

OPERATION PLAN FOR SORTING TEAR-OFF ASPHALT SHINGLES FOR RECYCLING



Wilson County Landfill

Permit # 98-09

2416 Highway 42 East
Wilson, North Carolina 27893

Wilson County Solid Waste Management Department
Post Office Box 1728
Wilson, North Carolina 27893

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Prepared by:



Bartlett Engineering and Surveying
1906 Nash Street North
Wilson, North Carolina 27893

November 20, 2012



I. Introduction

This operation plan describes how tear-off asphalt shingles will be collected, 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 to remove the tear-off shingles from the waste stream. The County has an agreement with S.T. Wooten Corporation for them to periodically haul the tear-off shingles to their facility where they will be responsible for any testing, sorting, grinding, processing and ultimately incorporating into their asphalt product.

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 promotes source separation at the job site by the roofer. Materials from flat and built-up roofing systems are disposed of in the C & D Landfill rather than accepted for recycling due to the higher use of asbestos roofing materials in those systems. Roofers are encouraged 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 of in the C & D Landfill.

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.

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 C & D Landfill for disposal. Loads that were source-separated into dedicated containers are sent directly to the Tear-Off Shingle Storage 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 C & D Landfill to remove the non-shingle roofing waste and then to the Tear-Off Shingle Storage Area for unloading the shingles. Attachment "C" shows the location of the Tear-Off Shingle Storage Area. Shingles are not unloaded into an area with standing water. Tear-off shingles unloaded at the Tear-Off Shingle Storage Area will be grouped such that there is no more than 100 tons together. S.T. Wooten Corporation will haul the tear-off shingles to their facility when a sufficient amount is accumulated for them to process.

IV. Record 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 maintained.

V. Testing and Processing

S.T. Wooten Corporation will periodically haul the tear-off shingles to their facility. S.T. Wooten Corporation will be responsible for asbestos testing and any other required testing and record keeping for their sorting, grinding and additional processing.

Attachment "A"



Wilson County Landfill

TEAR-OFF ASPHALT SHINGLE RECYCLING

List of Acceptable and Unacceptable Materials

“YES”

Include these items:

- Shingles
- Felt attached to shingles

“NO”

Do NOT include these items:

- Wood
- Metal flashings, gutters, etc.
- Nails (best effort)
- Rolls or 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

Attachment "B"



Wilson County Landfill

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.

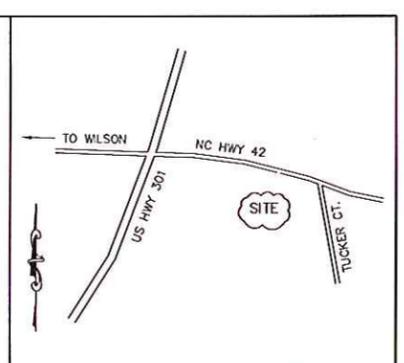
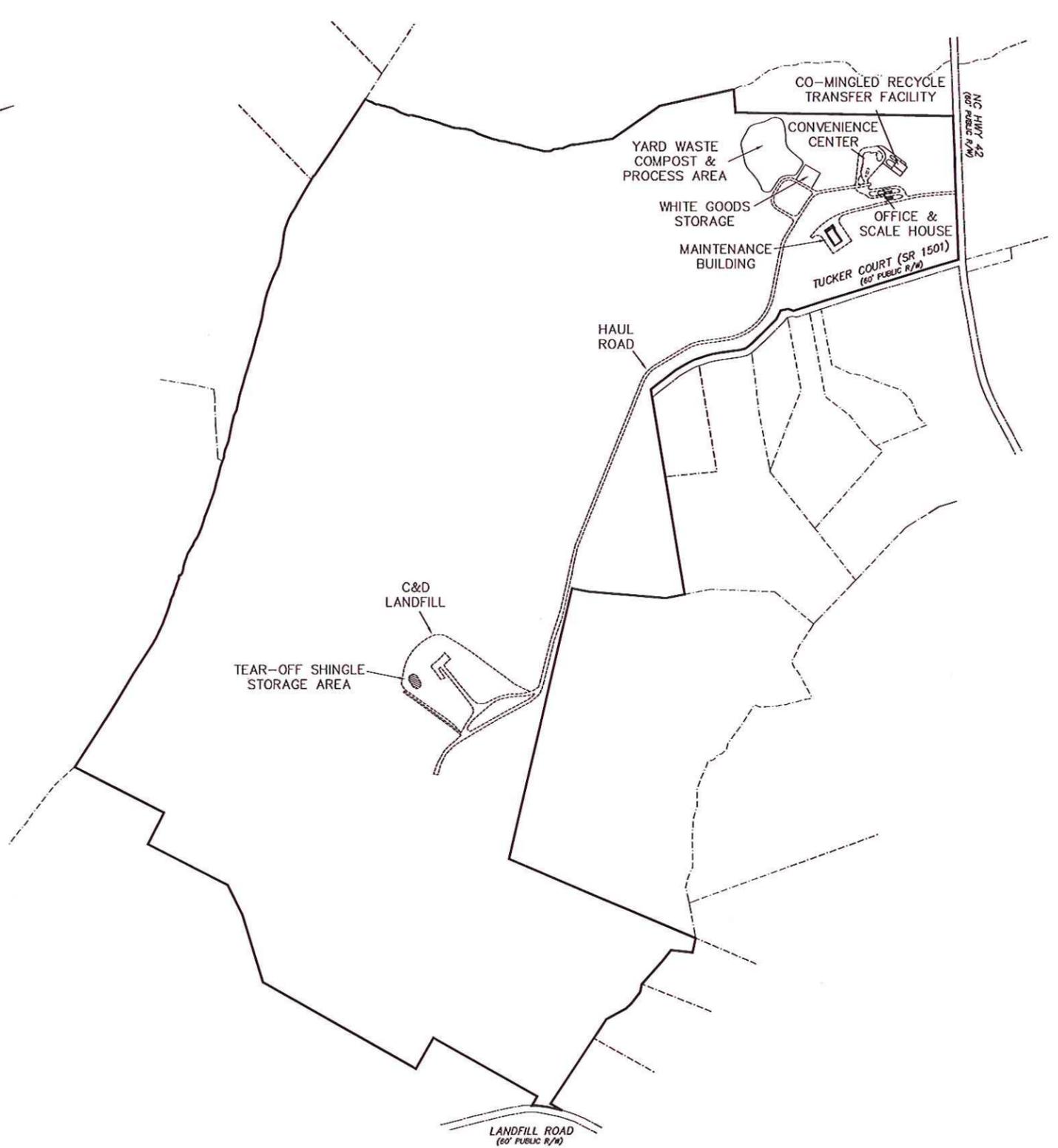
Tear-off shingles were removed from the following addresses:

