Permit No.	Date	DIN
P1225	**December 30, 2010**	**12600**

Boggs

PAVING, INC.

GREEN

RECEIVED

NOV 22 2010

SOLID WASTE SECTION
ASHEVILLE REGIONAL OFFICE

ASPHALT SHINGLE PROCESSING APPLICATION

August 10, 2010

RECEIVED

NOV 22 2010

SOLID WASTE SECTION
ASHEVILLE REGIONAL OFFICE

Mr. Larry Frost, P.E.
Environmental Engineer II
NCDENR, Division of Waste Management
Solid Waste Section Permitting
1646 Mail Service Center Raleigh, NC 27699-1646

RE: New Permit Application – Treatment and Processing Facility

Dear Mr. Frost

Boggs Paving, Inc. submits the attached new permit application for the operation of a Treatment and Processing Facility at their Matthews facility located at 2168 Stevens Mill Rd., Matthews, NC.

Boggs Paving has been a leader in the HMA industry in promoting environmentally friendly technology. We are now committed to expanding our 'Green' initiatives to include the use of recycled asphalt Shingle (RAS) into our mix designs for hot-mix asphalt (HMA). With the demonstrated economic and environmental benefits of using RAS in HMA pavement, it is our goal to utilize this valuable commodity in our HMA production. The economic value of RAS in HMA has been shown nationwide to provide significant savings for all participating industry and agency partners and at the same time includes environmental benefits by diverting this valuable commodity from landfills.

Boggs Paving, Inc. has prepared this new permit application for approval to begin the recycling of asphalt roofing shingles for use in their hot-mix asphalt production. This submittal has been prepared In accordance with the requirements of 15A NCAC 13B.0300 and the Application Guidance for Facilities Processing Asphalt Shingles (Version 02/05/2009).

We look forward to working with you on the approval of this application and believe that you will agree that Boggs Paving is qualified to operate another Treatment and Processing Facility for the collection and processing of asphalt shingles.

Sincerely,

Drew Boggs
President

"Operation Plan"

Boggs Treatment and Processing Facility

for

Recycled Asphalt Shingles

Permit #

2168 Stevens Mill Rd.

Matthews, North Carolina 28104

Boggs Paving, Inc.

August 10, 2010

Boggs Treatment and Processing Facility
for
Recycling Asphalt Shingles

"Operation Plan"

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Financial Assurance

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Applicant Signature Page

Certification by Land Owner

Boggs Paving Shingle Recycling Facility

Applicant:
Boggs Paving Shingle Recycling Facility
Carl A. Boggs III
2168 Stevens Mill Rd. Matthews, NC
704-289-8482 ext. 225
dboggs@boggspaving.com

Landowner:
Grady R. Hill, Walter Dean Hill,
The W.T. and Annie Hill Family
Limited Partnership
2403 Medlin Rd.
Monroe, NC 28112
Jhill14@carolina.rr.com

Consultants on Recycling Asphalt Shingles:
Debra S. Haugen, Geological Engineer
Chris Williams, PH.D. (Profile Sheet Attached)
Sustainable Green Technologies, LLC
PO Box 3844
Minneapolis, MN 55403
dhaugen1@bitstream.net

Recipient of Permit Fee Invoices and Annual Fee Invoices:
Boggs Paving, Inc.
Carl A. Boggs III
PO Box 1609, Monroe N.C. 28111
704-289-8482 ext. 225
dboggs@boggspaving.com

Revision July 9, 2009

BK: 07901 PG: 0619/0621 #:0646 12.00
JUDITH A GIBSON REG OF DEEDS MECK NC
FILED FOR REGISTRATION 09/01/94 16:12

Excise Tax $0.00

Recording Time, Book and Page

Tax Lot No. _____ Parcel Identifier No. 215-092-13/14

Verified by _____ County on the _____ day of _____, 19____

by _____

Mail after recording to Underwood Kinsey Warren & Tucker P.A., R/D Box 43

This instrument was prepared by Underwood Kinsey Warren & Tucker, P.A.

Brief description for the Index 4.2 ACRES MT HARMONY CHURCH ROAD AND STILWELL ROAD

NORTH CAROLINA GENERAL WARRANTY DEED

THIS DEED made this 23rd day of August, 19 94, by and between

GRANTOR	GRANTEE
Grady Reid Hill	Grady Reid Hill and wife, Judy F. Hill 12309 E Independence Blvd Matthews, NC 28105

Enter in appropriate block for each party: name, address, and, if appropriate, character of entity, e.g. corporation or partnership.

The designation Grantor and Grantee as used herein shall include said parties, their heirs, successors, and assigns, and shall include singular, plural, masculine, feminine or neuter as required by context.

WITNESSETH, that the Grantor, for a valuable consideration paid by the Grantee, the receipt of which is hereby acknowledged, has and by these presents does grant, bargain, sell and convey unto the Grantee in fee simple, all that certain lot or parcel of land situated in the City of Matthews, Township, Mecklenburg County, North Carolina and more particularly described as follows:

See Exhibit A attached hereto and incorporated herein by reference.

-0-

The property hereinabove described was acquired by Grantor by instrument recorded in Book 7886, Page 889

A map showing the above described property is recorded in

TO HAVE AND TO HOLD the aforesaid lot or parcel of land and all privileges and appurtenances thereto belonging to the Grantee in fee simple.

And the Grantor covenants with the Grantee, that Grantor is seized of the premises in fee simple, has the right to convey the same in fee simple, that title is marketable and free and clear of all encumbrances, and that Grantor will warrant and defend the title against the lawful claims of all persons whomsoever except for the exceptions hereinafter stated. Title to the property hereinabove described is subject to the following exceptions:

IN WITNESS WHEREOF, the Grantor has hereunto set his hand and seal, or if corporate, has caused this instrument to be signed in its corporate name by its duly authorized officers and its seal to be hereunto affixed by authority of its Board of Directors, the day and year first above written.

USE BLACK INK ONLY

(Corporate Name)

By: .....

.....President

ATTEST:

.....

.....Secretary (Corporate Seal)

Grady Reid Hill (SEAL)

.....(SEAL)

.....(SEAL)

.....(SEAL)

SEAL-STAMP

Use Black Ink

NORTH CAROLINA, Mecklenburg County.

I, a Notary Public of the County and State aforesaid, certify that Grady Reid Hill Grantor, personally appeared before me this day and acknowledged the execution of the foregoing instrument. Witness my hand and official stamp or seal, this 23rd day of August, 1994.

My commission expires: 6-8-97 Eleanor Burnsky Notary Public

SEAL-STAMP

Use Black Ink

NORTH CAROLINA, ...County.

I, a Notary Public of the County and State aforesaid, certify that .....,

personally came before me this day and acknowledged that ..... he is ..... Secretary of ..... a North Carolina corporation, and that by authority duly given and as the act of the corporation, the foregoing instrument was signed in its name by its ..... President, sealed with its corporate seal and attested by ..... as its ..... Secretary.

Witness my hand and official stamp or seal, this .....day of ....., 19.....

My commission expires: ..... Notary Public

The foregoing Certificate(s) of .....

is/are certified to be correct. This instrument and this certificate are duly registered at the date and time and in the Book and Page shown on the first page hereof.

.....REGISTER OF DEEDS FOR..... .....COUNTY

By .....Deputy/Assistant - Register of Deeds

Exhibit A
Grady Reid Hill Property

BEGINNING at a point marking the intersection of the southerly margin of the right-of-way of Mt Harmony Church Road and the southerly or southwesterly margin of the right-of-way of Stillwell Road and running thence with the southwesterly margin of the right-of-way of Stillwell Road S. 55-50-00 E. 87.60 feet to a point; thence with the line of W.T. Hill property (now or formerly) S. 20-14-37 W. 248.37 feet to a point; thence continuing with the line of the W.T. Hill property (now or formerly) S. 57-37-40 E. 383.72 feet to a point; thence N. 39-53-00 W. 150.00 feet to a point; thence N. 59-57-20 E. 49.01 feet to a point; thence N. 02-51-30 E. 380.33 feet to a point in the southerly margin of the right-of-way of Mt Harmony Church Road; thence with the southerly margin of the right-of-way of Mt Harmony Church Road S. 82-27-18 E. 266.19 feet to a point; thence with the arc of a circular curve to the left having a radius of 339.45 feet a distance of 108.97 feet to the point a place of BEGINNING, being the same property shown on a survey prepared by DPR Associates, Inc. dated June 6, 1994, to which survey reference is hereby made for a more particular description of the property.

Being also the same property conveyed to the Grantor by deed recorded in Book 7886, Page 889 in the Mecklenburg Public Registry.

State of North Carolina, County of Mecklenburg

The foregoing certificate(s) of Eleanor Lucinskey

Notary(ies) Public is/are certified to be correct.

This 12th day of September, 19 94

JUDITH A. GIBSON, REGISTER OF DEEDS

By: Patricia N. Bennett Deputy Register of Deeds

BK: 08342 PG: 0411/0413 #:0617 12.00
JUDITH A GIDSON REG OF DEEDS MECK NC
FILED FOR REGISTRATION 10/27/95 16:12

Excise Tax | Recording Time, Book and Page

Tax Lot No. 215-094-01/215-092-07 Parcel Identifier No.

Verified by County on the day of , 19

by

BOX 43

Mail after recording to William E. Underwood, Jr., Underwood Kinsey Warren & Tucker, P.A. 2020 Charlotte Plaza, 201 S. College Street, Charlotte, North Carolina 28244

This instrument was prepared by William E. Underwood, Jr.

Brief description for the Index

NORTH CAROLINA GENERAL WARRANTY DEED

THIS DEED made this 26 day of September , 19 95 , by and between

GRANTOR	GRANTEE
GRADY R. HILL, Executor of the Estate of Walter Thomas Hill, Jr. 2403 Medlin Road Monroe, NC 28112	Myron L. Webb, Trustee under Will of Walter Thomas Hill, Jr. 1305 Old Pageland-Monroe Road Monroe, NC 28112

Enter in appropriate block for each party: name, address, and, if appropriate, character of entity, e.g. corporation or partnership.

The designation Grantor and Grantee as used herein shall include said parties, their heirs, successors, and assigns, and shall include singular, plural, masculine, feminine or neuter as required by context.

WITNESSETH, that the Grantor, for a valuable consideration paid by the Grantee, the receipt of which is hereby acknowledged, has and by these presents does grant, bargain, sell and convey unto the Grantee in fee simple ~~all~~ a one-half undivided interest in that certain lot or parcel of land situated in the City of Morning Star Township, Mecklenburg County, North Carolina and more particularly described as follows:

See attached Schedule A.

The property hereinabove described was acquired by Grantor by instrument recorded in

A map showing the above described property is recorded in Plat Book page

TO HAVE AND TO HOLD the aforesaid lot or parcel of land and all privileges and appurtenances thereto belonging to the Grantee in fee simple.

And the Grantor covenants with the Grantee, that Grantor is seized of the premises in fee simple, has the right to convey the same in fee simple, that title is marketable and free and clear of all encumbrances, and that Grantor will warrant and defend the title against the lawful claims of all persons whomsoever except for the exceptions hereinafter stated. Title to the property hereinabove described is subject to the following exceptions:

IN WITNESS WHEREOF, the Grantor has hereunto set his hand and seal, or if corporate, has caused this instrument to be signed in its corporate name by its duly authorized officers and its seal to be hereunto affixed by authority of its Board of Directors, the day and year first above written.

(Corporate Name)

By:

President

ATTEST:

Secretary (Corporate Seal)

USE BLACK INK ONLY

Grady R. Hill, Executor (SEAL)
GRADY R. HILL

(SEAL)

(SEAL)

(SEAL)

(SEAL)

KIMBERLY H. COX NOTARY PUBLIC UNION COUNTY, N.C.

Use Black Ink

NORTH CAROLINA, Union County.

I, a Notary Public of the County and State aforesaid, certify that Grady R. Hill, Executor Grantor, personally appeared before me this day and acknowledged the execution of the foregoing instrument. Witness my hand and official stamp or seal, this day of ~~September~~ October 26, 1995.

My commission expires: Feb. 19, 2000 Kimberly H. Cox Notary Public

SEAL-STAMP

Use Black Ink

NORTH CAROLINA, County.

I, a Notary Public of the County and State aforesaid, certify that personally came before me this day and acknowledged that he is Secretary of a North Carolina corporation, and that by authority duly given and as the act of the corporation, the foregoing instrument was signed in its name by its President, sealed with its corporate seal and attested by as its Secretary.

Witness my hand and official stamp or seal, this day of 19

My commission expires: Notary Public

The foregoing Certificate(s) of is are certified to be correct. This instrument and this certificate are duly registered at the date and time and in the Book and Page shown on the first page hereof.

REGISTER OF DEEDS FOR COUNTY

By Deputy Assistant - Register of Deeds

Schedule A

That certain tract of land containing 17.7 acres, more or less, more particularly described in deed from Kathleen Phillips Killough et als to W. T. Hill, Jr., and wife, Annie W. Hill, dated June 16, 1973, and recorded in Book 3592, Page 72 of the Mecklenburg County, North Carolina, Public Registry, to which deed reference is hereby made for a more particular description.

By deed dated May 22, 1985 and recorded on May 28, 1985 in Book 5022, Page 610, of the Mecklenburg County, North Carolina, Public Registry W. T. Hill, Jr. and wife, Annie W. Hill, conveyed the property less First and Second Tracts below to "W. T. Hill, Jr. and Annie W. Hill as tenants in common and not as tenants by the entireties".

LESS AND EXCEPT from the above-described property the following:

FIRST TRACT: That certain tract of land containing 1.218 acres, more or less, conveyed by W. T. Hill, Jr., and wife, Annie W. Hill, to McCamie D. Hill and wife, Shirley P. Hill, by deed duly recorded in the Mecklenburg County, North Carolina, Public Registry.

SECOND TRACT: That certain tract of land containing approximately 1.8 acres, more or less, conveyed by W. T. Hill, Jr. and wife, Annie W. Hill, to Bland Helms by deed duly recorded in the Mecklenburg County, North Carolina, Public Registry.

THIRD TRACT: That certain property containing approximately two (2) acres and additional easements conveyed to the North Carolina department of Transportation by deeds dated October 22, 1993 and recorded in Book 7543, at Page 918, and Book 7543, at Page 920, of Mecklenburg County, North Carolina, Public Registry.

W. T. Hill died testate on March 13, 1994 and a certified copy of his Will has been filed in the Office of the Clerk of Superior Court for Mecklenburg County, pursuant to G.S. 31-20. This conveyance is made to fund the Trust established by Item Six of his Will.

