

**Part III  
Attachment III-D  
Appendix III-D.8**

**ALTERNATIVE FINAL COVER DEMONSTRATION**

**Pescadito Environmental Resource Center  
MSW-2374  
Webb County, Texas**

**PESCADITO**  
ENVIRONMENTAL RESOURCE CENTER

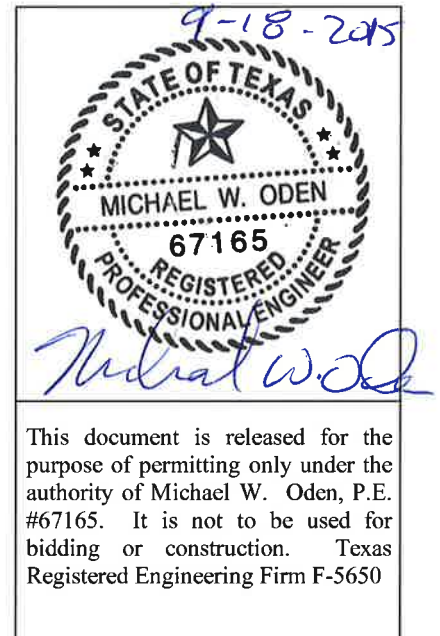
**Initial Submittal March 2015  
Revised September 2015**

**Prepared for:  
Rancho Viejo Waste Management, LLC  
1116 Calle del Norte  
Laredo, TX 78041**

**Prepared by:  
CB&I Environmental and  
Infrastructure, Inc.**



**12005 Ford Rd, Suite 600  
Dallas, TX 75234**



This document is released for the purpose of permitting only under the authority of Michael W. Oden, P.E. #67165. It is not to be used for bidding or construction. Texas Registered Engineering Firm F-5650

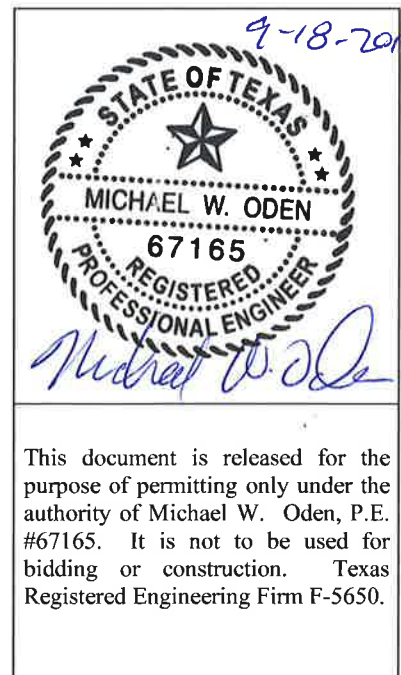
## Table of Contents

1.0	Introduction.....	1
2.0	Alternate Final Cover System Design.....	2
3.0	Equivalency Demonstration requirements.....	3
4.0	Soil loss due to erosion.....	4
5.0	Help model.....	55.1
	Input Parameters.....	5
6.0	Alternative final cover Quality Control Plan.....	10
7.0	Conclusion.....	11

### List of Attachments

Attachment III-D.8-1: HELP 3.07 Output

Attachment III-D.8-2: References



## 1.0 INTRODUCTION

A water balance (WB) alternative final cover system (AFC) is proposed to be used at the Pescadito Environmental Resource Center (PERC) (MSW No. 2374). This final cover will consist of an erosion control layer and infiltration layer that provide the capacity to store water until it can be removed through evaporation and transpiration. This ability to store water within the final cover minimizes percolation or infiltration of stormwater into underlying waste material, thereby reducing the volume of leachate generated at the facility. Vegetation or other appropriate material will be established on top of the erosion control layer to minimize soil loss but has not been utilized in the model to reduce infiltration.

Type I Landfills are typically designed with compacted clay liners (CCL) and geomembrane barrier layers. This document presents the design of the AFC and a demonstration that this design provides equivalent performance to a CCL/geomembrane final cover configuration based on standards recognized by the TCEQ. This final cover system has been designed in accordance with 30 TAC 330.457(d) and TCEQ's "Guidance for Requesting a Water Balance Alternative Final Cover for a Municipal Solid Waste Landfill" (Revised January 27, 2012).

Pursuant to 30 TAC 330.457(d), an AFC may be approved if it meets the following performance standards:

1. The final cover achieves an equivalent reduction in infiltration as a clay-rich soil cover layer specified in 30 TAC 330.457(a)(1) and (2)
2. The final cover provides equivalent protection from wind and water erosion as the erosion layer specified in 30 TAC 330.457(a)(3)