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

Shingle Supplier (signature)

Date

Attachment "C"



LOCATION MAP
NO SCALE

SITE DATA

TOTAL AREA	709± ACRES
ZONING	AR
MIN. BLDG. LINES	FRONT 35' SIDE 15' REAR 30'
REFERENCE:	DB 1562 PG 165 DB 1577 PG 567 DB 1930 PG 792 DB 2150 PG 708 DB 2338 PG 667

- NOTES**
- AREAS COMPUTED BY COORDINATE CALCULATIONS
 - NO GRID MONUMENT FOUND WITHIN 2000'
 - COORDINATES SHOWN ON PLAT ARE HORIZONTAL COORDINATES UNLESS STATED OTHERWISE.
 - ALL DISTANCES SHOWN ARE HORIZONTAL
 - ALL RIGHTS-OF-WAY ARE PUBLIC UNLESS NOTED OTHERWISE
 - WETLANDS, IF ANY, HAVE NOT BEEN DELINEATED
 - THIS PROPERTY IS NOT LOCATED IN A SPECIAL FLOOD HAZARD AREA
 - THIS PROPERTY IS NOT LOCATED IN A PROTECTED WATERSHED AREA
 - THERE ARE NO CEMETERIES VISIBLE.
 - THIS PROPERTY IS SUBJECT TO ALL RIGHTS-OF-WAY, EASEMENTS, RESTRICTIVE COVENANTS AND ORDINANCES.
 - THIS IS NOT A BOUNDARY SURVEY.
 - BOUNDARY AND TOPOGRAPHICAL INFORMATION PROVIDED FROM WILSON COUNTY TAX MAPS, NCDOT DIGITAL TOPOGRAPHY, AND FIELD SURVEY BY BARTLETT ENGINEERING & SURVEYING, PC.

LEGEND

	PROJECT LOCATION
	LANDFILL BOUNDARY



BARTLETT
ENGINEERING & SURVEYING, PC
1906 NASH STREET NORTH
WILSON, N.C. 27893-1726
TELE: (252) 399-0704
FAX: (252) 399-0804
EMAIL: info@bartletteng.com

OVERALL MAP

WILSON COUNTY LANDFILL
ASPHALT SHINGLE RECYCLING
2400 NC HIGHWAY 42 EAST

DATE:	NOV 2012	PROJECT:	12245
SCALE:	NTS	CLIENT CODE:	WC
REVISIONS:		CAD FILE:	12246SP1
		FIELD BOOK:	
		DRAWN BY:	CEP,PPH
		SURVEY BY:	TRAP,LP

GARDNERS TOWNSHIP	WILSON COUNTY
NORTH CAROLINA	ZONE: AR
PIN # 3732-52-9078	SHEET 1 OF 1

From: [Robert Bartlett](#)
To: [Chao, Ming-tai](#)
Cc: [Andy Davis](#)
Subject: Wilson County Landfill - Tear-off Shingle Recycle
Date: Tuesday, December 04, 2012 8:19:48 AM
Attachments: [tear-off shingle recycle map - Attachment C.pdf](#)
[tear-off shingle recycle operation plan.pdf](#)

Mr. Chao:

Please find attached, the operational plan for the tear-off shingle recycle storage that Wilson County Landfill is implementing. I plan to send you a hard copy unless you tell me you don't need one. If there are any questions or comments, or if you have any suggestions for revising the operational plan please let me know.

Robert S. Bartlett, PE
President
BARTLETT ENGINEERING & SURVEYING, PC

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intentionally becoming better at providing
engineering and surveying solutions . . .
serving others . . . serving Jesus Christ!*