North Carolina Department of Environment and Natural Resources
Division of Waste Management

Beverly Eaves Perdue
Governor

Dexter R. Matthews
Director

Dee Freeman
Secretary

July 23, 2012

Mr. David W. King, President
Shotwell Landfill, Inc.
3209 Gresham Lake Road, Suite 120
Raleigh, NC 27615

Re: Modification of Operation Plan, Apex C&D Waste Transfer Facility, Wake County, North Carolina, Permit No. 92-29T-Transfer

Dear Mr. King:

The Solid Waste Section has reviewed and approved your request for a change in the operations plan for the Apex C&D Waste Transfer Facility to add the collection and management of tear-off asphalt shingles. This permit change allows the material to be diverted for recycling into asphalt pavement rather than transferred for disposal. The stamped approved plan, Doc ID 16946, is attached to this letter.

The request included a plan prepared using the "General Operation Plan for Tear-Off Asphalt Shingle Sorting at a Solid Waste Permitted Facility" that was included in the *CAPA Best Practices Guide for Post-Consumer Reclaimed Asphalt Shingles in Asphalt Pavement.*

This letter serves as an approval of the permit modification. Please place a copy of this letter and the approved asphalt shingle recycling plan in your operating record and incorporate the recycling plan into your operation plan in future permitting requests. If you have any questions regarding this matter please contact me at 919-707-8255 or by email donna.wilson@ncdenr.gov .

Sincerely,

Donna J. Wilson

Donna J. Wilson
Environmental Engineer
Solid Waste Section

Enclosure
cc: John Brown
Shawn McKee
Dennis Shackelford

CAPITOL WASTE TRANSFER, LLC

3209-120 GRESHAM LAKE ROAD
RALEIGH, NC 27615
(919) 876-8485

APPROVED DOCUMENT
Division of Waste Management
Solid Waste Section
Approved July 23, 2012
By D. Wilson
Facility ID 92-29T-Transfer
Doc ID 16946

February 22, 2012

Ms. Donna Wilson
Environmental Engineer II
North Carolina Dept. of Environment and Natural Resources
Division of Waste Management – Solid Waste Section
1646 Mail Service Center
Raleigh, NC 27699-1646

Re: Shingle Recycling Permit Modification: Capitol Waste Transfer, Shotwell Transfer Station, Shotwell Transfer Station II

Dear Ms. Wilson:

Capitol Waste Transfer, LLC, Shotwell Transfer Station, LLC and Shotwell Transfer Station II, are pleased to submit General Operations Plans for Shingle Recycling as an addition to respective Operating Plans.

Included with the Shingle Recycling Operations Plan, please find an updated map of each facility that includes the proposed location of our Shingle Recycling Program.

Should you have any questions or require clarification, please contact me at (919) 795-0599 or by email at jbrown@debrisrp.com.

Sincerely,

John Brown
President, Capitol Waste Transfer, LLC
Shotwell Transfer Station, LLC
Shotwell Transfer Station, II, LLC

CC: Ms. Shawn McKee (via email)
Mr. David King (via email)

SHOTWELL TRANSFER STATION II, INC.

Permit No.92-29T-Transfer-2009

1506 ½ N. Salem Street
Apex, NC 27502

Operation Plan for Sorting

Tear-off Asphalt Shingles for Recycling

David W. King Jr.,
Shotwell Transfer Station II, Inc.
225 Weathers Street, Suite 111
Youngsville, NC 27596

Prepared by: Shotwell Transfer Station II, Inc.

225 Weathers Street, Suite. 111
Youngsville, NC 27596

December 12, 2011

I. Introduction

This operation plan describes how tear-off asphalt shingles will be collected, sorted, stored, and managed at this facility in order to provide a material that can be used in asphalt production. Our facility uses best practices for acceptance and sorting to remove the tear-off shingles from the waste stream and divert the “clean” shingles to other facilities.

II. Waste Acceptance

Asphalt roofing shingles contain asphalt cement, mineral aggregate, and mineral filler which are raw materials used in asphalt production. Asbestos was used in shingle manufacture until the mid-1970’s and in other roofing materials such as roof felt, roof putty, surface coating, and mastic until the mid 1980s.

Our facility provides roofers with a list of acceptable and unacceptable items for tear-off shingle recycling and requires source separation at the job site by the roofer. Materials from flat and built-up roofing system are disposed rather than accepted for recycling due to the higher use of asbestos roofing materials in those systems. Roofers are instructed to separate tear-off shingles into either a dedicated trailer or to layer their waste when loading so that the shingles can be easily separated from the unacceptable debris. Our list of acceptable and unacceptable material is shown in Attachment A.

