

BRUNSWICK COUNTY CONSTRUCTION & DEMOLITION LANDFILL

Permit No. 1007-CDLF-1997

172 Landfill Road NE
Bolivia, NC 28422



Operation Plan for Sorting
Tear-off Asphalt Shingles for Recycling

Brunswick County Solid Waste

P.O. 249
Bolivia, NC 28422

Prepared by:

Kimberley Thompson

P.O. Box 249
Bolivia, NC 28422
910-253-2524

January 10, 2013

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 into 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 accepted for recycling due 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 is 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 it 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

Brunswick County C&D Landfill or the Brunswick County 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 Brunswick County C&D Landfill or the Brunswick County transfer station tipping floor to remove the non-shingle roofing waste and then to the sorting area for unloading the shingles. Figure 1 and Figure 2 show the location of the sorting area on the site plan and 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.

Attachment

A

Source Separated Tear – Off Shingles:

An Example list of Acceptable and Unacceptable Items

List of Roofing Waste Items Included for Recycling

“YES”

Include these items:

- Shingles
- Felt attached to shingles

“NO”

Don't include these items:

- Wood
- Metal flashings, gutters, etc.
- Nails (best effort)
- Plastic wrap, buckets
- Paper waste
- Other garbage, trash or dirt

ATTACHMENT

B

**BRUNSWICK COUNTY
CONSTRUCTION & DEMOLITION 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

FIGURE 1

Figure 1 – Site photo showing asphalt shingle recycling area.



FIGURE 2

Figure 2 – Site photo showing asphalt shingle recycling area.





Brunswick County
Operation Services Department
PO Box 249
Bolivia, NC 28422
910-253-2515
910-253-2539 (fax)

Scanned By	Date	DOC ID	Permit
Backus	01/14/2013	18117	1007-CDLF-1997

Construction/Grounds/
Building Maintenance/
Housekeeping Divisions



Service Center/
Mosquito Control/
Solid Waste Divisions

January 10, 2013

Pat Backus
NC Department of Environment and Natural Resources
Division of Waste Management - Solid Waste Section
Telephone & Fax: (919) 707-8257

Dear Ms. Backus:

Brunswick County Solid Waste Department is requesting that asphalt shingle recycling be added to our permit. Please review the plan that we've submitted pertaining to the program. If you have any further question please contact me.

Thank you for your assistance with this matter.

Sincerely,

Kimberley Thompson
Brunswick County Solid Waste/Recycling Coordinator