

January 30, 2015



Ms. Pat Backus, P.E.
Permitting Engineer
DWM, NCDENR
1646 Mail Service Center
Raleigh, NC 27699-1646

**RE: Cement Disposal – Demonstration Summary
Currin Bros. Inc. - LCID Landfill (Permit No.32I)
Durham, North Carolina**

Dear Pat:

On behalf of the Currin Bros. Inc. (Currin); Smith Gardner, Inc. (S+G) is privileged to present this cement disposal demonstration summary. On September 30, 2014 S+G submitted a demonstration request¹ (**attached**) to accept partially hardened concrete. This request was accepted by NCDENR (**attached**) on October 17, 2014², for a 6 week demonstration period.

An area outside the working face, within the landfill footprint was used as a concrete hardening zone. The following procedure was used:

1. The process began when concrete trucks backed-up to the designated zone and dumped their excess concrete, as shown in **photos 1 and 2**.
2. Poured concrete piles (**photo 3**) were spread (**photo 4**) to hasten drying time and provide for easier break up and disposal.
3. **Photos 5 and 6** show the concrete break-up once dried. As expected, the anticipated waste volume is approximately 3-4 yards per day with a 2 hour or less cure time.
4. The hardened concrete placed in the LCID landfill is shown in **photo 7 and 8**.

In accordance with approved demonstration parameters, no mixer rinsing or clean out occurred. These actions are performed in designated areas at the plant. A de minimis water volume was used on the chute following the pour; however, any water used remained in the immediate hardening zone and did not discharge.

The 6 week demonstration confirmed excess concrete can be poured, dried and placed in the LCID landfill.

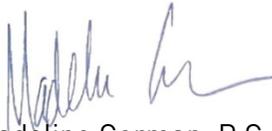
¹ Letter to Pat Backus, P.E. from Stacey Smith, P.E., Concrete Disposal-Demonstration Request, September 30, 2014. DIN 21969.
² Letter to Mr. Allen Currin from Pat Backus, P.E., Concrete Disposal Demonstration Approval, October 17, 2014. DIN 21970.

The following text is proposed to the site operations plan³ as a section titled: **Partially Hardened Concrete**.

"An area located within the landfill footprint will be used to pour and cure the excess concrete leftover following completed pour jobs. Trucks are permitted to back up to the designated disposal area, located outside the working face, dump their excess concrete and rinse off the chute. A marginal water amount may be used for chute rinsing. No mixer rinsing or clean out shall occur on-site. Run-on and stormwater shall be diverted away from the poured concrete."

Please contact us with comments or questions at (919) 828-0577 or by email below.

Sincerely,
SMITH GARDNER, INC.



Madeline German, P.G.
Project Geologist, ext. 222
madeline@smithgardnerinc.com



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

Attachments Demonstration Request Letter
Demonstration Acceptance by NCDENR
Photo Logs

cc: Allen Currin, Currin Bros. Inc.
John Patrone, NCDENR
File

³ Currin Bros. LCID Landfill No. 2 Operations Manual, prepared by John A.K. Tucker, P.E. April 5, 2010.

September 30, 2014

Ms. Pat Backus, P.E.
Permitting Engineer
DWM, NCDENR
1646 Mail Service Center
Raleigh, NC 27699-1646

**RE: Concrete Disposal – Demonstration Request
Currin Bros. LCID Landfill (Permit No. 321)
Durham, North Carolina**

Dear Pat:

As you know, the Currin Bros, LCID Landfill facility (Permit 321) in Durham, NC would like to accept concrete before it has completely hardened. The following details regarding siting and operation are provided below.

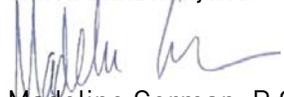
A discrete area will be created within the landfill footprint that will accept the excess partially hardened concrete leftover following completed pour jobs. This area, which may be moved as needed, will be barricaded to prevent unintentional or unauthorized access.