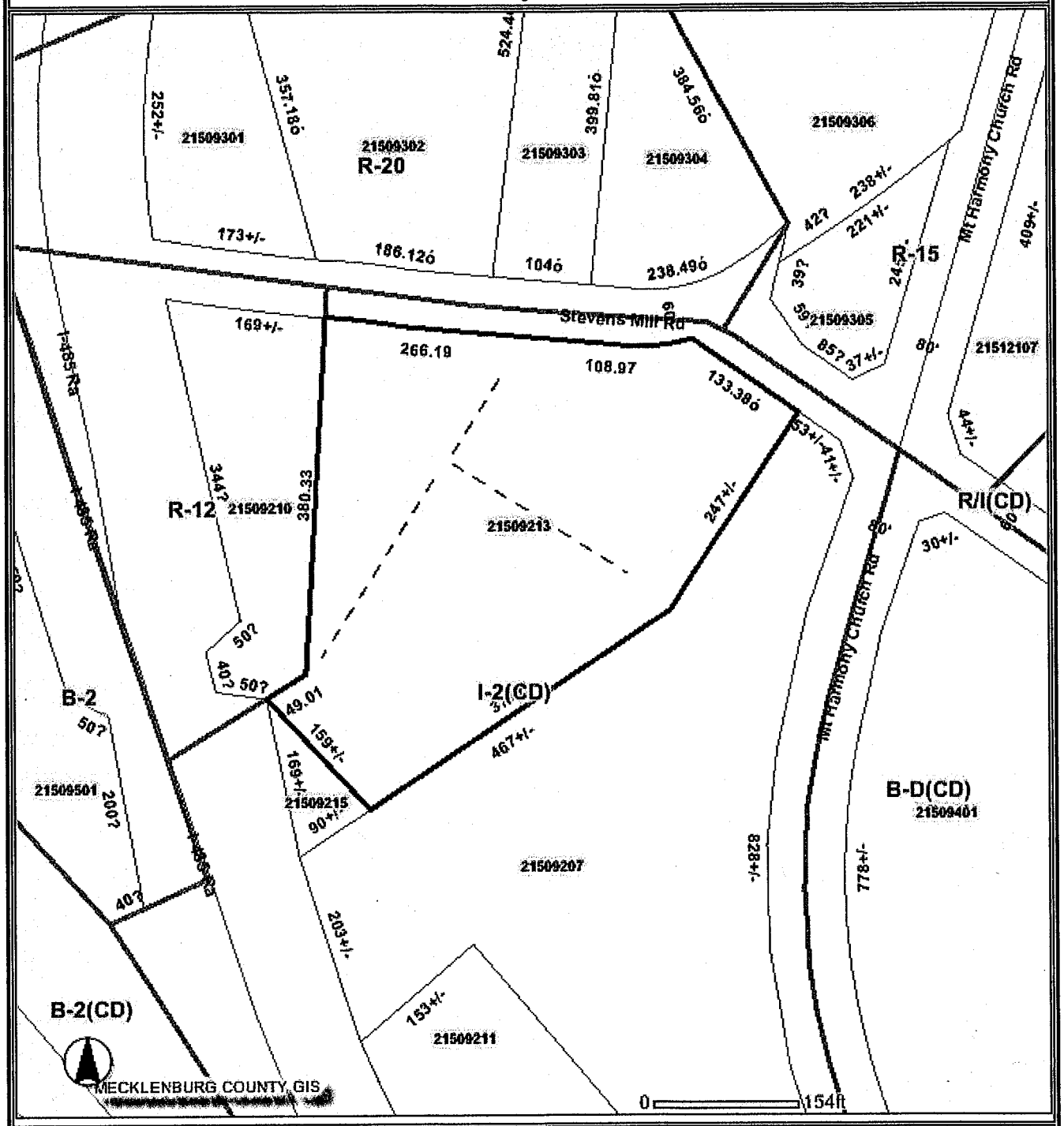
State of North Carolina, County of Mecklenburg
The foregoing certificate(s) of Kimberly H. Coy
Notary(ies) Public is/are certified to be correct. This 27 day of October, 1995
JUDITH A. GIBSON, REGISTER OF DEEDS By: Sherry H. Rude Deputy Register of Deeds

Mecklenburg County, North Carolina

POLARIS

Property Ownership Land Records Information System

Date Printed: Wed Aug 11 09:43:09 EDT 2010



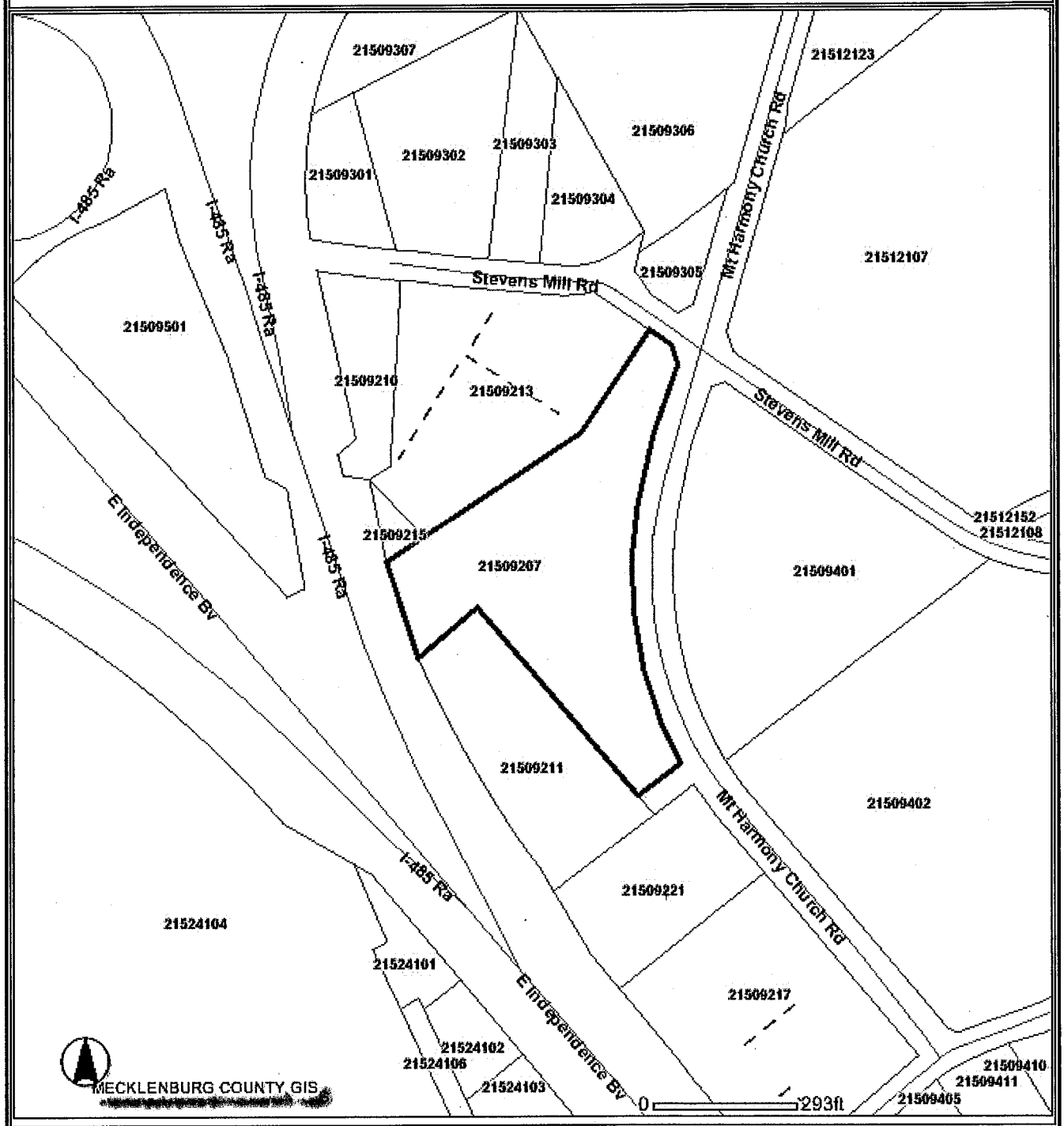
This map is prepared for the inventory of real property within Mecklenburg County and is compiled from recorded deeds, plats, tax maps, surveys, planimetric maps, and other public records and data. Users of this map are hereby notified that the aformentioned public primary information sources should be consulted for verification. Mecklenburg County and its mapping contractors assume no legal responsibility for the information contained herein.

Mecklenburg County, North Carolina

POLARIS

Property Ownership Land Records Information System

Date Printed: Mon Nov 8 13:28:08 EST 2010



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Mecklenburg County, North Carolina

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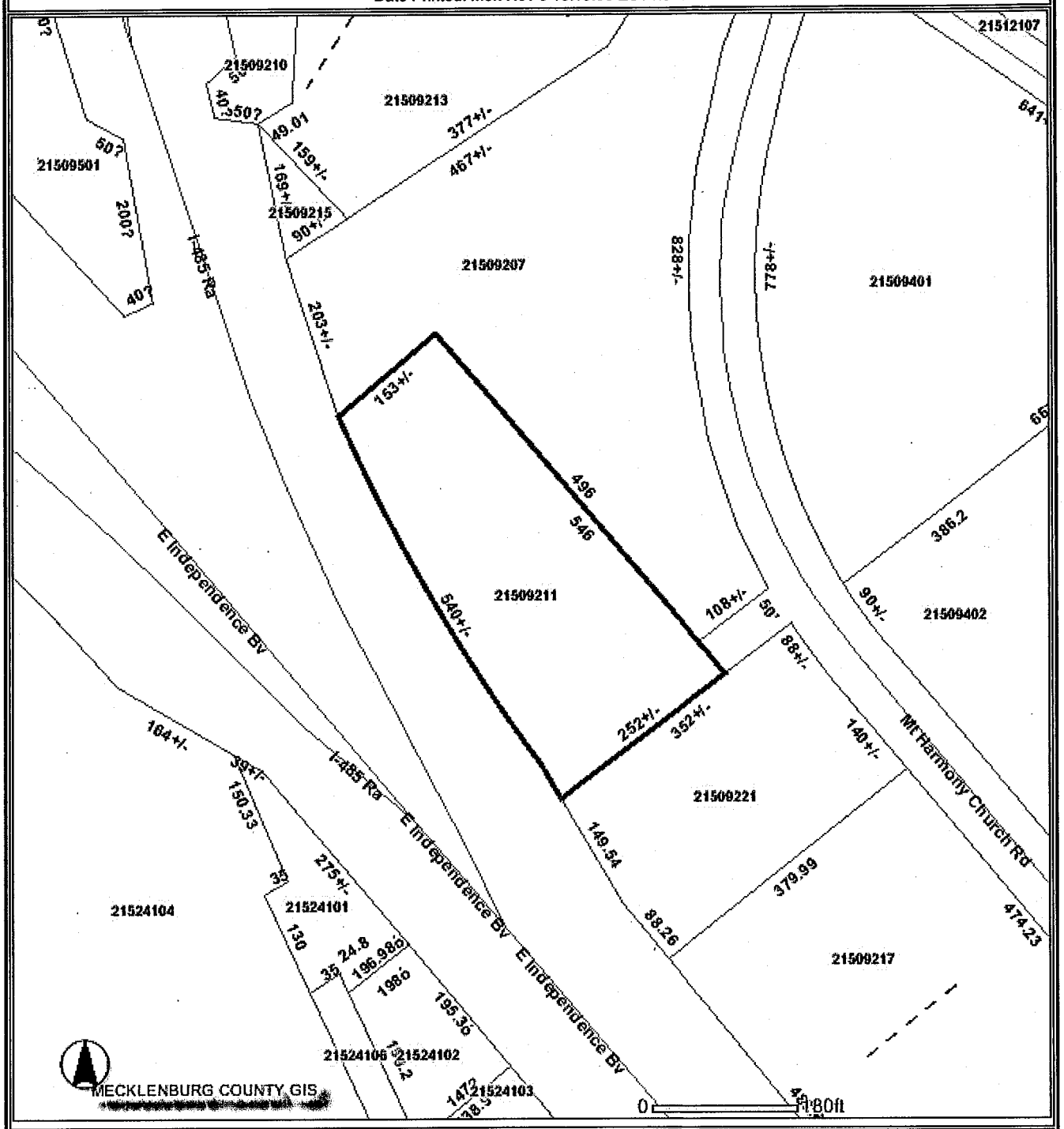
Date Printed: Mon Nov 8 13:19:08 EST 2010



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MECKLENBURG COUNTY
Land Use and Environmental Services Agency
-AIR QUALITY-

September 21, 2010

Mr. Phil Hill
Boggs Paving, Inc.
P.O. Box 1609
Monroe, North Carolina 28111

Re: Registering Boggs Treatment and Processing Facility
2168 Stevens Mill Rd. Matthews, NC 28104
Air Quality Source R501

Dear Mr. Hill:

Mecklenburg County Air Quality ("MCAQ") has reviewed the information provided by Boggs Treatment and Processing Facility relevant to air quality permitting for the following proposed equipment/processes:

- One (1) 4701B Peterson Track Mounted Horizontal Grinder with associated Caterpillar 765 hp diesel engine.

The review demonstrates that Caterpillar 765 hp diesel engine is exempt from air quality permitting due to the applicability exemptions specified under Mecklenburg County Air Pollution Control Ordinance ("MCAPCO") Regulation 1.5211 – "Applicability", and more specifically Subpart (g)(2)(B)(vi) which in part states the following:

> "portable generators and other portable equipment with internal combustion engines not regulated by rules adopted under Title II of the federal Clean Air Act, (except self-propelled vehicles), that operate at the facility no more than a combined 350 hours for any 365-day period, provided the generators or engines have a rated capacity of no more than 750 kilowatts (electric) or 1100 horsepower each and provided records are maintained to verify the hours of operation;"

In addition, the 4701B Peterson Track Mounted Horizontal Grinder is exempt from air quality permitting per MCAPCO 1.5211 Part (f) which in part states:

> "A facility does not need a permit or permit modification under this Article if the facility's uncontrolled potential emissions of particulate, sulfur dioxide, nitrogen oxides, volatile organic compounds, or carbon monoxide are each no more than five tons, and uncontrolled potential emissions of hazardous air pollutants are below their lesser quantity cutoff emission rates; however the Director may require the owner or operator of these activities to register them under MCAPCO Regulation 2.0202 - "Registration of Air Pollution Sources".

As a result of this review, Boggs Treatment and Processing Facility will be registered with MCAQ as an air pollution facility. During future years, MCAQ may require a registered facility to submit information necessary to document compliance and a nonpermitted status.

In accordance with MCAPCO Regulation 1.5231 - "Air Quality Fees", Boggs Processing Facility will be charged a one-time fee of $100.00 for the processing of your submitted information. The check or money order made payable to Mecklenburg County Air Quality for this amount should be mailed by October 30, 2010 to:

Mecklenburg County Air Quality
700 N. Tryon Street, Suite 205
Charlotte, NC 28202-2236

In accordance with North Carolina General Statute 25-3-506, a $25.00 processing fee will be charged for a returned check.