The shingle suppliers are also required to complete a supplier certification form. The handling and disposal of asbestos during demolition and renovation is regulated under the National Emissions Standards for Hazardous Air Pollution (NESHAP). NESHAP-regulated facilities are required to submit a notification of demolition and renovation prior to starting work. The notification includes an inspection by a North Carolina accredited asbestos inspector or roofing supervisor and analysis for asbestos. The supplier of shingles from a NESHAP-regulated facility must present documentation that the shingles do not contain greater than 1% asbestos. The documentation is a letter from the accredited asbestos inspector or roofing supervisor that sampled the shingles and the analytical test results. A copy of the documentation is kept with the supplier certification form. Shingles from a NESHAP-regulated facility that do not have the required documentation or that are documented to contain greater than 1% asbestos are disposed.

Shingles from single family homes or residential buildings containing four or fewer dwelling units are generally not regulated under NESHAP. Only the source of shingles is required for these shingles.

Our supplier certification form is shown in Attachment B. These practices help ensure that only recyclable tear-off shingles are sent for asphalt production while reducing sorting at our facility.

III. Flow and Management of Tear-off Shingles

Loads are visually inspected when entering the facility to determine whether the shingles have been separated or if it is a mixed load. The roofer is asked to complete a supplier certification form. Mixed loads, shingles from a NESHAP-regulated facility that contain greater than 1 percent asbestos, and shingles from a NESHAP-regulated facility without the proper documentation are directed to the transfer station tipping floor for disposal. Loads that were source-separated into dedicated containers are sent directly to the sorting area and unloaded. Loads that were separated into layers usually have the asphalt shingle on the bottom and other material on the top. These loads are first directed to the transfer station tipping floor to remove the non-shingle roofing waste and then to the sorting area for unloading the shingles. Figure 1 shows the location of the sorting area on the site plan and Figure 2 shows the unloading, sorting, and storage areas. Shingles are not unloaded into an area with standing water and sorted and unsorted materials are kept separate.

Source-separation by the roofer eliminates most of the unacceptable materials that cannot be used in tear-off shingle recycling. The unloaded tear-off shingles are examined for unacceptable materials and any unacceptable materials are removed. The remaining sorted shingles are accumulated in the designated area until there is a sufficient amount to transport to a facility that will grind and use or sell the ground shingles for asphalt production. A copy of the supplier certification form accompanies each sorted load to the receiving facility. At least 75% of the tear-off shingles that are sorted leave the facility during the same year.

IV. Recording Keeping

Records are kept of shingle waste entering the facility, sorted shingles leaving the facility for recycling, and waste that is disposed or sent for disposal. These records are kept for use in the facility's monthly and annual reports. Supplier certification forms and any supporting documents are also kept.

V. [Additional Operations/Requirements]

[Please check with the facility that will receive the sorted shingles to determine if there are additional requirements. Those requirements and any other site specific operations may be included here. Asbestos sampling and testing is required prior to grinding shingles. The testing frequency and protocols are set by NCDENR-DAQ and NCOOT. The current frequency current testing requirement is to sample each 100 tons of shingles (September2011).

Appendix A

TEAR-OFF ASPHALT SHINGLE RECYCLING

List of Acceptable and Unacceptable Materials

"YES"	"NO"
Include these items: items:	**Do NOT include these**
• Shingles	• Wood
• Felt attached to shingles	• Metal flashings, gutters, etc.
	• Nails (best effort)
	• Rolls of sheets of felt paper
	• Plastic wrap, buckets
	• Paper waste
	• No garbage, trash, or other waste materials
	• Built-up asphalt roofing
	• Asbestos-containing materials
	• Shingles containing mastics

Appendix B

SHOTWELL TRANSFER STATION II, INC.

SHINGLE SUPPLIER CERTIFICATION FORM

Supplier of Whole Tear-off Asphalt Shingles

Supplier Name: _____

Address: _____

Contact Name: _____

Phone: _____

We the undersigned certify that (check appropriate boxes):

☐ The tear-off shingles are from a NESHAP regulated facility and documentation stating that the shingles do not contain >1% asbestos is attached. (Documentation is a letter from the North Carolina accredited asbestos inspector or roofing supervisor that collected the samples with the analytical results attached.)

☐ The tear-off shingles are from a single family home or residential building having four or fewer dwelling units that is not regulated under NESHAP.

Tear-off shingles were removed from the following addresses:

_____

_____

_____

_____

_____

_____

_____

(Please attach additional sheets as needed to record each building address.)

