

## Wilson, Donna

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**From:** David Garrett [david@davidgarrettpe.com]  
**Sent:** Wednesday, March 03, 2010 4:56 PM  
**To:** Wilson, Donna  
**Cc:** 'Wayne Bell'  
**Subject:** RE: C&D Landfill Phase 2 CQA  
**Attachments:** Donna Wilson Cover Letter.pdf; Sheet 2\_C&D Landfill Phase 2 As-Built DETAIL PLAN VIEW.pdf

Please find attached a revised drawing (Sheet 2) showing the bench marks and topo for the perimeter soil berm, and a revised cover letter with the updated certification. These items are submitted per your request.

I am pleased to inform you that the bond for closure/post closure financial assurance is on its way.

Thank you.

**David Garrett, P.G., P.E.**  
David Garrett & Associates  
5105 Harbour Towne Drive  
Raleigh, NC 27604

Tel. 919-418-4375 (mobile)

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**From:** Wilson, Donna [mailto:donna.wilson@ncdenr.gov]  
**Sent:** Tuesday, March 02, 2010 11:20 AM  
**To:** David Garrett  
**Cc:** 'Wayne Bell'  
**Subject:** RE: C&D Landfill Phase 2 CQA

Dave – I've finished my review and I have a few questions/comments:

1. Certification should state that the construction was completed in accordance with (1) the CQA Plan, (2) the conditions of the Permit to Construct, (3) the Solid Waste Management Rules, and (4) acceptable engineering practices.
2. Please show on a map the soil berm that was not shown on the original topo map.
3. Please show the location of the permanent benchmark on a map, as required by Rule .0540(3).

Thanks, Donna

Donna J. Wilson  
Environmental Engineer  
Solid Waste Section/Division of Waste Management/NC DENR  
1646 Mail Service Center  
Raleigh NC 27699-1646  
Phone 919-508-8510  
Section webpage - <http://wastenotnc.org/swhome>

**New email address - [donna.wilson@ncdenr.gov](mailto:donna.wilson@ncdenr.gov)**

E-mail correspondence to and from this address may be subject to the North Carolina Public Records Law and may be disclosed to third parties.

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**From:** David Garrett [mailto:david@davidgarrettpe.com]  
**Sent:** Tuesday, March 02, 2010 7:56 AM

**To:** 'Donna Wilson'; ed.mussler@ncmail.net

**Cc:** 'Wayne Bell'

**Subject:** C&D Landfill Phase 2 CQA

Good morning. We're looking for an update on the status of our Permit to Operate on Phase 2 of C&D Landfill, Inc. The CQA report has been in for a few weeks. The facility manager indicates he is very tight on airspace in Phase 1. Please let me know if there are any questions or if you need additional information. Thank you.

**David Garrett, P.G., P.E.**

David Garrett & Associates  
5105 Harbour Towne Drive  
Raleigh, NC 27604

Tel. 919-418-4375 (mobile)

## **David Garrett & Associates**

*Engineering and Geology*



March 3, 2010

Ms. Donna Wilson, Regional Engineer  
NCDENR Division of Waste Management  
Solid Waste Section Permitting Branch  
1646 Mail Service Center  
Raleigh, NC 27699-1646

RE: Construction Quality Control Documentation  
C&D Landfill, Inc. CDLF Phase 2A  
Pitt County, North Carolina  
Solid Waste Permit #74-07

Dear Ms. Wilson:

On behalf of C&D Landfill, Inc., I am pleased to present this report documenting the completion of Phase 2A of the approved CDLF expansion. This work was completed in pursuit of the Permit to Construct issued by the Solid Waste Section (SWS) on July 21, 2009. Within this report, please find documentation on the construction of the first of two cells—Phase 2A covering approximately 10 acres in the southern portion of the approved footprint – including my certification of subgrade conditions and general adherence to the approved construction plan. At this time C&D Landfill, Inc., seeks the Section's approval of the construction and the issuance of a Permit to Operate for a five-year period.