A small excavation will be dug to create the disposal area for the partially hardened concrete. Trucks will be permitted to back up to the designated disposal area and dump their excess concrete and rinse off their shoot. A marginal amount (~three (3) gallons) of water will be used for shoot rinsing. No mixer rinsing or clean out will occur, as these actions are performed in designated areas at the plant. Run-on and stormwater will be diverted away from the excavation. The anticipated waste volume will be 3-4 yards per day with a cure time of only a few hours.

The demonstration will be for a period of six (6) weeks; to monitor, assess and adjust the proposed procedure as necessary. Following the demonstration a demonstration report letter will be submitted to NCDENR regarding the demonstration findings.

Please contact us with comments or questions at (919) 828-0577 or by email below.

Sincerely,
SMITH GARDNER, INC.


Madeline German, P.G.
Project Geologist, ext. 222
madeline@smithgardnerinc.com


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

cc: Allen Currin, Currin Bros., Inc.
John Patrone, NCDENR
File



North Carolina Department of Environment and Natural Resources

Pat McCrory
Governor

John E. Skvarla, III
Secretary

October 17, 2014

Mr. Allen Currin
Currin Brothers, Inc.
1610 Wolfpack Lane
Raleigh, NC 27609

Subject: Concrete Disposal Demonstration Approval
Currin Brothers, Inc. LCID Landfill #2
Wake County, Permit No. 32I-LCID, Document ID No. (DIN) 21970

Dear Mr. Currin:

The Division of Waste Management, Solid Waste Section (Section) received your request to conduct a demonstration test of concrete disposal (DIN 21969).

The request was for a six-week demonstration of the acceptance of partially hardened concrete from mix trucks. Typically these trucks dump the partially hardened concrete on the ground at concrete plant where it allowed to harden and then transported to the LCID facility. This practice will reduce handling and transportation costs for the concrete plant.

The Section has reviewed the request and hereby approves the demonstration in accordance with the information provided in the referenced document (DIN 21969). As is stated in the request, no rinsing or clean out of the mixer at your facility is allowed. Please notify John Patrone at (336) 771-5095 or (919) 280-4814 or by email at john.patrone@ncdenr.gov and Pat Backus at (919) 707-8257 or by email at pat.backus@ncdenr.gov prior to starting the demonstration.

If you have any questions regarding this matter, please contact Pat Backus.

Sincerely,

Edward F. Mussler, III, P.E., Permitting Branch Supervisor
Division of Waste Management, NCDENR

cc: Stacey Smith, P.E., Smith Gardner
Madeline Germain, P.G., Smith Gardner
Pat Backus, P.E., Permitting Engineer
Deb Aja, Western District Supervisor
John Patrone, Environmental Senior Specialist

Client Name: Currin Bros. LCID		Site Location: Durham LCID (Permit No. 321)	Project No. Currin 13-4
Photo No. 1	Date: Dec. 2014		
Direction Photo Taken: NA			
Description: Concrete poured on ground, isolated from working face.			

Photo No. 2	Date: Dec. 2014		
Direction Photo Taken: NA			
Description: Several piles of concrete.			

Client Name: Currin Bros. LCID		Site Location: Durham LCID (Permit No. 321)		Project No. Currin 13-4	
Photo No. 3	Date: Dec. 2014				
Direction Photo Taken: NA					
Description: Poured concrete					

Photo No. 4	Date: Dec. 2014				
Direction Photo Taken: NA					
Description: Spread concrete.					

Client Name: Currin Bros. LCID		Site Location: Durham LCID (Permit No. 32I)	Project No. Currin 13-4
Photo No. 5	Date: Dec. 2014		
Direction Photo Taken: NA			
Description: Dried concrete is broken into pieces for disposal.			

Photo No. 6	Date: Dec. 2014		
Direction Photo Taken: NA			
Description: Broken up, dried concrete			

Client Name: Currin Bros. LCID		Site Location: Durham LCID (Permit No. 32I)	Project No. Currin 13-4
Photo No. 7	Date: Dec. 2014		
Direction Photo Taken: NA			
Description: Dried concrete placed in waste disposal area.			

Photo No. 8	Date: Dec. 2014		
Direction Photo Taken: NA			
Description: Dried concrete mixed with other LCID material in disposal area.			