_____ _____

Shingle Supplier (signature) Date

Figure 1

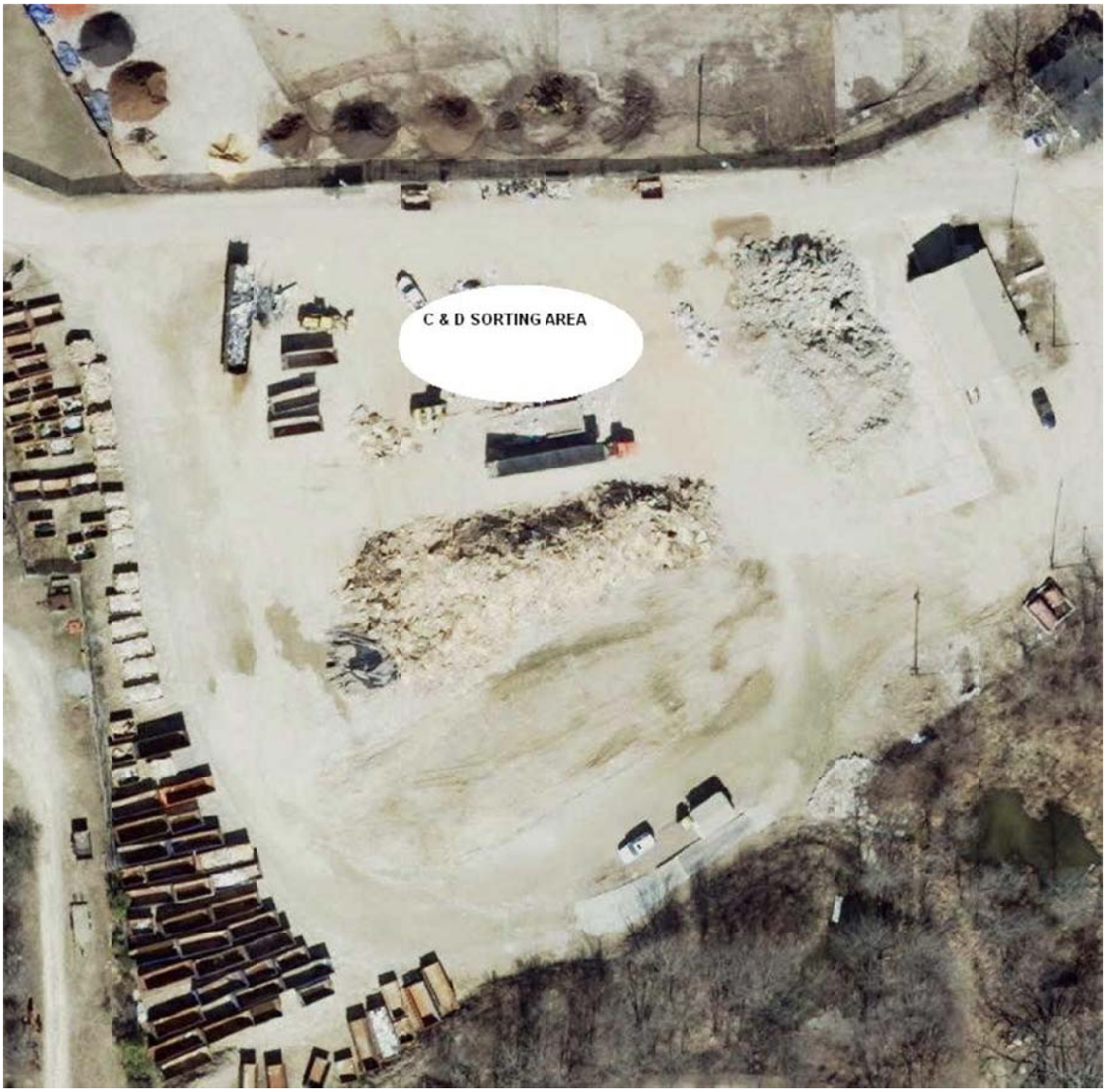

Figure 2

Wilson, Donna

From: John Brown [jbrown@debrisrp.com]
Sent: Friday, April 27, 2012 8:21 AM
To: Wilson, Donna
Cc: David King; David Cook; Katie Kessing; Catherine Hernandez; Grant Kiser
Subject: Shingle Recycling

Hi Donna,

I would like to clarify a couple of items related to our shingle recycling permit modification at all of the Shotwell Recycling/Transfer facilities.

We anticipate using approximately two containers per location to store recycled shingles. The secondary market for recycled shingles doesn't currently support reimbursement or payment for shingles so there will be no monetary value for any stored recycled shingles.

For Financial Assurance calculations, the total disposal value for two containers of shingles will be covered by the existing Financial Assurance amounts already in place.

Thank you,

John Brown, President
Shotwell Landfill, Shotwell Transfer Station
Shotwell Transfer Station II - Apex, Capitol Waste Transfer
Capitol Recycling, Debris Removal Partners
(919) 876-8485 (office) (919) 795-0599 (mobile) (919) 876-6203 (fax)