Please be advised of the following:

- Unless otherwise exempted by MCAPCO Regulation 1.5211 - "Applicability", a facility whose uncontrolled emissions of any criteria air pollutant that potentially exceeds 5 tons per year is required to have a permit according to MCAPCO Section 1.5200 - "Air Quality Permits". Criteria pollutants are sulfur dioxide, particulate matter {PM-10 or PM-2.5}, carbon monoxide, nitrogen oxides, or volatile organic compounds. Potential emissions are estimated assuming continuous yearly operation under maximum conditions.
- Facilities subject to the permitting requirements of MCAPCO must have received such permit prior to any construction/operation of applicable new equipment, the replacement/modification of existing registered equipment or use of different raw materials containing volatile organic compounds; and,
- Because an activity is exempted from being required to have a permit does not mean that the activity is exempted from any applicable requirement or that the owner or operator of the facility is exempted from demonstrating compliance with any applicable requirement including MCAPCO Regulation 1.5109 - "Nuisance" and 1.5110 - "Control and Prohibition of Odorous Emissions".

Enclosed with this letter is a brochure for the Environmental Assistance Office for Small Business. This office, located at UNC-Charlotte, provides free, non-regulatory assistance for small businesses in various environmental areas, including technology practices and enhancements, pollution prevention, and access to regulatory information through on-line services.

Please contact me at (704) 336-5430 at your convenience should you have questions.

Sincerely,

Aaron B. Matijow

Aaron B. Matijow
Air Quality Specialist

ABM:isp

Enclosures (1): EAO brochure

Section 3: Operation Plan

General:

Boggs Treatment and Processing Facility is operated by Boggs Paving, Inc. The facility is located at 2168 Stevens Mill Rd. Matthews, North Carolina. The facility will be recycling asphalt roofing shingles for use in their hot-mix asphalt production. The storage and processing area for asphalt roofing shingles will be contained within a fenced area on the property. Incoming loads of asphalt roofing shingles will enter the facility and be weighed and inspected prior to unloading within the storage and processing area. Accepted loads will be stockpiled and sorted to remove all non-shingle material. . All non-shingle material will be delivered to the Union County Landfill and Transfer Station, Fox Hole C & D landfill in Mecklenburg County or the Cabarrus County Construction and Demolition Debris Landfill in Cabarrus County., N.C. The clean shingles will then be placed into a grinder to reduce the shingles to a size that meets specifications for use in HMA pavements by Boggs Paving, Inc.

The facility operations will be conducted in accordance with the Application Guidance for Facilities Processing Asphalt Shingles and 15A NCAC 13B.0300.

Operational Plan for the NC DENR Health Hazards Control Unit

Boggs Paving developed an operational plan to address the requirements of the NC DENR Health Hazards Control Unit (HHCU) on the testing and handling protocol for asbestos containing material for incoming loads of asphalt shingles. The plan was submitted to the HHCU and approved. The approved plan and letter of acceptance are included in section N.C. Health & Human Services Plan & Approval.

Hours of Operation:

Boggs Treatment and Processing Facility will be open every day except Sundays and Holidays from January 15th through December 15th. These hours may change in order to accommodate the conditions of unforeseen circumstances. Hours are generally as follows:

Monday through Friday	7:00 a.m. – 5:00 p.m.
Saturday	7:00 a.m. – 1:00 p.m.

Waste Accepted:

Boggs Paving will be accepting loads of asphalt roofing shingles. Incoming loads of asphalt shingles will be accepted and tested for asbestos per the sampling protocol in the HHCU Operation Plan attached as Appendix "A" Incoming loads of asphalt shingles will be sampled by a NC accredited asbestos inspector trained to identify potential asbestos containing material and other unacceptable wastes and materials. Loads identified by the asbestos inspector as containing potential asbestos containing material or unacceptable wastes and materials will be rejected. Rejected loads will be documented with the date, reason for rejecting the load, vehicle license and signature of the asbestos inspector and supplier. A carbon copy of the documentation will be presented to the supplier. No flat built-up roofing, roof

flashing, shingles that have been coated with paint, sealants or mastics, or asbestos cement shingles will be accepted by Boggs Paving, Inc. A list of unacceptable items for recycling will be posted at the point of inspection of incoming loads.

Service Area: This Facility will receive asphalt waste generated in the area surrounding Charlotte, N.C., including the counties of Mecklenburg, Union, Anson, Stanly, and Cabarrus.

Quantity of Waste:

Boggs Paving will be accepting up to 200 tons of asphalt roofing shingles per day. The facility will have 260 operating days per year.

Site Security and Access Control:

The facility is secured by fences and gates. A sign will be posted at the entrance with the following information:

Type of Waste Accepted
Operating Hours
Permit Number
Emergency Contact Phone Numbers

A sign will be posted at the gate entrance and within the gates to direct incoming traffic to the scale house for inspection and weighing. Signs will also be posted within the sorting and grinding area on how to properly enter and exit the operating facility.

Entrance Signs:

A sign will be posted at the entrance with the name of the facility and the hours of operation.

Disposal Facilities:

All non-shingle material will be disposed of at the following locations:

Union County Construction and Demolition Debris Landfill	Permit # 901-01
Union County Transfer Facility	Permit # 90-05T
Mecklenburg County (Fox Hole) Landfill	Permit # 60-19
Cabarrus County Construction and Demolition Debris Landfill	Permit # 13-02

Operation of the Processing Facility:

Vehicles will enter the facility from Stevens Mill Rd. and be directed to the scale house, just inside the gate, for weighing and inspection. The vehicles are weighed upon entering and exiting to document the total amount of asphalt shingles received. Incoming loads are inspected and loads containing unacceptable waste and materials will be rejected. Drivers will be required to present completed supply certification forms on the source of the shingles prior to unloading.

Immediately after inspection the vehicles are directed around the scale house and to the right to the storage and processing area, located behind the scale house to the southwest. The loader operator will direct the driver where to deposit the shingles on the bituminous tipping pad. After unloading is completed, vehicles will be directed back to the scale house for weighing before exiting the facility.

Each load of shingles will be marked and dated. Once the shingles are determined to be asbestos free they will be moved to the pre-sorted shingle stockpile located in a separate area on the tipping pad.

The pre-sorted shingles are then placed into a surge bin that feeds the shingles onto a sorting line. The sorting line will have four to six trained sorters who will remove all non-shingle material. The non-shingle material is placed into roll-off containers as it is removed.

The clean shingles will be stockpiled on a separate bituminous tipping pad or when possible directly loaded into the industrial grinder for size reduction. The industrial grinder includes magnets to remove nails and water nozzles for dust control and to reduce the heat build up during the grinding process. The final ground product will be reduced to a size less than ½" minus to meet owner agency specifications for hot-mix asphalt applications. The final ground shingles will be stockpiled on a bituminous tipping pad. Final ground shingles will be loaded as needed into trucks for delivery to the HMA facilities for use in HMA pavements.

Storage of Materials:

Storage and unloading of the asphalt shingles will be defined to an approved designated area with a bituminous "tipping pad". Each load will be weighed, ticketed, and stockpiled separately within the assigned area. Stockpiles will be marked and placed in the order of arrival. Once the loads are identified as asbestos free they will be moved to the pre-sorted stockpile located in a separate area on the tipping pad. Fencing or a stackable concrete block area at least six feet in height will be constructed to prevent windblown material from leaving the storage area. Storage of the shingles shall be a minimum of 100 feet from surface waters.

Storage of the final ground asphalt shingle product will be confined to an approved designated area on a bituminous "tipping pad". The stockpile of ground recycled asphalt shingles (RAS) shall be a minimum of 100 feet from surface waters.

The recycled shingles will be utilized by Boggs Paving, Inc. in their hot-mix asphalt production. All recycled product will be processed or removed from the facility within one year of receipt. The recycled product will be monitored through daily documentation on the tonnage of shingles accepted and the tonnage of RAS delivered for utilization in HMA production. Records will be kept on file at the facility.

During the HMA season, the stockpiles of asphalt shingles (both pre-processed and processed) will not exceed 10,000 tons. During the off season for HMA production, December – February, shingles will continue to be collected and sorted to ensure that there is a sufficient amount of clean shingles ready for grinding to begin utilizing once HMA production resumes. During the off-season, stockpiles of pre-processed shingles will not exceed 20,000 tons and processed shingles will not exceed 2,500 tons.

Equipment:

The facility will use the following equipment for operations and maintenance:

1. 60' X 10' Scale
2. Rubber-Tired Front End Loader (for stockpiling shingles and loading waste and product)
3. Sorting Station (4 person)

4. Roll-offs (3)(for storage of non-shingle material – two for recyclable materials, wood and metal, and one for other material)
5. Industrial Horizontal Grinder
6. Trommel Screen
7. Small Track or wheel loader (for small clean up jobs and moving piles)

Facility Staffing:

Facility staffing will include the following:

1. A North Carolina accredited asbestos inspector will be on-site at all times during the operating hours of the facility. The inspector will be present to oversee the loading and unloading of the loads of incoming asphalt shingles. Loads identified by the asbestos inspector as containing potential asbestos containing material or unacceptable wastes and materials will be rejected. Rejected loads will be documented with the date, reason for rejecting the load, vehicle license and signature of the asbestos inspector and supplier. A carbon copy of the documentation will be presented to the supplier.
2. There will be up to six trained sorting employees on site as needed. The sorters will be responsible for removing non-shingle material from the loads of shingles before being processed. The sorters will be trained to identify acceptable and non-acceptable waste (see the attached training materials in Appendix D of the N.C. Health & Human Services Plan & Approval) that passes over the sorting line and where to properly dispose of non-shingle material.
3. There will be an experienced loader operator. The loader operator will be responsible for stockpiling the incoming loads of shingles once they are determined to be free of asbestos, load the shingles into the surge bin for feeding onto the conveyor belt for sorting and for loading the final ground product into the trucks for delivery. The loader operator will also be responsible for loading non-shingle material as needed into containers. In the event that a load of shingles is dumped and found to contain unacceptable waste, the loader operator will re-load the rejected load of shingles onto the roll-off or trailer of the supplier for proper disposal at a solid waste facility.
4. There will be a grinder operator who will be responsible for the operation and maintenance of the grinder. The operator will be responsible for maintaining a proper flow of shingles through the grinder to achieve a final ground product that will meet the specifications for HMA pavements. The operator will also be responsible for weekly maintenance on the machine and any maintenance needed during the operating days.

Surface Water Control Features

The property has three retention ponds for the diversion of any run-off that collects on the grounds. Operation of the facility during wet weather will be limited depending on the severity of the weather. In the cases of light rain operations will continue, in the case of heavy rains operations will be halted until the weather conditions improve.

Procedures to Maintain Facility Property in Sanitary Condition:

All recyclables and non-shingle material removed during the sorting of the shingles will be placed into separate containers. The containers will be covered at the end of each operating day and during rain events. Recyclables and non-shingle material will be removed from the site once the containers are full and shipped to the Union County Landfill and Transfer Station. All wind blown material will be picked up and disposed of in the proper container daily.

Procedures for Litter and Dust Control:

The shingle recycling operation will be enclosed within a fenced area, within the fenced property, to insure that no scattered or wind blown materials leave the area. All windblown debris collected off the fencing will be removed periodically or as needed.

The industrial grinder uses water nozzles for dust control during the grinding process.

Procedure for Fire Prevention:

Boggs Paving Treatment and Processing Facility is within the limits of the City of Matthews, North Carolina and fire protection is provided by the City. The primary fire control policy for the Facility consists of notifying the Matthews Fire Department and waiting for their response. A secondary fire control policy consists of having available on site fire extinguishers and staff trained in the use and handling of these extinguishers along with posted emergency phone numbers and information. A fire hydrant is located within 1000 feet of the site.

Record Keeping:

Boggs Paving Treatment and Processing Facility will collect and maintain on site the following information:

a. Copy of the permit
b. Site drawings
c. Reference to the DHHS guidance document;
d. Daily tonnages of asphalt shingles accepted by county of origin;
e. Daily tonnages of waste sent to a disposal facility;
f. Daily tonnages of processed material delivered for utilization in HMA production.
g. Daily tonnage of material stored onsite.
h. Monthly tonnages stored on site:
    1. Pre-Processed Shingles stored on site.
    2. Non-Shingle material stored on site.
    3. Processed Shingles stored on site.

Contingency Plans:

Equipment Breakdowns:

In the event that the horizontal grinder is down for more than four operating weeks, a mobile grinder will be hired to complete the grinding of the shingles as needed.

In the event the sorting station is down for more than five consecutive days, sorting will be conducted on the tipping pad. The loader will spread the shingles out on the tipping pad and the sorting crew will remove all non-shingle material.

In the event that the loader breaks down, a leased loader will be obtained.

Extreme Weather Conditions:

During storms, heavy rain or high winds operations will be halted until the weather clears.

APPENDIX A

ASTM D75/AASHTO T2

SAMPLING PROTOCOL

Designation: D 75 – 97

American Association State Highway and Transportation Officials Standard AASHTO No.: T 2

Standard Practice for Sampling Aggregates[1]

This standard is issued under the fixed designation D 75; the number immediately following the designation indicates the year of original adoption or, in the case of revision, the year of last revision. A number in parentheses indicates the year of last reapproval. A superscript epsilon (ε) indicates an editorial change since the last revision or reapproval.

This standard has been approved for use by agencies of the Department of Defense.

1. Scope *

1.1 This practice covers sampling of coarse and fine aggregates for the following purposes:

1.1.1 Preliminary investigation of the potential source of supply.

1.1.2 Control of the product at the source of supply,

1.1.3 Control of the operations at the site of use, and

1.1.4 Acceptance or rejection of the materials.

NOTE 1—Sampling plans and acceptance and control tests vary with the type of construction in which the material is used. Attention is directed to Practices E 105 and D 3665.

1.2 *This standard does not purport to address all of the safety concerns, if any, associated with its use. It is the responsibility of the user of this standard to establish appropriate safety and health practices and determine the applicability of regulatory limitations prior to use.*

2. Referenced Documents

2.1 *ASTM Standards:*

C 702 Practice for Reducing Field Samples of Aggregate to Testing Size[2]

D 2234 Test Method for Collection of a Gross Sample of Coal[3]

D 3665 Practice for Random Sampling of Construction Materials[4]

E 105 Practice for Probability Sampling of Materials[5]

E 122 Practice for Choice of Sample Size to Estimate the Average Quality of a Lot or Process[5]

E 141 Practice for Acceptance of Evidence Based on the Results of Probability Sampling[5]

3. Significance and Use

3.1 Sampling is equally as important as the testing, and the sampler shall use every precaution to obtain samples that will show the nature and condition of the materials which they represent.

3.2 Samples for preliminary investigation tests are obtained by the party responsible for development of the potential source (Note 2). Samples of materials for control of the production at the source or control of the work at the site of use are obtained by the manufacturer, contractor, or other parties responsible for accomplishing the work. Samples for tests to be used in acceptance or rejection decisions by the purchaser are obtained by the purchaser or his authorized representative.

NOTE 2—The preliminary investigation and sampling of potential aggregate sources and types occupies a very important place in determining the availability and suitability of the largest single constituent entering into the construction. It influences the type of construction from the standpoint of economics and governs the necessary material control to ensure durability of the resulting structure, from the aggregate standpoint. This investigation should be done only by a responsible trained and experienced person. For more comprehensive guidance, see the Appendix.

