Northeast Mississippi Regional Landfill is provided by an entrance on County Road 302, approximately 2 miles west of the intersection of MS-15 and US-72.

1. LOCAL SOLID WASTE PLANNING AND ZONING INFORMATION

The proposed permit action is consistent with the Northeast Mississippi Regional Solid Waste Management Plan (Plan). On July 9, 2019, the Authority adopted a resolution to modify the Plan to include the proposed 72.7 acre expansion area. The revision to the Plan was approved by MDEQ under Administrative Order No. 7048 20 on June 22, 2020.

In addition, a letter dated May 8, 2019 from the City of Walnut confirmed that the facility is in compliance with local zoning, land use and other laws’ regulations, and ordinances.

1. APPROVED SERVICE AREA

The Northeast Mississippi Regional Solid Waste Management Plan also includes a service area for the landfill as approved by the Authority. The landfill will only be allowed to accept solid wastes that originate within this approved service area. This approved service area includes the Authority (counties of Benton, Prentis, and Tippah and the cities of Ashland, Booneville, and Ripley) as well as solid waste originating from Mississippi and the surrounding states from those counties within 75 miles of Benton, Prentis and Tippah Counties.

1. SITING CRITERIA

Rule 1.3.T.1.d of the Mississippi Nonhazardous Solid Waste Management Regulations (Regulations) requires that, for landfills, the setback distance from the property line to the disposal area shall be at least 500 feet, except where adequate on-site screening, whether natural or artificial, will restrict the offsite view of the landfill, in which case the setback shall be no less than 250 feet. As allowed by the regulation, the applicant has requested this reduction in property line setback distance on the northern, southern and eastern boundaries be approved under the assertion that there is suitable onsite natural visual screening present and/or will be constructed to support the proposed reduction. The proposed setback distances from the property lines to the new disposal area as follows: North - 285 feet; South - 250 feet; and East - 450 feet The existing, permitted disposal area property line setback distances will remain the same (North – 285 feet; South – 250 feet; and West – 250 feet).

Rule 1.3.L.1 of the Regulations requires that landfills be located where adequate naturally occurring geological materials present of low permeability to act as a buffer between the base of the landfill liner and the top of the uppermost aquifer. Such materials shall generally consist of clays, silty clays, clayey silts, or other soils which have an average hydraulic conductivity of 1 x 10-6 cm/sec or less. The thickness, or depth, of these materials shall extend to at least five feet immediately beneath the base of the landfill liner. The proposed design and location of the landfill expansion requires that fill materials be placed in order to meet design grades. The Authority petitioned the Commission on Environmental Quality and received a variance to these siting criteria, which allows them to construct additional buffer in below grade areas to meet design grades. The final buffer will be at least 5 feet thick and will have an average hydraulic conductivity of 1 x 10-6 cm/sec or less as required by Regulation.

No other variances to the Mississippi Nonhazardous Solid Waste management Regulations are proposed for the new disposal area. No changes to the previously approved siting criteria for the existing disposal areas are proposed with this modification.

1. GEOLOGICAL INFORMATION

In order to evaluate the geologic conditions within or near the 72.7 acres expansion, twelve borings were advanced from 30-80 feet below surface grade. The shallow subsurface geology beneath the site is been defined by three distinct sedimentary units. These units in descending order include:

* An upper, discontinuous, silty clay, (Stratum I), with an average hydraulic conductivity value of 6.5 x 10‾⁸ centimeters per second (cm/sec).
* A middle, laterally extensive, massive clay, (Stratum II), with an average hydraulic conductivity value of 5.7 x 10‾⁸ cm/sec.
* A lower sand unit, Tippah Sand Member, (Stratum III), with the upper boundary marked by a distinctive sandstone. This sand unit serves as the point-of compliance aquifer at the landfill

This investigation determined that the near surface soils are suitable for geologic buffer and for use in the construction of a compacted low permeability liner. Additionally, the bottom of the proposed liner system is greater than 10 feet above the upper most aquifer. The depth of excavation to reach design grades varies based on underlying solid conditions and site topography.

The geologic conditions for the already permitted 82 acres were previously demonstrated by the applicant in their original permit application and remain unchanged from these previous studies.

1. CONSTRUCTED COMPOSITE LINER SYSTEM:

The applicant has proposed a design for the landfill liner system in accordance with the Mississippi Nonhazardous Solid Waste Management Regulations. The composite liner system will be constructed in the bottom of the disposal cell above the low permeability buffer described in Section VIII above. The liner system will consist of 24” of compacted clay that must be constructed to the federal and state permeability standard (k ≤ 1 x 10-7 cm/sec). A 60 mil HDPE (high density polyethylene) geomembrane liner will be placed over the constructed clay liner material, followed by a minimum of 18” of a granular collection media as part of the leachate collection system. A construction quality assurance plan has been provided to ensure quality control and standards for construction of the landfill.

