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1840 East Three Notch Street
Andalusia, AL 36421
Post Office Box 278
Andalusia, AL 36420
Tel (334) 222-9431
Fax (334) 222-4018

www.cdge.com

October 27, 2020

Blake Holden
Alabama Department of Environmental Management
P.O. Box 301463
Montgomery, AL 36130

**Re: Minor Modification
Alternate Daily Cover – 50/50 Shredded green waste/ Soil Mixture
Magnolia Sanitary Landfill (No. 02-03)**

Dear Mr. Holden,

Please accept this letter on behalf of the Baldwin County Solid Waste Department as a Minor Modification to use a shredded green waste/ soil mixture as an alternative cover at the Magnolia Landfill. The facility's request is consistent with EPA's previous research and development guidance as outlined in the report titled *The Use of Alternative Materials for Daily Cover at Municipal Solid Waste Landfills (September 1993)*.

A summary of the proposed daily cover operating plan, and the applicable regulatory requirements concerning daily cover have been addressed below.

I. Regulatory Requirements for Use of Alternative Daily Cover

In accordance with ADEM Admin Code 335-13-4-.22, Section 1.a.1- A minimum of six inches of compacted earth or other alternative cover material that includes but is not limited to foams, geosynthetic or waste products, and is approved by the Department shall be added at the conclusion of each day's operation or as otherwise approved by the Department to control disease vectors, fires, odors, blowing litter, and scavenging.

As it relates to the above mentioned regulatory requirements, the proposed alternative cover (shredded green waste/soil mixture consisting of 50% soil by volume) provides protection of public health by controlling vectors, not sustaining a breeding environment, being free of toxic materials, being odorless, and pathogen free.

In addition to the control of vectors by the mechanisms mentioned, the proposed alternate cover will provide odor control through the incorporation of the 50% soil by volume. Previous laboratory tests have shown that mixtures with more than 30% to 50% soil experience performance similar to soil as it relates to hydraulic conductivity, combustibility, resistance to burrowing from birds and rodents, erosion resistance to wind and water, and waste mass

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stability. Therefore, the proposed alternate cover will meet the regulatory requirements for ADC as identified in ADEM Rule 335-13-4-.21 (**General Operation Standards for Landfill Units**) and 335-13-4-.22 (**Specific Requirements for Municipal Solid Waste Landfills**).

II. Operational Plan for Proposed Alternative Daily Cover

The proposed alternative cover will consist of a shredded green waste/soil mixture used in conjunction to achieve the daily cover requirements as stipulated in 335-13-4-.21. The proposed mixture shall be achieved using shredded green waste with on-site soil with the mixture consisting of at least 50% daily soil material by volume. The alternate cover may be pre-mixed by incorporating a “windrow” method consisting of mixing the proposed soil and green waste at the working face, with the mixture containing at least 50% soil by volume. This mixing will be achieved using a dozer prior to placement on the working face. The material mixing will be completed by placing a windrow of shredded green waste adjacent to a windrow of daily soil cover material and making multiple passes through the material with the dozer. After achieving a blend of at least 50% soil by volume the alternate cover will be used to cover the working face following each daily lift.

If you have any questions, please feel free to call.

Sincerely,

CDG Engineers & Associates, Inc.

A handwritten signature in blue ink that reads "Laura Kate Young".

Laura Kate Young
Project Engineer

cc. Terri Graham and Ed Fox