4. Securing Samples

4.1 *General*—Where practicable, samples to be tested for quality shall be obtained from the finished product. Samples from the finished product to be tested for abrasion loss shall not be subject to further crushing or manual reduction in particle size in preparation for the abrasion test unless the size of the finished product is such that it requires further reduction for testing purposes.

4.2 *Inspection*—The material shall be inspected to determine discernible variations. The seller shall provide suitable equipment needed for proper inspection and sampling.

4.3 *Procedure:*

4.3.1 *Sampling from a Flowing Aggregate Stream (Bins or Belt Discharge)*—Select units to be sampled by a random method, such as Practice D 3665, from the production. Obtain at least three approximately equal increments, selected at random from the unit being sampled, and combine to form a field sample whose mass equals or exceeds the minimum recommended in 4.4.2. Take each increment from the entire cross section of the material as it is being discharged. It is usually necessary to have a special device constructed for use at each particular plant. This device consists of a pan of sufficient size to intercept the entire cross section of the discharge stream and hold the required quantity of material

[1] This practice is under the jurisdiction of ASTM Committee D-4 on Road and Paving Materials and is the direct responsibility of Subcommittee D04.30 on Methods of Sampling.

Current edition approved Oct. 10, 1997. Published April 1998. Originally published as D 75 – 20 T. Last previous edition D 75 – 87 (1992)[ε1].

[2] *Annual Book of ASTM Standards*, Vol. 04.02.

[3] *Annual Book of ASTM Standards*, Vol. 05.05.

[4] *Annual Book of ASTM Standards*, Vol. 04.03.

[5] *Annual Book of ASTM Standards*, Vol. 14.02.

*A Summary of Changes section appears at the end of this standard.

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without overflowing. A set of rails may be necessary to support the pan as it is passed under the discharge stream. Insofar as is possible, keep bins continuously full or nearly full to reduce segregation.

NOTE 3—Sampling the initial discharge or the final few tons from a bin or conveyor belt increases the chances of obtaining segregated material and should be avoided.

4.3.2 *Sampling from the Conveyor Belt*—Select units to be sampled by a random method, such as Practice D 3665, from the production. Obtain at least three approximately equal increments, selected at random, from the unit being sampled and combine to form a field sample whose mass equals or exceeds the minimum recommended in 4.4.2. Stop the conveyor belt while the sample increments are being obtained. Insert two templates, the shape of which conforms to the shape of the belt in the aggregate stream on the belt, and space them such that the material contained between them will yield an increment of the required weight. Carefully scoop all material between the templates into a suitable container and collect the fines on the belt with a brush and dust pan and add to the container.

4.3.3 *Sampling from Stockpiles or Transportation Units*—Avoid sampling coarse aggregate or mixed coarse and fine aggregate from stockpiles or transportation units whenever possible, particularly when the sampling is done for the purpose of determining aggregate properties that may be dependent upon the grading of the sample. If circumstances make it necessary to obtain samples from a stockpile of coarse aggregate or a stockpile of combined coarse and fine aggregate, design a sampling plan for the specific case under consideration. This approach will allow the sampling agency to use a sampling plan that will give a confidence in results obtained therefrom that is agreed upon by all parties concerned to be acceptable for the particular situation. The sampling plan shall define the number of samples necessary to represent lots and sublots of specific sizes. General principles for sampling from stockpiles are applicable to sampling from trucks, rail cars, barges or other transportation units. For general guidance in sampling from stockpiles, see the Appendix.

4.3.4 *Sampling from Roadway (Bases and Subbases)*—Sample units selected by a random method, such as Practice D 3665, from the construction. Obtain at least three approximately equal increments, selected at random from the unit being sampled, and combine to form a field sample whose mass equals or exceeds the minimum recommended in 4.4.2. Take all increments from the roadway for the full depth of the material, taking care to exclude any underlying material. Clearly mark the specific areas from which each increment is to be removed: a metal template placed over the area is a definite aid in securing approximately equal increment weights.

4.4 *Number and Masses of Field Samples*:

4.4.1 The number of field samples (obtained by one of the methods described in 4.3) required depends on the criticality of, and variation in, the properties to be measured. Designate each unit from which a field sample is to be obtained prior to sampling. The number of field samples from the production should be sufficient to give the desired confidence in test results.

NOTE 4—Guidance for determining the number of samples required to obtain the desired level of confidence in test results may be found in Test Method D 2234, Practice E 105, Practice E 122, and Practice E 141.

4.4.2 The field sample masses cited are tentative. The masses must be predicated on the type and number of tests to which the material is to be subjected and sufficient material obtained to provide for the proper execution of these tests. Standard acceptance and control tests are covered by ASTM standards and specify the portion of the field sample required for each specific test. Generally speaking, the amounts specified in Table 1 will provide adequate material for routine grading and quality analysis. Extract test portions from the field sample according to Practice C 702 or as required by other applicable test methods.

5. Shipping Samples

5.1 Transport aggregates in bags or other containers so constructed as to preclude loss or contamination of any part of the sample, or damage to the contents from mishandling during shipment.

5.2 Shipping containers for aggregate samples shall have suitable individual identification attached and enclosed so that field reporting, laboratory logging, and test reporting may be facilitated.

6. Keywords

6.1 aggregates; exploration of potential sources; aggregates; number and sizes needed to estimate character; aggregates; sampling

TABLE 1 Size of Samples

Maximum Nominal Size of Aggregates[A]	Approximate Minimum Mass of Field Samples, kg[B]
Fine Aggregate	
2.36 mm	10
4.75 mm	10
Coarse Aggregate	
9.5 mm	10
12.5 mm	15
19.0 mm	25
25.0 mm	50
37.5 mm	75
50 mm	100
63 mm	125
75 mm	150
90 mm	175

[A] For processed aggregate the nominal maximum size of particles is the largest sieve size listed in the applicable specification, upon which any material is permitted to be retained.

[B] For combined coarse and fine aggregates (for example, base or subbase) minimum weight shall be coarse aggregate minimum plus 10 kg.

APPENDIXES

(Nonmandatory Information)

X1. SAMPLING AGGREGATE FROM STOCKPILES OR TRANSPORTATION UNITS

X1.1 Scope

X1.1.1 In some situations it is mandatory to sample aggregates that have been stored in stockpiles or loaded into rail cars, barges, or trucks. In such cases the procedure should ensure that segregation does not introduce a serious bias in the results.

X1.2 Sampling from Stockpiles

X1.2.1 In sampling material from stockpiles it is very difficult to ensure unbiased samples, due to the segregation which often occurs when material is stockpiled, with coarser particles rolling to the outside base of the pile. For coarse or mixed coarse and fine aggregate, every effort should be made to enlist the services of power equipment to develop a separate, small sampling pile composed of materials drawn from various levels and locations in the main pile after which several increments may be combined to compose the field sample. If necessary to indicate the degree of variability existing within the main pile, separate samples should be drawn from separate areas of the pile.

X1.2.2 Where power equipment is not available, samples from stockpiles should be made up of at least three increments taken from the top third, at the mid-point, and at the bottom third of the volume of the pile. A board shoved vertically into the pile just above the sampling point aids in preventing further segregation. In sampling stockpiles of fine aggregate the outer layer, which may have become segregated, should be removed and the sample taken from the material beneath. Sampling tubes approximately 30-mm min by 2-m min in length may be inserted into the pile at random locations to extract a minimum of five increments of material to form the sample.

X1.3 Sampling from Transportation Units

X1.3.1 In sampling coarse aggregates from railroad cars or barges, effort should be made to enlist the services of power equipment capable of exposing the material at various levels and random locations. Where power equipment is not available, a common procedure requires excavation of three or more trenches across the unit at points that will, from visual appearance, give a reasonable estimate of the characteristics of the load. The trench bottom should be approximately level, at least 0.3 m in width and in depth below the surface. A minimum of three increments from approximately equally spaced points along each trench should be taken by pushing a shovel downward into the material. Coarse aggregate in trucks should be sampled in essentially the same manner as for rail cars or barges, except for adjusting the number of increments according to the size of the truck. For fine aggregate in transportation units, sampling tubes as described in X1.2 may be used to extract an appropriate number of increments to form the sample.

X2. EXPLORATION OF POTENTIAL AGGREGATE SOURCES

X2.1 Scope

X2.1.1 Sampling for evaluation of potential aggregate sources should be performed by a responsible trained and experienced person. Because of the wide variety of conditions under which sampling may have to be done it is not possible to describe detailed procedures applicable to all circumstances. This appendix is intended to provide general guidance and list more comprehensive references.

X2.2 Sampling Stone from Quarries or Ledges

X2.2.1 *Inspection*—The ledge or quarry face should be inspected to determine discernible variations or strata. Differences in color and structure should be recorded.

X2.2.2 *Sampling and Size of Sample*—Separate samples having a mass of at least 25 kg should be obtained from each discernible stratum. The sample should not include material weathered to such an extent that it is no longer suitable for the purpose intended. One or more pieces in each sample should be at least 150 by 150 by 100 mm in size with the bedding plane plainly marked, and this piece should be free of seams or fractures.

X2.2.3 *Record*—In addition to the general information accompanying all samples the following information should accompany samples taken from ledges or quarry faces:

X2.2.3.1 Approximate quantity available. (If quantity is very large this may be recorded as practically unlimited.)

X2.2.3.2 Quantity and character of overburden.

X2.2.3.3 A detailed record showing boundaries and location of material represented by each sample.

NOTE X2.1—A sketch, plan, and elevation, showing the thickness and location of the different layers is recommended for this purpose.

X2.3 Sampling Roadside or Bank Run Sand and Gravel Deposits

X2.3.1 *Inspection*—Potential sources of bank run sand and gravel may include previously worked pits from which there is an exposed face or potential deposits discovered through air-photo interpretation, geophysical exploration, or other types of terrain investigation.

X2.3.2 *Sampling*—Samples should be so chosen from each different stratum in the deposit discernible to the sampler. An estimate of the quantity of the different materials should be made. If the deposit is worked as an open-face bank or pit, samples should be taken by channeling the face vertically,

bottom to top, so as to represent the materials proposed for use. Overburdened or disturbed material should not be included in the sample. Test holes should be excavated or drilled at numerous locations in the deposit to determine the quality of the material and the extent of the deposit beyond the exposed face, if any. The number and depth of test holes will depend upon the quantity of the material needed, topography of the area, nature of the deposit, character of the material, and potential value of the material in the deposit. If visual inspection indicates that there is considerable variation in the material, individual samples should be selected from the material in each well defined stratum. Each sample should be thoroughly mixed and quartered if necessary so that the field sample thus obtained will be at least 12 kg for sand and 35 kg if the deposit contains an appreciable amount of coarse aggregate.

X2.3.3 *Record*—In addition to the general information accompanying all samples the following information should accompany samples of bank run sand and gravel:

X2.3.3.1 Location of supply.

X2.3.3.2 Estimate of approximate quantity available.

X2.3.3.3 Quantity and character of overburden.

X2.3.3.4 Length of haul to proposed site of work.

X2.3.3.5 Character of haul (kind of road, maximum grades, etc.)

X2.3.3.6 Details as to extent and location of material represented by each sample.

NOTE X2.2—A sketch of plans and elevations, showing the thickness and location of different layers, is recommended for this purpose.

X3. NUMBER AND SIZE OF INCREMENTS NEEDED TO ESTIMATE CHARACTER OF UNIT SAMPLED

X3.1 Scope

X3.1.1 This appendix presents the rationale used by the responsible committee in the development of this practice.

X3.2 Descriptions of Terms Specific to This Standard

X3.2.1 *field sample*—a quantity of the material to be tested of sufficient size to provide an acceptable estimate of the average quality of a unit.

X3.2.2 *lot*—a sizable isolated quantity of bulk material from a single source, assumed to have been produced by the same process (for example, a day's production or a specific mass or volume).

X3.2.3 *test portion*—a quantity of the material of sufficient size extracted from the larger field sample by a procedure designed to ensure accurate representation of the field sample, and thus of the unit sampled.

X3.2.4 *unit*—a batch or finite subdivision of a lot of bulk material (for example, a truck load or a specific area covered).

X3.3 Test Unit, Size, and Variability

X3.3.1 The unit to be represented by a single field sample should neither be so large as to mask the effects of significant variability within the unit nor be so small as to be affected by the inherent variability between small portions of any bulk material.

X3.3.2 A unit of bulk material composed of graded aggregate or aggregate mixtures might consist of a full truckload. If it were possible, the entire load might be tested; as a practical matter, a field sample is composed of three or more increments chosen at random from the material as it is loaded or unloaded from the truck. Research has shown that such a procedure permits an acceptable estimate to be made of the average gradation that might be measured from 15 or 20 increments from the truck.

X3.3.3 Significant variability with a lot of material, where it might exist, should be indicated by statistical measures, such as the standard deviation between units selected at random from within the lot.

SUMMARY OF CHANGES

This section identifies the location of selected changes to this practice that have been incorporated since the last issue. For the convenience of the user, Committee D-4 has highlighted those changes that may impact the use of this practice. This section may also include descriptions of the changes or reasons for the changes, or both.

(1) This practice has been converted to all metric.

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AASHTO T2-91
SAMPLING OF AGGREGATES

PROCEDURE		
Selection of Method – Student must demonstrate one method and be able to list the remaining methods for the proctor.	**Test 1**	**Test 2**
Sampling from Stockpiles – If the student chooses this method they must demonstrate sampling each of the following materials listed below. (Coarse aggregate, fine aggregate and coarse and fine aggregate).		
Coarse aggregate:		
Board shoved vertically into the stockpile just above sampling point?		
Increments taken from the top third, mid-point, and bottom third of the volume of the pile?		
Fine aggregate:		
Outer layer removed and sample taken from underlying material?		
Appropriate sampling tube randomly inserted to obtain increments?		
Minimum of five increments taken?		
Coarse and Fine Aggregate:		
Increments combined to form field sample?		
Size of field sample equals or exceeds minimum mass needed or stated in Table 1?		
Sampling from Roadway (Bases and Subbases)		
Samples taken randomly using a method such as Practice D 3665?		
Specific areas clearly marked from which each increment will be removed? (a metal template placed over the area is helpful)		
At least three approximately increments taken from roadway at full depth?		
Care taken to exclude any underlying material not part of material being sampled?		
Increments combined to form field sample?		
Minimum size of field sample equals or meets minimum mass needed or as determined from Table 1?		