1. HOURS OF OPERATION AND SITE SECURITY

The application indicates that the standard hours of operation at the landfill for receiving wastes from public and commercial customers are Monday through Friday from 6:00 AM to 5:00 PM, and closed on Saturday and Sunday, with the inclusion of certain holidays. Site security is provided by perimeter fencing and locked gates during off hours and by an attendant present at the scale house during operating hours to monitor site access.

1. WASTE ACCEPTANCE

The proposed landfill permit would allow the landfill to continue to accept and dispose of various nonhazardous solid wastes from residential, commercial, industrial, institutional and other approved sources from within the approved service area. The applicant estimates an average incoming waste tonnage of approximately 2,000 tons per day, however this is not a set limit and may increase or decrease with time.

1. WASTE COVER SCHEDULE

As required by State and Federal Regulations, the landfill’s operating plans propose that at least six inches of earthen cover or Portable Synthetic Daily Cover (PSDC) will placed on all disposed solid waste at the end of each working day. Twelve inches of earthen cover will be applied on all areas that have received no waste for 30 days.

1. MONITORING SYSTEMS

Groundwater Monitoring

The current landfill permit requires that a groundwater monitoring system be installed and monitored. The approved monitoring system includes groundwater monitoring wells, groundwater sampling protocols, and a data quality assurance plan. A system of 8 groundwater wells (previously 11) has been installed and background data will be collected and provided to MDEQ prior to wastes being received at the landfill. The expansion area will require that two wells (GW-11 and GW-12) be decommissioned and new wells be installed as the waste area advances and one well (GW-1) will need to be relocated due to the location of Sediment Pond 5. Background data for GW-1 will be used for GW-1A and future wells will be installed in accordance with the well construction timeline that has been provided. The total amount of wells that will be used following all construction will be 13.

 Methane Monitoring

The current landfill permit requires that a methane monitoring system be installed to monitor for any potential migration of methane gas from the site. Methane monitoring wells will be located on the site with monitoring conducted on a quarterly basis. The number of monitoring wells will remain the same (8) and one of the previously constructed wells will be relocated to facilitate the storm water pond expansion.

1. FINAL COVER SYSTEM:

Upon closure, a final cover system must be constructed in accordance with State Regulations and the approved closure plan. An updated closure plan describing the final cover system must be submitted and approved by MDEQ prior to beginning final closure activities. The final cover system will be developed with no more than 25% side slopes and a top cap with minimum of 4% slopes. The highest elevation of the site is 730 feet above MSL. The final cover system shall be comprised of a composite (earthen and synthetic) cover over landfill areas with slopes of 15% percent or less and an earthen cover where slopes exceed 15%.

1. APPLICANT DISCLOSURE STATEMENT

In accordance with State Law, the contract operator filed a disclosure statement describing the company’s structure, key officers and members, other affiliated businesses and any civil or criminal violations. An updated disclosure statement for Waste Services of Northeast Mississippi, Inc. was reviewed by the MDEQ Legal Division and determined to be complete on March 4, 2020.

1. APPLICANT CONTACT INFORMATION

Northeast Mississippi Regional Solid Waste Management Authority

P.O. Box 1078

Booneville, MS 38829

(662) 286-5785

1. OPERATOR CERTIFICATION

Northeast Mississippi Solid Waste Management Authority is required to employ at least one person to manage site operations who possesses a Certificate of Competency as a Commercial Landfill Operator in accordance with Rule 1.4.E.(20) of the Mississippi Nonhazardous Solid Waste Management Regulations. Currently the certified operator for the Northeast Mississippi Regional Landfill is David R. Green (LF-03-09 expires February 29, 2024).

1. OTHER ENVIRONMENTAL PERMITS

The Northeast Mississippi Solid Waste Management Authority has applied for the modification of Storm Water Management Permit No. MSS049301 to address the development of the proposed expansion area as well as continued landfill operations. Title V Air Permit No. 2620-00055 is also being renewed with modifications at this time. Additionally, the Authority has applied for Water Quality Certification WQC-2021001 to address the proposed fill of 0.03 acre of wetland and 1,619 linear feet of other waters of the United States (streams). Pretreatment Permit No. MSP091079 for the management of leachate was issued June 15, 2020 and will not be modified at this time.