

Permit No.	Date	Document ID No.
06-03	August 6, 2010	11309



RICHARDSON SMITH GARDNER & ASSOCIATES

Engineering and Geological Services

August 5, 2010

Mr. Allen Gaither
Environmental Engineer
Division of Waste Management – NCDENR
2090 US Highway 70
Swannanoa, North Carolina 28778

RE: Phase 3 – Cells 1 and 2 Construction – **Response to Comments**
Avery County C&D Landfill
(NC Solid Waste Permit # 06-03)
Ingalls, North Carolina

Dear Allen:

Richardson Smith Gardner & Associates, Inc. (RSG) on behalf of Avery County Solid Waste Department has provided this clarification to address verbal comments received from the section. This letter addresses each comment and includes a response to each as follows:

Comment No. 1

Provide an explanation of the compaction notes within the Certification Documents.

Response to Comment No. 1

The hand written notes on the compaction results (Field Density Test Results included in **Appendix D**) were included to show acceptance of compaction results in areas that were known of be over waste within and underlain by Phases 1 and 2 in the location of the lower access road. It is noted that the existing waste was bridged and later achieved acceptable results near the road surface. Furthermore, all compaction tests within the Phase 3 construction area were satisfactory and conformed to project requirements.

Comment No. 2

Provide volumes of waste placed, along with explanations, for Phases 1 and 2.

Response to Comment No. 2

A composite field topographic survey¹ of the existing Phases 1 & 2 of the C&D landfill,

¹ Phase 1 area north of gravel access road topography from field survey by Surveying Solutions, P.C., dated 10/8/09. Phase 1 area south of gravel access road and Phase 2 topography from field survey by Appalachian Professional Land Surveyors and Consultants P.A., dated 1/11/10.

including the vertical expansion grades² as well as the lateral expansion grades included in the Waste Relocation Plan³, was compared to historical drawings prepared by Municipal Engineering Services Company, P.A.. Electronic files for these drawings were not available. Therefore, RSG digitized the pre-development contours at a site specific datum from the permit application⁴ and translated the elevations to NC State Plane (~2,760 feet vertically). The comparison of grading yielded total volumes of waste in Phases 1 and 2 to be approximately 39,000 yd³ and 65,500 yd³ respectively, as shown in **Table 1**. It is understood that this quantity is approximate and is limited by the accuracy between the current survey data and the historical topographic files. However, it is our opinion that it is consistent with historical permit documents.

TABLE 1
SUMMARY OF LANDFILL CAPACITY

Phase	Operating Capacity (CY)
	Gross
Phase 1	39,750
Phase 2	65,500
Phase 3 - Cell 1*	49,000
Phase 3 - Cell 2*	47,000
Total:	201,250

* Phase 3 Cells 1 and 2 volumes reference the Phase 3 Permit to Construct Application, by RSG dated February 2009 with revisions through July 2009.

² Continued Operations Approval Letter. From Mr. Ed Mussler, NCDENR dated February 20, 2009.

³ Avery County C&D Landfill, Waste Relocation and Mitigation Plan. Prepared by RSG Engineers, October 2008.

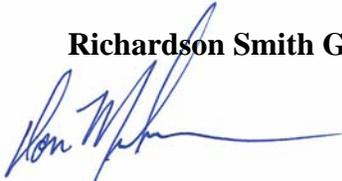
⁴ Avery County Solid Waste Management Facility Operation Plan Drawings prepared by Municipal Engineering Services Company, P.A., Project #G95115 dated October 21, 1995.

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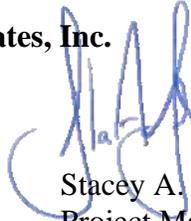
We appreciate your attention and we are prepared to respond immediately to any questions or concerns. Please feel free to contact us by phone at (919) 828-0577 or by email below.

Sincerely,

Richardson Smith Gardner & Associates, Inc.