AASHTO T2-91
SAMPLING OF AGGREGATES

PROCEDURE		
	Test 1	**Test 2**
Sampling from Transportation Units		
Coarse Aggregate:		
Three or more trenches made across the unit at points that will, from visual appearance, give a reasonable estimate of the characteristics of the load?		
Trench bottom is approximately level and at least 0.3 m (1 ft) in width and in depth below the surface?		
Minimum of three increments taken from approximately equally spaced points along each trench?		
Material obtained by pushing a shovel downward in to the material?		
Fine Aggregate:		
Appropriate sampling tube inserted to remove the predetermined number of increments?		
Coarse and Fine Aggregate:		
All increments combined to form a field sample?		
Minimum size of field sample equals or meets minimum mass needed or as determined from Table 1?		
Sampling from a Flowing Aggregate Stream (Bins or Belt Discharge)		
Sampling from the Conveyor Belt		

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Beverly Eaves Perdue, Governor
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Jeffrey P. Engel, M.D.
State Health Director

October 28, 2010

Mr. Phil Hill
Boggs Paving, Inc.
P.O. Box 1609
Monroe, NC 28111-1609

Subject: Recycling and Grinding Post-Consumer Asphalt Roofing Shingles-Second Review, 2168 Stevens Mill Road, Matthews, North Carolina

Dear Mr. Hill:

After reviewing your revised "Operational Plan for Recycling Tear-Off Roofing Shingles", we believe that you have adequately addressed all of our questions about the plan. It is expected that Boggs Paving will adhere to the existing plan as written. Should you decide to expand your operations or modify the existing plan to address future needs, remember to submit an amendment plan to our office for review and comment.

Should you have any questions or need further assistance, please feel free to contact me at (919) 707-5972.

Sincerely,

Jeffery W. Dellinger
Industrial Hygiene Consultant
Health Hazards Control Unit

/jwd

cc: Ed Mussler, NC DSWM
Mary Giguere, HHCU Manager
Danny Lineback, IH Supervisor

Boggs Paving, Inc.

Operational Plan for the Health Hazards Control Unit on

Recycling Post Consumer or "Tear-Off" Asphalt Shingles

August 10, 2010

Mr. Edward Mussler, P.E.

N.C. Department of Environment and Natural Resources

Division of Waste Management

Solid Waste Section

1646 Mail Service Center

Raleigh, NC 27699-1646

Mr. Jeffrey W. Dellinger

N.C. Department of Health and Human Services

Health Hazards Control Unit

1912 Mail Service Center

Raleigh, NC 27699-1912

Dear Sirs,

Boggs Paving, Inc. submits this operational plan for the recycling of Post Consumer or "Tear-off" (Tear-off) asphalt roofing shingles at their Matthews facility located at 2168 Stevens Mill Rd., Matthews, N.C. With the demonstrated economic and environmental benefits of using recycled asphalt shingles (RAS) in hot mix asphalt (HMA) pavement, it is our goal to utilize this valuable commodity in our HMA production. The economic value of RAS in HMA has been shown nationwide to provide significant savings for all participating industry and agency partners. Partners include suppliers (roofing contractors, haulers, landfills, and transfer stations), shingle recycling operations, hot-mix asphalt producers and the owner agency. In addition to the economical savings of RAS in HMA, the environmental benefits include the diversion of this valuable commodity from landfills along with the reduction of green house gases through the replacement of virgin asphalt.

Boggs Paving, Inc. has prepared this operational plan for approval to begin the recycling of Tear-off asphalt shingles for use in their hot-mix asphalt production. This operational plan meets the requirements of North Carolina G.S. § 130A-309.05(c) and the Guidance for Preparation of Permit Modification Requests for Removal from the Waste Stream Recycling of Asphalt Shingles (Revised 03/08). Drawings of the site plan which include the proposed location of the separation; storage and processing of the Tear-off asphalt shingles along with plant operations are attached as Exhibits A and B.

Boggs Paving Inc. shall meet the following requirements:

1. Tear-off asphalt shingles will be limited to shingles from residential buildings with four of fewer dwelling units. Suppliers will provide written certification on the source of the Tear-off asphalt shingles. *See example Supply Certification forms attached as Appendix A.* Certification forms will be kept on file and available for review.

2. Incoming loads of Tear-off asphalt shingles will be accepted by a NC accredited asbestos inspector trained to identify potential asbestos containing material and other unacceptable wastes and materials. Loads identified by the asbestos inspector as containing potential asbestos containing material or unacceptable wastes and materials will be rejected. Rejected loads will be documented with the date, reason for rejecting the load, vehicle license and signature of the asbestos inspector and supplier. A carbon copy of the documentation will be presented to the supplier. No flat built-up roofing, roof flashing, shingles that have been coated with paint, sealants or mastics, or asbestos cement shingles will be accepted by Boggs Paving, Inc. A list of unacceptable items for recycling will be posted at the point of inspection of incoming loads. (*See example Supplier List of Acceptable and Non Acceptable Materials* attached as Appendix B).

3. Training of the suppliers on acceptable and non-acceptable materials will be conducted by Boggs Paving, Inc. A certificate along with a list of acceptable and non-acceptable materials will be distributed to all trained suppliers. Accepted loads of Tear-off asphalt shingles will not contain more than 5% by weight of non-shingle material (i.e. wood, metal, plastic) and will only be accepted by suppliers who have completed the training. (See training materials attached as Appendix C).

4. Accepted loads of Tear-off asphalt shingles will follow the sampling protocol below:

   a. The first 100 loads (approximately 1,000 tons) of pre-processed *"Tear-off"* asphalt shingles shall be sampled and tested for asbestos containing materials (ACM) as follows
      i. Each load will be weighed, ticketed, and stockpiled separately in an assigned area. Stockpiles will be marked and placed in the order of arrival.
      ii. Representative samples will be collected from the pre-processed shingle pile according to the sampling method determined by the North Carolina accredited asbestos inspector. Representative samples will include different colors and patterns present.
      iii. Samples will be sent to an accredited laboratory for 24 hour testing turn around time for ACM using the polarized light microscopy (PLM) analysis to determine the presence and percent of asbestos.
      iv. Documentation of the results will be recorded and maintained on site.
      v. In the event that a sample is found to contain > 1% ACM:
         1. The shingle pile will be disposed of in the Union County Landfill consistent with EPA's interpretation under NESHAP 40 CFR, Part 61, Subpart M: Appendix A, III. C: 3.C.1., that Category I nonfriable asbestos-containing material that is not cut, ground or abraded can be disposed of as non-asbestos waste.

2. Disposal documentation will be recorded and maintained on site.

b. In the event that the first 100 loads of pre-processed *Tear-off* asphalt shingles tested for ACM are negative, the sampling protocol will be reduced to one sample every 250 tons collected (approximately every 25 loads.) The sampling procedure and handling of the loads will be conducted as defined above in 4(a) i-v.

c. In the event that one or more samples of post-consumer roofing shingles test positive for ACM, Boggs Paving will continue ACM testing for an additional 100 loads of pre-processed Tear-off asphalt shingles. At the end of the sampling of the 200 loads (approximately 2,000 tons), the results will be presented to the NC DHHS for review and a statistically based sampling protocol will be determined and implemented.

d. If we accept loads of Tear-off asphalt shingles from a landfill, the piles of pre-processed Tear-off asphalt shingles will be segregated from the other incoming loads. The sampling procedure and handling of the loads of Tear-off asphalt shingles from a landfill will be conducted as defined above in 4(a) i-v, with one exception; That exception will be that samples will be taken from each load for an indefinite period of time, rather than as the afore mentioned 100 loads.

5. Tear-off asphalt shingles shall be stored in a confined area to prevent mixing or contamination of the shingle piles. Operation of the area shall include:

a. Access to the storage facility will be controlled by a gated entrance and exit.

b. A sign will be posted at the entrance indicating the name and hours of operation.

c. Incoming loads will be inspected for unacceptable waste and materials by a North Carolina accredited asbestos inspector familiar with the requirements and operation procedures of the facility.

d. Storage and unloading of the Tear-off asphalt shingles will be confined to an approved designated area with a bituminous "tipping pad".

e. Fencing or a stackable concrete block area at least six feet in height will be constructed to prevent windblown material from leaving the storage area.

f. Storage of the shingles shall be a minimum of 100 feet from surface waters.

g. A sort line with a conveyor belt staffed by trained personnel will be used to sort the loads of Teat-off asphalt shingles (a copy of the training materials are attached as Appendix D). All recycling material (i.e. paper, metals, and plastics) will be separated and delivered to a recycling facility. All non-recyclable material will be separated and stored in a roll-off container for disposal at the Union County Landfill.

h. Sorting of the loads of shingles will be completed daily or periodically depending upon the quantity of shingles received on a daily basis.

6. The final sorted Tear-off asphalt shingle product for grinding shall contain less than 1% asbestos as supported by sampling results as detailed in Section 4 and by the onsite North Carolina accredited asbestos inspector and less than 2% deleterious material by weight including nails, wood , paper or plastic. The final sorted "Tear-off" shingle product shall not include metal flashing, glass, rubber or other objectionable material.

7. Tear-off asphalt shingle grinding shall be conducted on-site with an industrial grinder. Boggs Paving, Inc. has acquired a Peterson grinder for the grinding of Tear-off shingles that will utilize water nozzles for dust control

and to reduce the heat build up during the grinding process. The final ground product will be reduced to a size less than ½" minus to meet owner agency specifications for the use in hot-mix asphalt applications.

8. The final post-processed Tear-off asphalt shingle product shall be free of nails and other metals and have at most 1% deleterious material,

9. Storage of the final ground Tear-off asphalt shingle product will be confined to an approved designated area and shall be a minimum of 100 feet from surface waters.

10. Boggs Paving, Inc. will process the recovered Tear-off asphalt shingles within one month or less after collection and an additional month after processing will utilize the ground shingles in their hot mix asphalt production.

11. Boggs Paving, Inc. will collect and maintain on site the following information:

    a. Reference to this guidance document;
    b. Description of the asbestos testing program and specific sampling and testing methods;
    c. Monthly test results of the pre-processed Tear-off asphalt shingles;
    d. Monthly supply certification forms on the sourcing of the tear-off asphalt shingles;
    e. Monthly tonnage of Tear-off asphalt shingles accepted;
    f. Monthly tonnage of loads of asphalt shingles rejected;
    g. Monthly tonnage of Tear-off asphalt shingles processed; and
    h. A list of state projects completed by Boggs Paving, Inc. utilizing Tear-off asphalt shingle product.

Referenced Specifications and Documents:

American Association of State Highway and Transportation (AASHTO), "Provisional Standard Recommended Practice for Design Considerations when using Reclaimed Asphalt Shingles in New Hot Mix Asphalt (R2005A-TS-2c)" Final Publication in preparation.

American Association of State Highway and Transportation (AASHTO), "Use of Reclaimed Asphalt Shingle as an Additive in Hot Mix Asphalt: A Provisional Standard Specification (M2005A-TS-2c)" Final publication in preparation.

Missouri Department of Transportation (February 2008), Standards and specifications – Standard Plans - Section 403: Asphaltic Concrete Pavement.

North Carolina General Statutes: § 130A-309.05. Regulated wastes; certain exclusions.

North Carolina Department of Environmental and Natural Resources, Division of Waste Management: Guidance for Preparation of Permit Modification Requests for Removal from The Waste Stream and Recycling of Asphalt Shingles, (revised 03/08).

North Carolina General Statutes: § 130A-295.2 Financial responsibility.

Ramsey County Department of Public Works in conjunction with the Minnesota Department of Transportation (June 2007), "Specifications, Special Provisions, and General Provisions for the Construction of a Pedestrian Trail on Lower Afton Road from McKnight Road South to Century Avenue South, Ramsey County, MN, City of St. Paul, MN – S.A.P.138-020-033".

State of Michigan Department of Environmental Quality, (September 2007), "Asphalt Shingle Exemption".

State of Wisconsin Department of Natural Resources, (September 2007), "Approval for Exemption from Solid Waste Processing Rules for Recycling of Asphalt Shingles in Hot Mix Asphalt Concrete".

U.S. EPA's rules for National Emission Standards for Hazardous Air Pollutants (NESHAP), 40 CFR Part 61, Subpart M: National Emission Standard for Asbestos (40 CFR 61 Subpart M).

U.S. EPA's rules for National Emission Standards for Hazardous Air Pollutants (NESHAP), Appendix A to 40 CFR Subpart M of Part 61 –Interpretive Rule Governing Roof Removal Operations (III. C. 3.C.1.)

A guide by CMRA funded in part by the EPA Region 5: "Recycling Tear-off Asphalt Shingles: Best Practices Guide"

APPENDIX A

SUPPLY CERTIFICATION FORM

Supply Certification Form

Post Consumer or Tear-off Asphalt Shingles

Delivery Company Name:

_____

Address: _____

_____

Contact: _____

Phone: _____

E-mail: _____

We the undersigned, certify that:

1. All *Post Consumer or Tear-off* asphalt shingle scrap came from residential buildings having four or fewer dwelling units (see addresses below or attached);
2. These residential buildings are not "regulated facilities" according to state and federal NESHAP 40 CFR Part 61, Subpart M.; and
3. The roofing waste material delivered consists of asphalt shingles and normal roofing debris only and contains no known hazardous material (e.g., asbestos).

Residential re-roof customer address (es) where the *Post Consumer or Tear-off* asphalt shingle scrap originated:

_____

_____

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

Name and address of processor where the *Post Consumer or Tear-off* asphalt shingle scrap was supplied to:

_____

_____

Layers of shingles present:_____

_____ _____

***Post Consumer or Tear-off* asphalt shingles supplier (signature)** **Date**

APPENDIX B

TRAINING MATERIALS FOR SUPPLIERS

A Guide to Understanding Acceptable Materials For Asphalt Shingle Recycling

On Site Source Separation of Asphalt Shingles

Training for Suppliers

Why Recycle Asphalt Shingles?

- Economical Opportunities
- Reduce landfill space
- Extend landfill life and distance
- Environmental Opportunities
- Protect landfill space
- Conserve resources

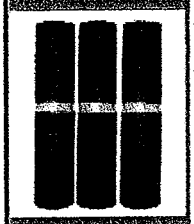
Acceptable Materials

- Asphalt Shingles
- Nails
- Felt attached to shingles

Non-Acceptable Materials

- Felt Paper
- Wood
- Metal flashing, gutters, etc.
- Plastic wrap on pallet
- Paper waste
- Asbestos containing building material
- Other garbage and trash

No felt paper or rolls of felt paper



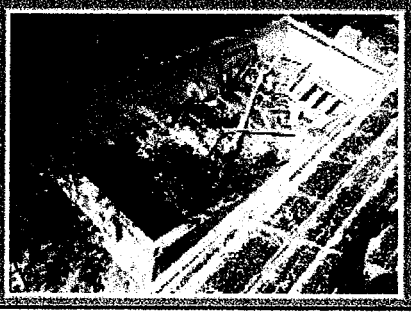
No wood or pallets

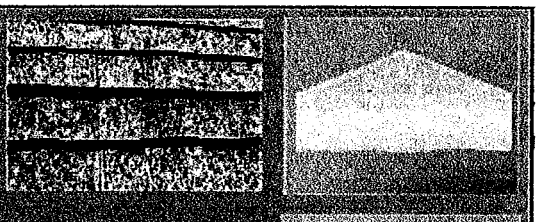
No paper

No flashing or gutters

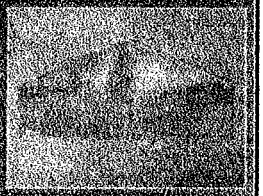
No Plastic Waste

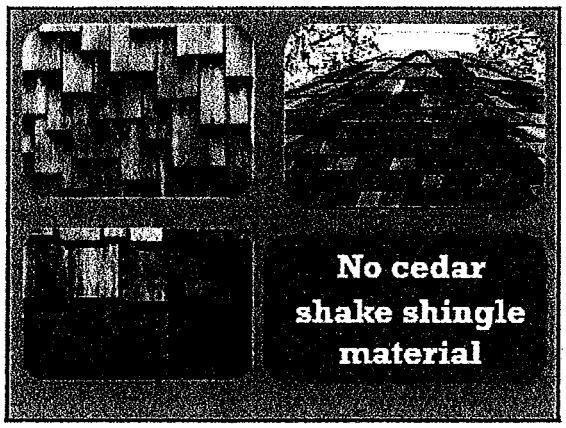
No ladders, chairs or other metal!