### **Report Organization**

This report is organized into the following sections:

1. CQA meeting minutes and notes
2. Soils laboratory testing reports
3. As-built construction drawings
4. Piezometer abandonment records
5. Monitoring well installation and sampling
6. Photographic documentation

## Overview

This report is intended to satisfy the requirements of 15A NCAC 13B .0541 for documentation of a Construction Quality Assurance program for Phase 2A of the C&D Landfill, Inc., outlined in Section 7 of the Permit to Construct application, March 2009 update. Phase 2 is a separate footprint from the older CDLF (Phase 1) and encompasses approximately 23 acres. Construction was divided into two equal-size cells: Phase 2A within the lower elevations to the south and future Phase 2B in the slightly higher elevations to the north. Major aspects of the new construction included:

1. Clearing of the former agriculture site; installation of sedimentation and erosion control measures approved by Pitt County Planning Department.
2. Abandonment of selected piezometers and installation of new monitoring wells in accordance with the approved Sampling and Analysis Plan Construction; baseline sampling of the new monitoring wells.
3. Establish layout and grade control for construction using a third-party licensed surveyor; setting permanent marker posts at the perimeter of the waste footprint.
3. Excavation and grading of approximately 1 acres with cuts varying up to 1.5 feet below the original ground surface.
4. Placement and compaction of new fill to approved grades within the remainder of the Phase 2A footprint; this includes the approved use of 'beneficial fill' within fill sections deeper than 24 inches; all fill within the upper 24 inches of finished grades must meet the current NC DENR Solid Waste Section requirements for compaction and soil type (documented in this report)—testing conducted by a third-party soils laboratory.
5. Construction of a new access road near the northeast corner of Phase 2A.
6. Protection of exposed subgrade and earthwork embankments, including sedimentation and erosion control features, with vegetation and/or mulch.

## Responsibilities and Documentation

The Facility served as its own contractor, using in-house staff and equipment with local surveying support (Tip Burgess, RLS supervising), field engineering support and CQA oversight (David Garrett & Associates, John Tucker PE), and a third-party soil laboratory (Geotechnics, Inc.). The General Manager of the facility, Wayne Bell, provided general supervision of the construction activities. Documentation of the work consists of field notes and "as-built" construction plans, plus a series of photographs, presented in separate sections of this report.

Regular CQA meetings were conducted with the staff, in conjunction with site inspections, to outline the objectives of the work and to check progress and quality of workmanship. During these meetings, and in regular phone contact in between meetings, the staff described problems they encountered, e.g., some of the soils failed initial compaction testing and needed to be reworked with additional compaction effort. During the course of the construction, grade control became an issue—grade stakes were lost—which resulted in a portion of the footprint requiring additional fill placement. The weather was a factor in construction progress but not considered detrimental to working the soils—if anything, the soils were believed to be too dry in the initial stages of construction, which turned around during the relatively rainy autumn. All soil work eventually passed the testing requirements.

### **Certification**

By way of my signature and seal on this document, this is to certify that the construction of Phase 2A of the C&D Landfill, Inc., CDLF was completed that the construction was completed in accordance with (1) the CQA Plan, (2) the conditions of the Permit to Construct, (3) the Solid Waste Management Rules, and (4) acceptable engineering practices. This is to further certify that the grades and lines are accurately depicted on the ‘as-built’ plans, prepared based on a topographic survey by a licensed surveyor, and that subgrade soil types meet the current regulatory requirements based on visual inspection and confirmatory lab tests. No ground water or detrimental soils were encountered at or above the approved subgrade elevations; site conditions are as anticipated based on the earlier permitting studies.

Please contact me if you have any questions or comments.

