



ENVIRONMENTAL WASTE SOLUTIONS LLC

SUBMITTAL OF

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DIV SOLID WASTE MGT

JUL 11 2012

EWS CLASS II LANDFILL
PROPOSED MODIFICATIONS
OF

Group No. _____

CELL 1 EAST AND SOUTH FINAL COVER SLOPES

SUBMITTED TO

TENNESSEE DIVISION OF SOLID WASTE MANAGEMENT

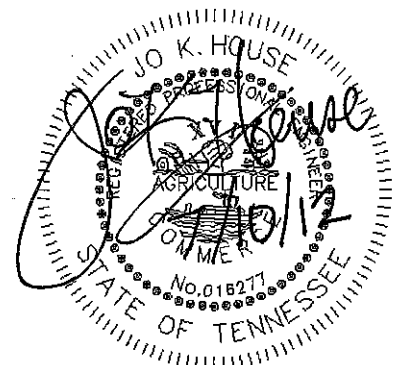
July 10, 2012



HOUSE ENGINEERING LLC
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INTRODUCTION

The purpose of this document is to request a modification of the final cover design for the east and south slopes of the Environmental Waste Solutions (EWS) Class II Landfill located at 200 Omar Circle in Camden, Tennessee. The following paragraphs detail the proposed final cover barrier system and provide conceptual illustrations of the final cover system components.

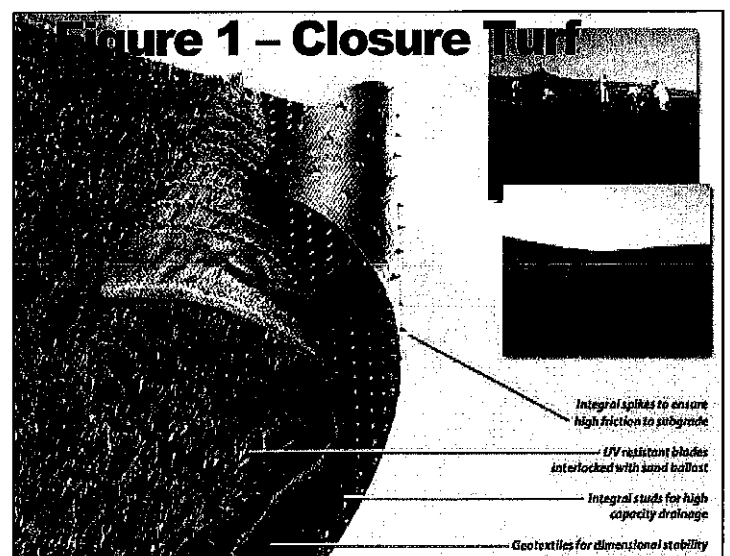
EXISTING CONDITIONS

The present configuration of the east and south slopes in Cell 1 is a result in large part on the excessive soil cover used at the site to mitigate the emission of ammonia to the atmosphere. The Tennessee Division of Solid Waste Management (TDSWM) also required EWS to place an additional 12 inches of clay over the entire surface of Cell 1 to further inhibit ammonia emissions. These additions of soil cover over the landfill extended the toe of the slope as well as steepened the slope due to earth moving equipment logistical constraints. Presently, the depth of soil that has been placed over the aforementioned slopes exceeds the final cover thickness requirements set forth in the TDSWM regulations.

PROPOSED FINAL COVER CONFIGURATION

A final cover has been designed for the east and south slope of Cell 1 which will comply with the TDSWM regulatory storm water infiltration requirements as well as providing for adequate factors of safety relative to the veneer stability of the final cover system. EWS is proposing to cover the east and south slopes of the initial cell with the proprietary product designated as Closure Turf™. Conceptual drawings are provided below which illustrate the incorporation of the Closure Turf™ into the final cover for the east and south slopes. **Figure 1** provided below reveals the basic components of Closure Turf™ which is the incorporation of an outdoor turf material with a 50 mil High Density Polyethylene (HDPE) Super Gripnet geomembrane manufactured by AGRU America.

The Closure Turf™ will be placed on both the east and south slopes after the slopes have been prepared to enable intimate contact with the soil slopes. A one inch layer of sand will then be placed above the turf to ensure that sufficient force is provided to stabilize the material from extreme wind conditions.





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Figure 2 illustrates the conceptual cross sectional view of the Closure Turf™ as it will be configured above the east and south slopes of Cell 1.

EWS plans to place

The table provided below presents the reported factors of safety for veneer stability for varying slope ratios. An inspection of the table indicates that the Closure Turf™ should be stable on the existing slopes at the EWS Class II Landfill.

Slope Angle	Slope	Safety Factor
33°	1.5H: 1V	1.4
26°	2.0 H: 1V	1.9
18°	3.0H: 1V	2.8
14°	4.0H: 1V	3.7

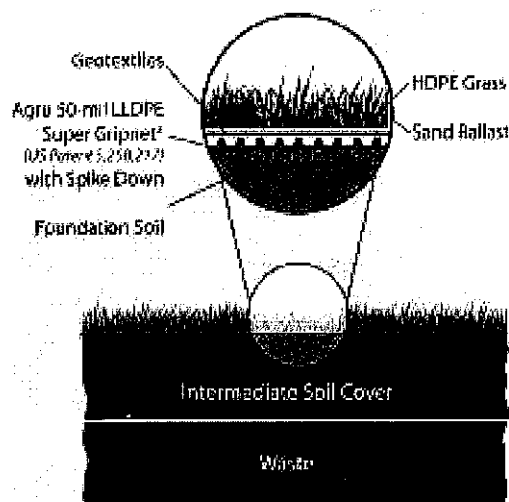
It should be noted that the steepest slope at the EWS Class II Landfill is 1.5H to 1V.

SUMMARY

EWS has developed a time schedule for completion of the final closure of the east and south slopes of Cell 1 which is attached with this document. EWS will submit a revised Closure/Post-Closure Plan along with Engineering Drawings which illustrate the contouring and details for closure of the east and south slopes of Cell 1.

A construction schedule for closure of the east and south slopes of Cell 1 is attached with this document.

Figure 2 - Conceptual Cross Section of Slope
ClosureTurf cross-section





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ENVIRONMENTAL WASTE SOLUTIONS CLASS II LANDFILL CELL 1 EAST AND WEST SLOPE CLOSURE SCHEDULE



ID	Project Name	Days	Start	End	10-Aug	17-Aug	24-Aug	31-Aug	7-Sep	14-Sep	21-Sep	28-Sep	5-Oct	12-Oct	19-Oct	26-Oct	2-Nov	9-Nov	16-Nov	23-Nov
	EAST AND SOUTH SLOPE FINAL CLOSURE	150	11-Jul	8-Dec																
	TASK 1 Develop Bid Specs and Negotiate Contract	30	11-Jul	10-Aug																
	TASK 2 Order Geosynthetic Materials and await delivery from Manufacturer	90	10-Aug	8-Nov																
	TASK 3 Perform Earthwork and Install Geosynthetics in East and South Slopes	30	21-Oct	20-Nov																