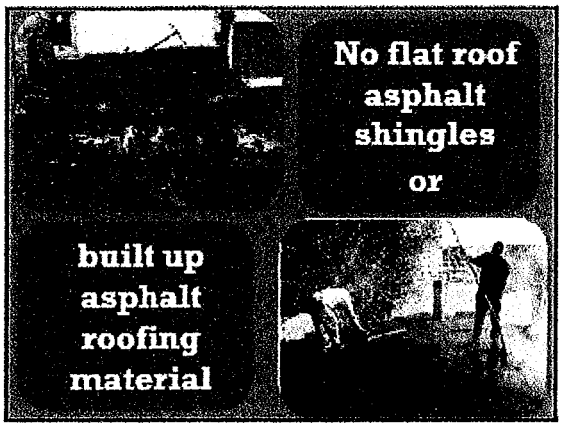


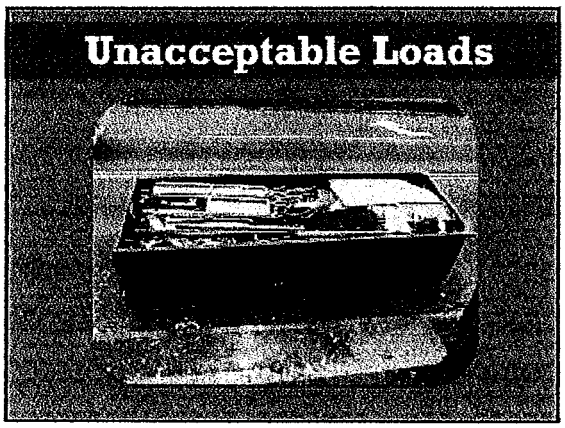


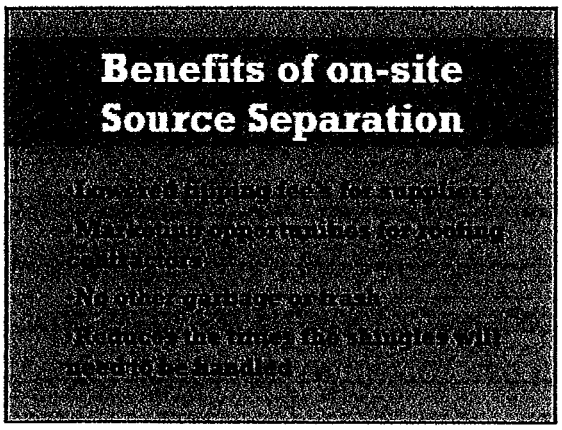
No asbestos cement shingle material

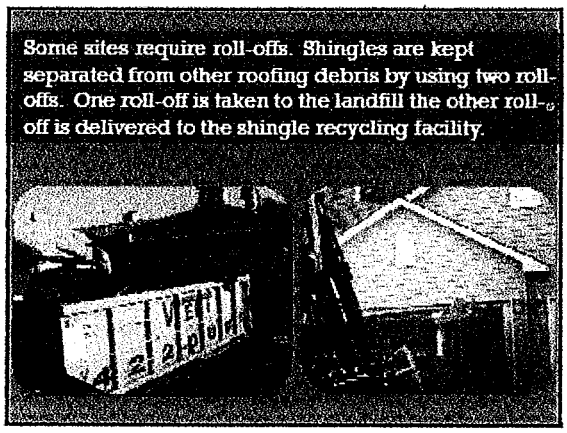


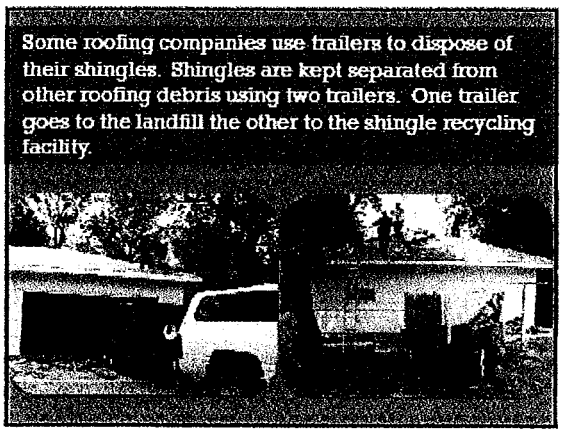

No cedar shake shingle material


No flat roof asphalt shingles
or
built up asphalt roofing material

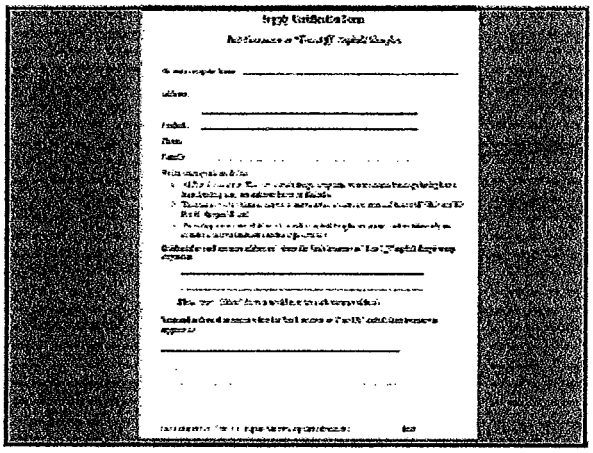

Unacceptable Loads


Benefits of on-site Source Separation


Some sites require roll-offs. Shingles are kept separated from other roofing debris by using two roll-offs. One roll-off is taken to the landfill the other roll-off is delivered to the shingle recycling facility.


Some roofing companies use trailers to dispose of their shingles. Shingles are kept separated from other roofing debris using two trailers. One trailer goes to the landfill the other to the shingle recycling facility.

Completed certification forms will be required for all loads delivered. The forms require roofing contractors to certify that the shingles are coming from residential buildings with four or fewer dwelling units. Suppliers will be required to provide the address of the shingle source.



Certification forms will be signed by the roofing contractor and the N.C. accredited asbestos inspector. Copies of the certification forms will be kept on file at the shingle recycling facility.

All in-coming loads will be inspected by an North Carolina (NC) accredited asbestos inspector for unacceptable material. Rejected loads will be accompanied by a form identifying:

- *Date*
- *Vehicle license plate number*
- *Reason the load was rejected*
- *Signature of the NC Accredited Inspector*
- *Signature of the drive of the vehicle*

A copy of the form will be given to the driver and the original will be kept on file at the recycling facility.

Keep Shingles out of the LAND-FILL!

The asphalt shingles go from...

...the roofs to the *roads*!

For more information contact:

[illegible]
[illegible]
[illegible]
[illegible]
[illegible]

APPENDIX C

SUPPLIERS LIST OF

ACCEPTABLE AND NON-ACCEPTABLE MATERIALS

Suppliers List of Acceptable and Non-Acceptable Materials

For

Recycling of Post Consumer or Tear-off Asphalt Shingles

"Acceptable"

Include these items:

- Shingles
- Felt attached to shingles
- nails

"Non-Acceptable"

Do <u>NOT</u> include these items:

- Wood
- Metal flashings, gutters, etc
- Rolls or sheets of felt paper
- Plastic wrap, buckets
- Paper waste
- No other garbage or trash
- Asbestos and Asbestos-Containing Materials

APPENDIX D

TRAINING MATERIALS

FOR

SORTING PERSONNEL

Training Guide for Sorting Personnel

Washington Ave
Asphalt Shingle Recycling
Sort Line

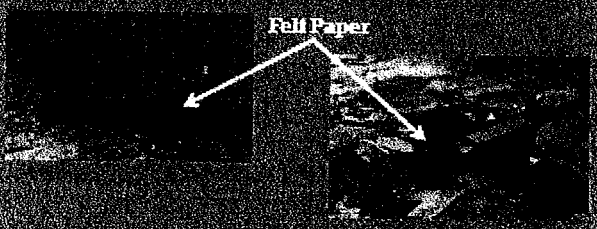
Acceptable Materials

- Asphalt shingles
- Nails
- Felt attached to shingles

Non-Acceptable Materials

- Felt Paper
- Wood
- Metal flashing, gutters etc
- Plastic wrap, buckets
- Rubber waste
- Asbestos containing building material
- No other garbage or trash

Remove any small or large remaining remnants of felt paper

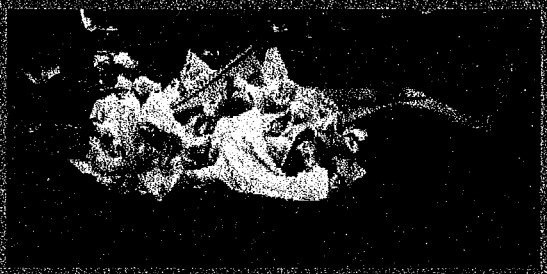


Remove any wood, paper or foam

Remove paper

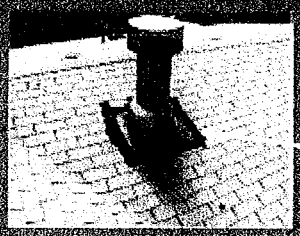
Remove flashing and metal

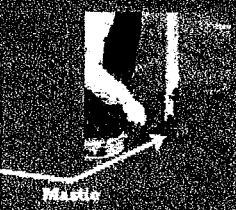
Remove plastic waste

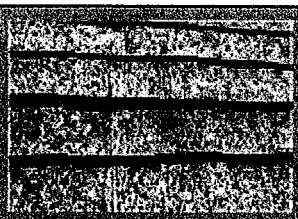


Remove pop-cans or Styrofoam or plastic cups

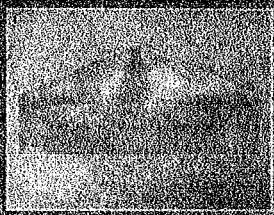
Mastic can sometimes be found on shingles that are placed near chimneys or pipes. Remove any asphalt shingles with mastic coating

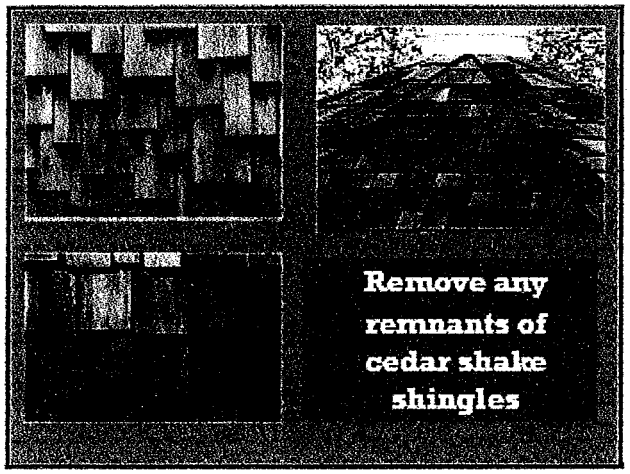


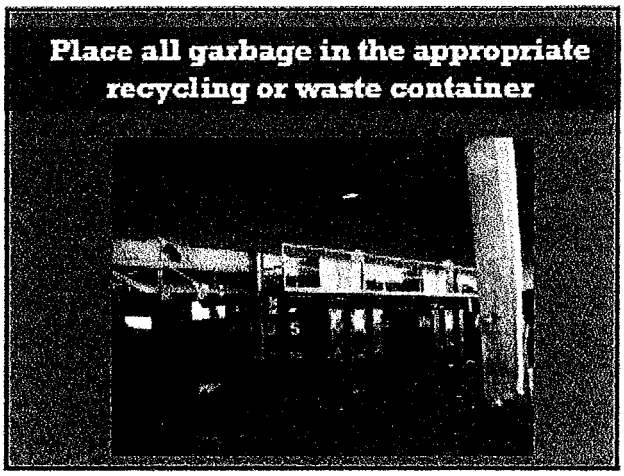




Remove any signs or remnants of Asbestos Cement Shingle Material




Remove any
remnants of
cedar shake
shingles


Place all garbage in the appropriate
recycling or waste container

Wear a hard-hat, gloves, safety glasses
and vest at all times

If you have any
questions contact:
Recycling Coordinator
Name Placeholder for Contact
Person
Phone Number: xxx-xxx-xxxx
Boggs Paving, Inc.
P.O. Box 1609
Monroe, NC 28111-1609

Section 4- Sedimentation and Erosion Control Plan

The shingle recycling operation will be located at an existing facility which has been in operation for over 35 years as a stone yard, landscaping materials and other heavy industrial uses. The addition of the shingle recycling requires no land disturbing activity that would require a sedimentation and erosion control plan. The site is already graded and has all required infrastructure. The only work being performed in this area is surfacing of existing stone areas, and the installation of some fencing.

Performance Bond

As per information supplied by Donald Herndon, Compliance Officer, NCDENR; Boggs Paving Inc. will be using the same Performance Bond at the 2168 Stevens Mill Rd. Matthews, NC as the 2318 Concord Hwy. Monroe, NC location.

PERFORMANCE BOND

Date bond executed: **August 17, 2009**
Effective date: **August 17, 2009**
Principal: **Boggs Paving, Inc., PO Box 2811, Monroe, NC 28111**
Type of organization: ***Corporation***
State of incorporation: **North Carolina**
Surety: **Safeco Insurance Company of America, Safeco Plaza, Seattle, WA 98185**

Solid Waste Section Permit Number: **90-08-TP-2009**
Facility name: **Boggs Paving Shingle Recycling Facility**
Facility address: **2318 Concord Avenue, Monroe, NC**
Closure costs: **$285,000.00**
Post-closure costs: None
Corrective Action costs: None

Total penal sum of bond: **$285,000.00**
Surety's bond number: **6648909**

Know All Persons By These Presents, That we, the Principal and Surety hereto are firmly bound to the North Carolina Division of Solid Waste Management (hereinafter called the Division), in the above penal sum for the payment of which we bind ourselves, our heirs, executors, administrators, successors, and assigns jointly and severally; provided that, where the Surety are corporations acting as co-sureties, we, the Sureties, bind ourselves in such sum "jointly and severally" only for the purpose of allowing a joint action or actions against any or all of us, and for all other purposes each Surety binds itself, jointly and severally with the Principal, for the payment of such sum only as is set forth opposite the name of such Surety, but if no limit of liability is indicated, the limit of liability shall be the full amount of the penal sum.