Cordially yours,



G. David Garrett, P.G., P.E.



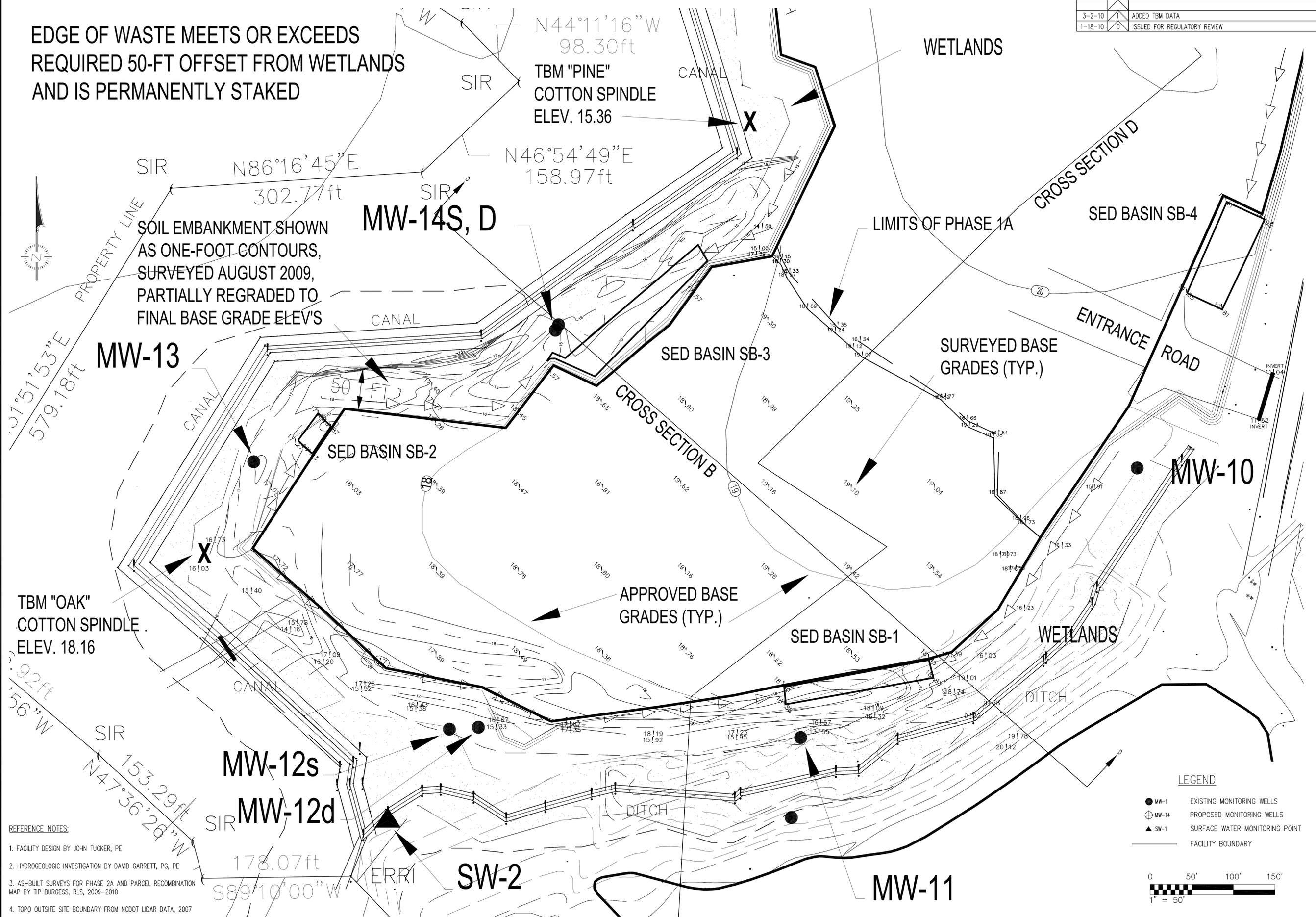
1-19-2010 Original Submittal  
3-3-2010 Certification Updated

cc: Judson Whitehurst, Wayne Bell—C&D Landfill, Inc.  
Ed Mussler, P.E.—SWS Permitting Branch

DATE	NO.	REVISION
3-2-10	1	ADDED TBM DATA
1-18-10	0	ISSUED FOR REGULATORY REVIEW

EDGE OF WASTE MEETS OR EXCEEDS  
REQUIRED 50-FT OFFSET FROM WETLANDS  
AND IS PERMANENTLY STAKED

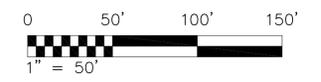
SOIL EMBANKMENT SHOWN  
AS ONE-FOOT CONTOURS,  
SURVEYED AUGUST 2009,  
PARTIALLY REGRADED TO  
FINAL BASE GRADE ELEV'S



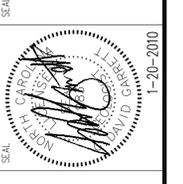
- REFERENCE NOTES:
- FACILITY DESIGN BY JOHN TUCKER, PE
  - HYDROGEOLOGIC INVESTIGATION BY DAVID GARRETT, PG, PE
  - AS-BUILT SURVEYS FOR PHASE 2A AND PARCEL RECOMBINATION MAP BY TIP BURGESS, RLS, 2009-2010
  - TOPO OUTSIDE SITE BOUNDARY FROM NCDOT LIDAR DATA, 2007

LEGEND

- MW-1 EXISTING MONITORING WELLS
- ⊕ MW-14 PROPOSED MONITORING WELLS
- ▲ SW-1 SURFACE WATER MONITORING POINT
- FACILITY BOUNDARY



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C&D LANDFILL, INC.  
PERMIT TO OPERATE  
PITT COUNTY, NC  
PERMIT #74-07

DETAIL PLAN VIEW  
PHASE 2A AS-BUILT  
JANUARY 2010

DESIGNED BY: G.D.G.	DRAWN BY: G.D.G.
CHECKED BY: J.A.T.	PROJECT NO.: CDLF-3
SCALE: AS SHOWN	DATE: JANUARY 2010
FILE NAME: C&D LANDFILL PH2A AS-BUILT	SHEET NO. DRAWING NO.
2	AB2