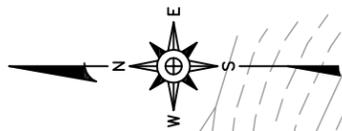
Don Misenheimer
Project Scientist, ext. 224
don@rsgengineers.com



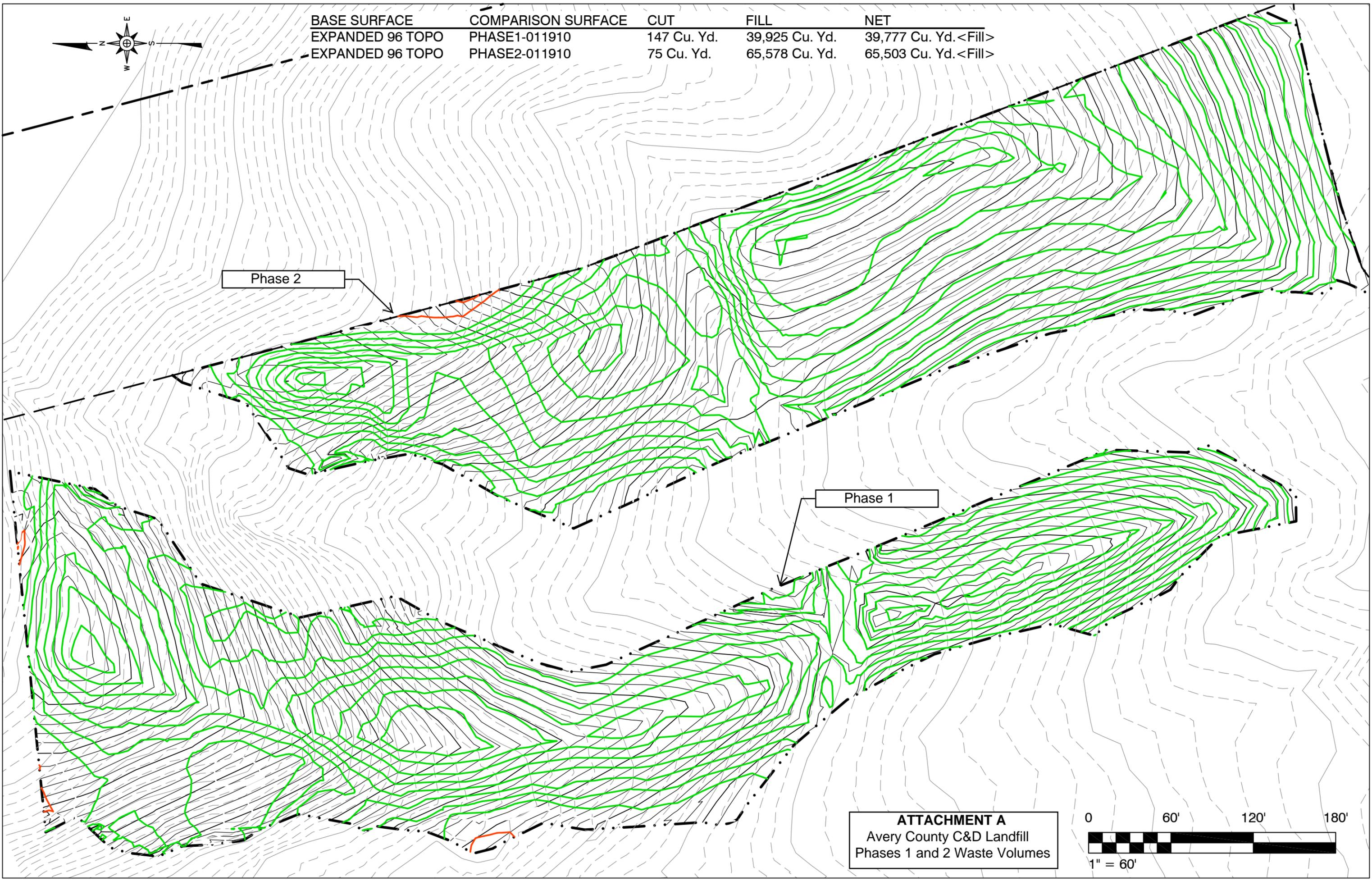
Stacey A. Smith, P.E.
Project Manager, ext. 127
stacey@rsgengineers.com

Att.

Cc: Mr. Henry "Buddy" Norris, Avery County Solid Waste Department
Bill Wagner, NCDENR
File



BASE SURFACE	COMPARISON SURFACE	CUT	FILL	NET
EXPANDED 96 TOPO	PHASE1-011910	147 Cu. Yd.	39,925 Cu. Yd.	39,777 Cu. Yd. <Fill>
EXPANDED 96 TOPO	PHASE2-011910	75 Cu. Yd.	65,578 Cu. Yd.	65,503 Cu. Yd. <Fill>



Phase 2

Phase 1

ATTACHMENT A
Avery County C&D Landfill
Phases 1 and 2 Waste Volumes