Whereas, said Principal is required, under the Solid Waste Management Rule .0201 as amended, to have a permit in order to own or operate each solid waste management facility identified above, and

Whereas, said Principal is required to provide financial assurance for closure, post-closure care, or corrective action as a condition of the permit, and

Whereas, said Principal shall establish a standby trust fund as is required when a surety bond is used to provide such financial assurance;

Now, Therefore, the conditions of this obligation are such that if the Principal shall faithfully perform closure, whenever required to do so, of each facility for which this bond guarantees closure, in accordance with the closure plan and other requirements of the permit, as such plan and permit may be amended, pursuant to all applicable laws, statutes, rules, and regulations, as such laws, statutes, rules, and regulations may be amended,

And, if the Principal shall faithfully perform post-closure care of each facility for which this bond guarantees post-closure care, in accordance with the post-closure plan and other requirements of the permit, as such plan and permit may be amended, pursuant to all applicable laws, statutes, rules, and regulations as such laws, statutes, rules, and regulations may be amended,

And, if the Principal shall faithfully perform corrective action of each facility for which this bond guarantees corrective action, in accordance with the corrective action program and other requirements of the permit, as such program and permit may be amended, pursuant to all applicable laws, statutes, rules, and regulations as such laws, statutes, rules, and regulations may be amended,

Or, if the Principal shall provide alternate financial assurance and obtain the Division's written approval of such assurance, within 90 days after the date notice of cancellation is received by both the Principal and the Division from the Surety(ies), then this obligation shall be null and void, otherwise it is to remain in full force and effect.

The Surety shall become liable on this bond obligation only when the Principal has failed to fulfill the conditions described above.

Upon notification by the Division that the Principal has been found in violation of the closure requirements for a facility for which this bond guarantees performance of closure, the Surety(ies) shall either perform closure in accordance with the closure plan and other permit requirements or place the closure amount guaranteed for the facility into the standby trust fund as directed by the Division.

Upon notification by the Division that the Principal has been found in violation of the post-closure requirements for a facility for which this bond guarantees performance of post-closure care, the Surety shall either perform post-closure care in accordance with the post-closure plan and other permit requirements or place the post-closure amount guaranteed for the facility into the standby trust fund as directed by the Division.

Upon notification by the Division that the Principal has been found in violation of the corrective action requirements for a facility for which this bond guarantees performance of corrective action, the Surety(ies) shall either perform corrective action in accordance with the corrective action program and other permit requirements or place the corrective action amount guaranteed for the facility into the standby trust fund as directed by the Division.

Upon notification by the Division that the Principal has failed to provide alternate financial assurance and obtain written approval of such assurance from the Division during the 90 days following receipt by both the Principal and the Division of a notice of cancellation of the bond, the Surety shall place funds in the amount guaranteed for the facility(ies) into the standby trust fund as directed by the Division.

The Surety hereby waive(s) notification of amendments to closure and post-closure plans, and corrective action programs, permits, applicable laws, statutes, rules, and regulations and agrees that no such amendment shall in any way alleviate its (their) obligation on this bond.

The liability of the Surety shall not be discharged by any payment or succession of payments hereunder, unless and until such payment or payments shall amount in the aggregate to the penal sum of the bond, but in no event shall the obligation of the Surety hereunder exceed the amount of said penal sum.

The Surety(ies) may cancel the bond by sending notice of cancellation by certified mail to the owner or operator and to the Division, provided, however, that cancellation shall not occur during the 120 days beginning on the date of receipt of the notice of cancellation by both the Principal and the Division, as evidenced by the return receipts.

The Principal may terminate this bond by sending written notice to the Surety(ies), provided, however, that no such notice shall become effective until the Surety(ies) receive(s) written authorization for termination of the bond by the Division.

[The following paragraph is an optional rider that may be included but is not required.]

Principal and Surety hereby agree to adjust the penal sum of the bond yearly so that it guarantees a new closure, post-closure, or corrective action amount, provided that the penal sum does not increase by more than 20 percent in any one year, and no decrease in the penal sum takes place without the written permission of the Division.

In Witness Whereof, The Principal and Surety have executed this Performance Bond and have affixed their seals on the date set forth above.

The persons whose signatures appear below hereby certify that they are authorized to execute this surety bond on behalf of the Principal and Surety(ies) and that the wording of this surety bond has not been changed as was constituted on the date this bond was executed.

Boggs Paving, Inc.

By: Paul A. Boggs

[*Corporate seal*]

Safeco Insurance Company of America
State of incorporation: **WA**
Liability limit: **$285,000.00**

By: Cynthia M. Partin

Cynthia M. Partin – Attorney-in-Fact
[*Corporate seal*]

Bond premium: **$1,425.00**

Liberty Mutual

POWER
OF ATTORNEY

Safeco Insurance Company of America
General Insurance Company of America
1001 4th Avenue
Suite 1700
Seattle, WA 98154

No. 9721

KNOW ALL BY THESE PRESENTS:

That **SAFECO INSURANCE COMPANY OF AMERICA** and **GENERAL INSURANCE COMPANY OF AMERICA**, each a Washington corporation, does each hereby appoint

**********PAMELA BRANDT; HEIDI K. HARRELL; BRAD LORENZETTI; JAMES M. MALONEY; CYNTHIA M. PARTIN; Columbia, South Carolina**********

its true and lawful attorney(s)-in-fact, with full authority to execute on its behalf fidelity and surety bonds or undertakings and other documents of a similar character issued in the course of its business, and to bind the respective company thereby.

IN WITNESS WHEREOF, SAFECO INSURANCE COMPANY OF AMERICA and GENERAL INSURANCE COMPANY OF AMERICA have each executed and attested these presents

this 21st day of March, 2009

Dexter R. Legg

Dexter R. Legg, Secretary

T A Mikolajewski

Timothy A. Mikolajewski, Vice President

CERTIFICATE

Extract from the By-Laws of **SAFECO INSURANCE COMPANY OF AMERICA** and of **GENERAL INSURANCE COMPANY OF AMERICA:**

"Article V, Section 13. - FIDELITY AND SURETY BONDS ... the President, any Vice President, the Secretary, and any Assistant Vice President appointed for that purpose by the officer in charge of surety operations, shall each have authority to appoint individuals as attorneys-in-fact or under other appropriate titles with authority to execute on behalf of the company fidelity and surety bonds and other documents of similar character issued by the company in the course of its business... On any instrument making or evidencing such appointment, the signatures may be affixed by facsimile. On any instrument conferring such authority or on any bond or undertaking of the company, the seal, or a facsimile thereof, may be impressed or affixed or in any other manner reproduced; provided, however, that the seal shall not be necessary to the validity of any such instrument or undertaking."

Extract from a Resolution of the Board of Directors of **SAFECO INSURANCE COMPANY OF AMERICA** and of **GENERAL INSURANCE COMPANY OF AMERICA** adopted July 28, 1970.

"On any certificate executed by the Secretary or an assistant secretary of the Company setting out,
(i) The provisions of Article V, Section 13 of the By-Laws, and
(ii) A copy of the power-of-attorney appointment, executed pursuant thereto, and
(iii) Certifying that said power-of-attorney appointment is in full force and effect,
the signature of the certifying officer may be by facsimile, and the seal of the Company may be a facsimile thereof."

I, Dexter R. Legg, Secretary of **SAFECO INSURANCE COMPANY OF AMERICA** and of **GENERAL INSURANCE COMPANY OF AMERICA,** do hereby certify that the foregoing extracts of the By-Laws and of a Resolution of the Board of Directors of these corporations, and of a Power of Attorney issued pursuant thereto, are true and correct, and that both the By-Laws, the Resolution and the Power of Attorney are still in full force and effect.

IN WITNESS WHEREOF, I have hereunto set my hand and affixed the facsimile seal of said corporation

this 17th day of August, 2009

SAFECO INSURANCE COMPANY OF AMERICA CORPORATE SEAL 1953 STATE OF WASHINGTON

GENERAL INSURANCE COMPANY OF AMERICA CORPORATE SEAL 1923 State of Washington

Dexter R. Legg

Dexter R. Legg, Secretary

WEB PDF

S-0974/DS 3/09

Boggs Paving, Inc.

Shingle Recycling Facility

Mecklenburg County,

Financial Assurance Estimate

Estimated Cost for Removal & Disposal:

Maximum Tons Stored 7,500

	$/TONS	Amount
Load	$0.50	$3,750.00
Hauling	$1.50	$11,250.00
*Disposal Fee	$36.00	$270,000.00
Total:	**$38.00**	**$285,000.00**

*current price @ Union County C&D Landfill on Presson Rd.

SECTION .0300 - TREATMENT AND PROCESSING FACILITIES

Rules .0301 - .0302 of Title 15A Subchapter 13B of the North Carolina Administrative Code (T15A.13B .0301 - .0302); have been transferred and recodified from Rules .0301 - .0302 of Title 10 Subchapter 10G of the North Carolina Administrative Code (T10.10G .0301 - .0302), effective April 4, 1990.

15A NCAC 13B .0301 APPLICATION REQUIREMENTS

This Rule contains the information required for a permit application for each treatment and processing facility. A minimum of three sets of the following information shall be required in each application:

(1) Site and operation plans;

(2) An approval letter from the unit of local government having zoning authority over the area where the facility is to be located, stating that the proposed facility meets all of the requirements of the local zoning ordinance, or that the site is not zoned; and

(3) Any other information pertinent to the proposed facility.

History Note: *Authority G.S. 130A-294;*
Eff. April 1, 1982;
Amended Eff. February 1, 1991.

15A NCAC 13B .0302 OPERATIONAL REQUIREMENTS

Any person who maintains or operates a treatment and processing facility shall maintain and operate the facility in accordance with the following practices unless otherwise specified in the permit:

(1) Operational plans shall be approved and followed as specified for the facility;

(2) A facility shall only accept wastes which it is permitted to receive;

(3) Water that comes in contact with solid waste will be contained on-site or properly treated prior to discharge from the site. A NPDES permit may be required prior to discharge to surface waters;

(4) Equipment for fire control shall be available;

(5) Effective vector control measures shall be applied to control flies, rodents, and other insects or vermin;

(6) Equipment shall be provided in the storage and charging areas and elsewhere as needed or as may be required in order to maintain the facility in a sanitary condition; and

(7) Appropriate methods shall be provided to confine material subject to be blown by the wind within the area. At the conclusion of each day of operation, all windblown material resulting from the operation shall be collected and returned to the area by the owner or operator.

History Note: *Authority G.S. 130A-294;*
Eff. April 1, 1982.

ELEMENTS OF COMPLIANCE REVIEW

1. Organization Information

Under N.C.G.S. § 130A-294 (b2)(2), the Compliance Branch of the Solid Waste Section will conduct a review to determine your past compliance with federal and state laws, regulations, and rules for the protection of the environment.

To begin the review, you will be asked to provide an organizational chart for your company with explanatory text that shows all business entities that are direct or indirect parents, subsidiaries or other affiliates of applicant and depicts the relationships among all entities shown on each chart. The charts shall also include any partnerships and joint ventures in which any of the entities are engaged or which have a financial interest in any of the entities. For all business entities identified in the organizational charts, please identify those business entities which operated under a previous business name and identify the prior business name.

After review of the organizational charts, the agency will request additional follow-up information. Please be advised that under subsection N.C.G.S. § 130A-294(b3), the agency is not required to review the application until you have satisfied the agency that you have met the requirements of subsection (b2). The agency will also conduct a compliance review under N.C.G.S. § 130A-309.06(b), which pertains to violations of statutes, rules, orders, or permit terms or conditions relating to any solid waste management facility in this State. If you are a business entity, the compliance review may extend to any other parent, subsidiary, or other affiliate, as well as a partner, a corporate officer or director, or a stockholder holding over 50% of the stock.

2. Compliance Review

After receiving your organizational chart, the Compliance Branch will send a questionnaire you to complete. The questions are shown below. Additional follow-up information may be requested.

Compliance Review

The applicant, _____, is requested to provide the following information. For purposes of the questions below, the phrase "within the past five years," means five years prior to the date of this request.

A. The following question applies to all the applicant's solid waste management activities.

1. With respect to the applicant's solid waste management activities, check whether the applicant has been a party to or received any of the following within the past five years:

   __a. Compliance Order with a penalty
   __b. Compliance order without a penalty
   __c. Order to cease operating
   __d. Order to abate public health nuisance [130A-19];
   __e. Order to abate imminent hazard [130A-20];
   __f. Order to abate nuisance scrap tire site [130A-309.60]).
   __g. Administrative Consent Agreement or Settlement Agreement (e.g., may involve revised permit conditions)
   __h. Revocation or suspension of a permit

__i. Denial of a permit application for a solid waste management facility
__j. Penalty Collection lawsuit (lawsuit to collect an unpaid penalty)
__k. Confession of Judgment (for the payment and collection of an unpaid penalty or other monies owed to a special account, such as the scrap tire account or white goods account)
__l. Injunctive relief or law suit for injunctive relief
__m. Lawsuit for forfeiture of gain (N.C.G.S. §130A-28)
__n. Lawsuit for recovery of money (N.C.G.S. §130A-27)
__o. State Criminal action- misdemeanor or felony (N.C.G.S. 130A-25; 130A-26.2; 14-399]
__p. Federal criminal action-misdemeanor or felony

B. **[Note: Questions 2 and 3 cover any type of environmental violation.]**
Check all applicable boxes.

Within the past five years:

2. The applicant has been convicted of, or pled guilty or no contest to, a criminal violation of a statute, regulation, or rule for the protection of the environment.

__a. in state court
__b. in federal court
__c. not applicable

3. A monetary penalty (whether denominated as a civil penalty, an administrative penalty, a judicial penalty, or by some other designation), has been assessed against the applicant for the violation of a state or federal statute, rule, or regulation for the protection of the environment.

__a. in a state forum
__b. in a federal forum
__c. not applicable

[Note: Questions 4 and 5 will encompass those situations where a solid waste management facility operated in violation of solid waste management statutes/regulations, as well as groundwater, surface water, water quality, and air quality statutes/regulations, among others.]

4. With respect to any solid waste management facility owned or operated by the applicant, a lawsuit for injunctive relief has been filed against the applicant for the violation of a statute, regulation or rule for the protection of the environment.

__a. in state court
__b. in federal court
__c. not applicable

5. With respect to any solid waste management facility owned or operated by the applicant, a judgment, or consent judgment, for injunctive relief has been entered against the applicant for the violation of any statute, regulation or rule for the protection of the environment.

__a. in state court
__b. in federal court
__c. not applicable

6. A permit for a solid waste management facility owned or operated by the applicant has been revoked or suspended.

   __a. in a state forum
   __b. in a federal forum
   __c. not applicable

7. The applicant submitted a permit application for the proposed ownership or operation of a solid waste management facility that has been denied.

   __a. in a state forum
   __b. in a federal forum
   __c. not applicable

8. A governmental agency or unit has notified the applicant in writing that the applicant has operated or is operating a solid waste management facility without the requisite permit.

   __a. yes
   __b. not applicable

9. A governmental agency or unit has notified the applicant in writing that the applicant has operated or is operating a solid waste management facility outside the scope of the permitted activity.

   __a. yes
   __b. not applicable

For each question that has been marked with an answer other than "not applicable," please provide a written, detailed explanation, including how or if the matter has been resolved.

The applicant may be requested to provide a written, sworn statement certifying the status of the matter. Possible certification statements are as follows:

> The applicant is now in compliance with all civil and criminal penalty provisions of any administrative order, consent agreement, settlement agreement, or court order.
>
> The applicant is in compliance with the payment schedule for any assessed administrative penalties.
>
> The applicant has filed and is presently pursuing, in good faith, a direct administrative or judicial appeal to contest the validity of the violation.

If the applicant certifies that the applicant is now in compliance, the applicant may be asked to submit proof from the agency having jurisdiction over the violation that the applicant is in the process of correcting or has corrected the violation to the satisfaction of the agency.

The applicant will be asked to certify the truth and accuracy of the answers provided to these compliance review questions.

APPENDIX C

CLOSURE COST ESTIMATE WORKSHEET

1. List the types and maximum amounts of combustible materials stored outdoors at your facility at any time. Specify material amounts in tons or cubic yards.

Type of Material	Maximum Amount Stored Outdoors
_____	_____
_____	_____
_____	_____
_____	_____

2. Total amount of combustible materials stored outdoors (from Item 1): _____

3. Attach quotes for disposition of any or all of these materials. Each quote should specify the type(s) and amount(s) of material it covers, and a cost for disposition of each.

4. Total amount of materials covered by quotes: _____

5. Total cost of disposition covered by quotes: $_____

6. Subtract the total amount of materials covered by quotes (Item 4) from the total amount of materials from Item 2:

Item 2 total	_____
- Item 4 total	_____
=	_____

If the number you entered for Item 6 is zero, the dollar figure entered for Item 5 is your financial assurance cost estimate. If this number is greater than zero, complete items 7 - 19 to determine the cost of disposition for materials not covered by quotes.

7. Nearest disposal facility authorized to accept materials on your site:

_____

8. Tipping fee (disposal charge) at this facility: 8(a) _____ per cubic yard or

8(b) _____ per ton

Note: Please continue to use the same unit of measurement as in Item 2.

9. Disposal cost = Item 6 x Item 8(a) or 8(b) = $_____

10. **Collection cost for materials not covered by quotes:**

Multiply the number recorded on Item 6 by $0.80 if calculated in cubic yards, or Multiply the number recorded on Item 6 by $1.00 if calculated in tons.

Collection cost: $_____ (if this number is less than $500, enter $500 on this line)

11. **Transportation cost for materials not covered by quotes:**

Distance from your facility to the disposal facility named on Item 7: _____ miles

12. **Use the chart in Appendix B to determine the density of each type of combustible material stored outdoors at your facility.**

13. **Total volume of materials with densities of less than 500 pounds per cubic yard:**

_____ cubic yards

14. **Total weight of materials with densities greater than 500 pounds per cubic yard:**

_____ tons

15. **Divide the number of cubic yards entered for Item 13 by 100:_____**

16. **Divide the number of tons entered for Item 14 by 25: _____**

17. **Add the numbers you have entered for Items 15 and 16: _____**

This is the number of truckloads necessary to transport your materials for disposition.

18. **Multiply the number you entered for Item 17 by the number of miles from your facility to the nearest authorized disposal facility (Item 11). _____**

This is the number of "loaded miles" required for transportation to a disposal facility.

19. **Multiply the number you entered for Item 18 by $2.50: $_____**

This is the cost of transportation for materials not covered by quotes.

20. **Total closure cost: add the dollar figures you entered for Item 5: $ _____**

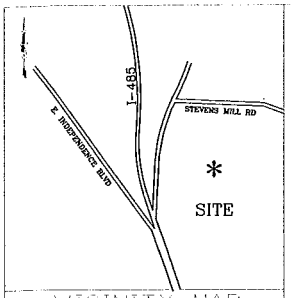
Item 9: $ _____

Item 10: $ _____

Item 19: $ _____

TOTAL: $ _____ *

*** This is the total amount of your financial assurance responsibility.**



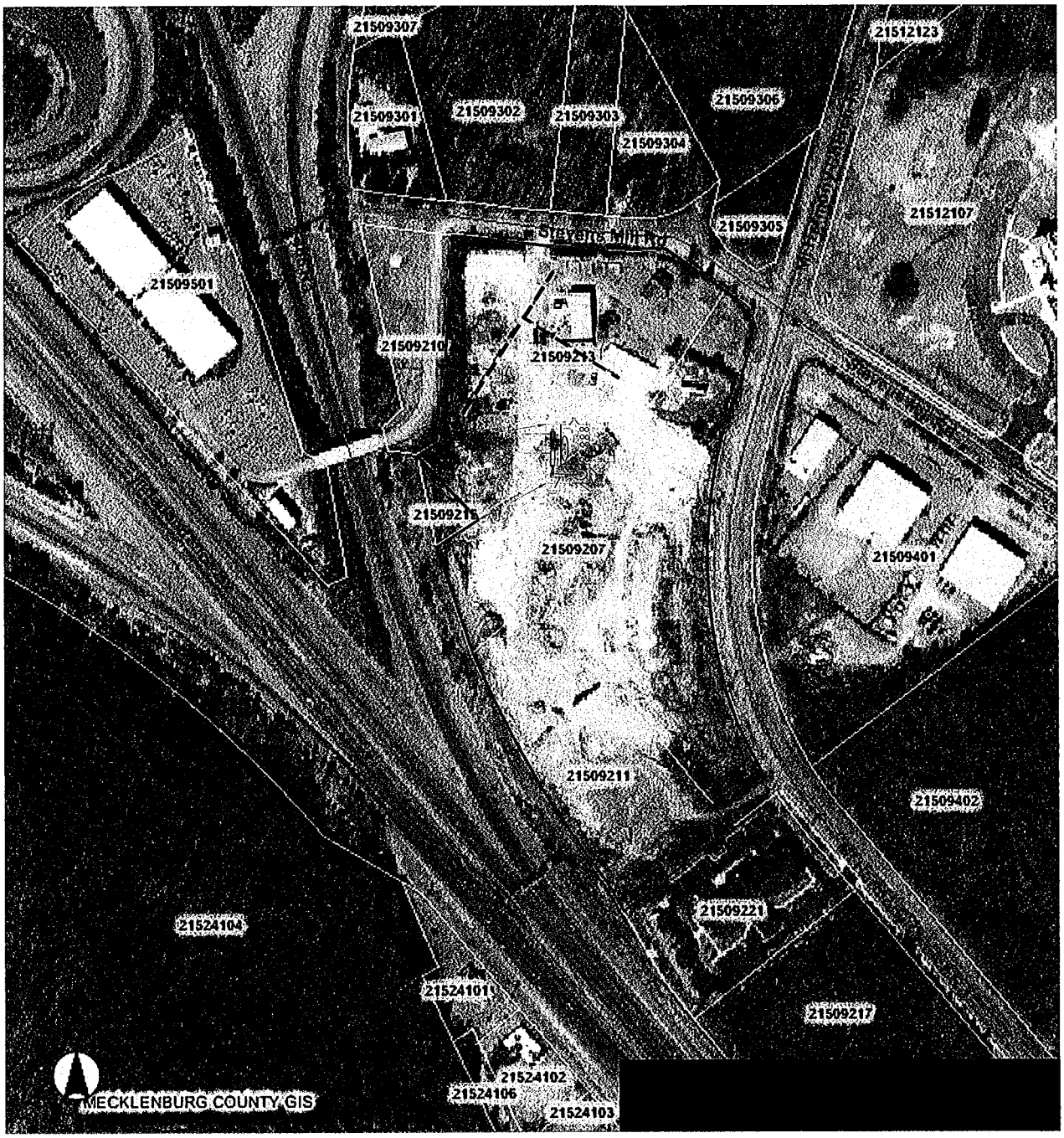
VICINITY MAP (N.T.S.)

NOTES:

1.) PROPERTY SHOWN HAS BEEN TAKEN FROM THE MECKLENBURG COUNTY GIS AND REFERS TO THE DEEDS REFERENCED IN THE ATTACHED PACKAGE LISTED UNDER "PROPERTY INFORMATION"

2.) THE PURPOSE OF THIS DRAWING IS TO SHOW THE LOCATION OF AN ASPHALT SHINGLE RECYCLE PLANT FACILITY ON THIS PROPERTY.

THIS IS NOT A BOUNDARY SURVEY.

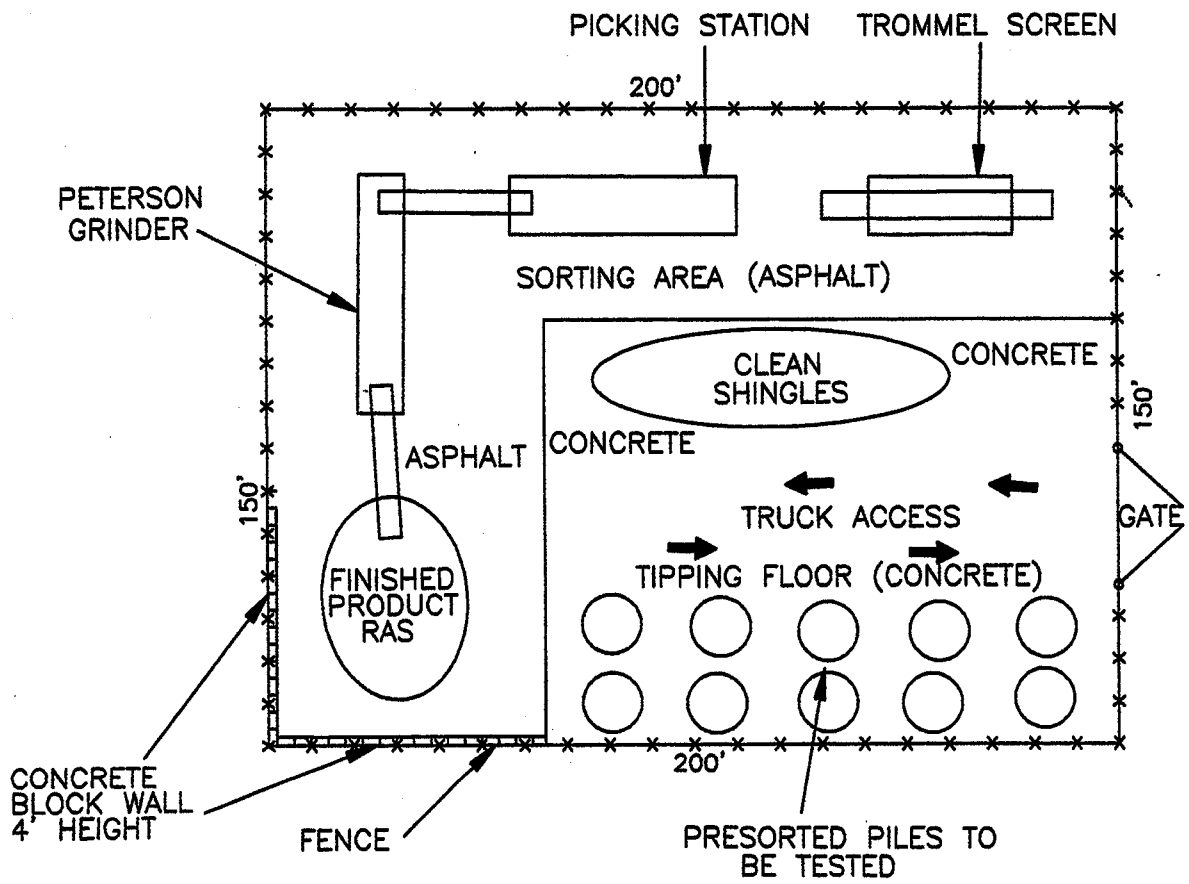


PLOT SCALE

(IN FEET)
1 inch = 40 ft.

BASE FLOOD LINE:
ACCORDING TO F.I.R.M.
PANEL NUMBER: 3710449900J
EFFECT DATE: 03/02/2009
THIS PROPERTY LIES IN ZONE-OUT.

BOGGS TREATMENT AND PROCESSING FACILITY FOR RECYCLED ASPHALTSHINGLES		Revisions:
N.T.S.	DATE: AUGUST 20, 2010	Drawn: LCP
PROPERTY OF: GRADY R. HILL 7166 STEVENS MILL RD MATTHEWS, NC 28104		



GRAPHIC SCALE

(IN FEET)
1 inch = 40 ft.

SCALE OF MAP MAY BE DISTORTED
DUE TO METHODS OF REPRODUCTION

Applicant Signature Page

Name of Facility Boggs Paving Shingle Recycling Facility

I certify under penalty of law that this document and all attachments were prepared under my direction or supervision and that the information provided in this application is true, accurate, and complete to the best of my knowledge.

I understand that North Carolina General Statute 130A-22 provides for administrative penalties of up to fifteen thousand dollars ($15,000.00) per day per each violation of the Solid Waste Management Rules. I further understand that the Solid Waste Management Rules may be revised or amended in the future and that the facility site and operations of this solid waste management facility will be required to comply with all such revisions or amendments.

Signature	Print Name	Date
Carl A. Boggs III	Carl A. Boggs III	11/8/10

President / CFO

Title

Boggs Paving, Inc

Business or organization

Certification by Land Owner (if different from Applicant)

I hereby certify that I have read and understand the application submitted by Boggs Paving for a permit to operate a solid waste processing facility on land owned by the undersigned located at (address) 2168 Stevens Mill Rd; (city) Matthews, NC, in Mecklenburg County, and described in Deed Book and Page(s) 7886, 889.

I specifically grant permission for the proposed processing facility planned for operation within the confines of the land, as indicated in the permit application. I understand that any permit will be issued in the names of both the operator and the owner of the facility/property. I acknowledge that ownership of land on which a solid waste management facility is located may subject me to cleanup of said property in the event that the operator defaults as well as to liability under the federal Comprehensive Environmental Responsibility, Compensation and Liability Act ("CERCLA"). Without accepting any fault or liability, I recognize that ownership of land on which a solid waste management facility is located may subject me to claims from persons who may be harmed in their persons or property caused by the solid waste management facility.

I am informed that North Carolina General Statute 130A-22 provides for administrative penalties of up to fifteen thousand dollars ($15,000) per day per each violation of the Solid Waste Management Rules. I understand that the Solid Waste Management Rules may be revised or amended in the future, and that the siting and operation of the facility will be required to comply with any such revisions or amendments.

Grady Reid Hill	Grady Reid Hill	11-18-10
Signature	Print Name	Date
Owner		
Title	Business or organization name	

NORTH CAROLINA

Union County

I, Kimberly H. Cox, a Notary Public for said County and State, do hereby certify that Grady Reid Hill personally appeared before me this day and acknowledged the due execution of the foregoing instrument.

Witness my hand and official seal, this the 9th day of November, 2010.

(Official Seal)

Notary Public Kimberly H. Cox

My commission expires May 01, 2015