




State of New Hampshire  
DEPARTMENT OF ENVIRONMENTAL SERVICES

6 Hazen Drive, P.O. Box 95, Concord, NH 03302-0095  
(603) 271-2900 FAX (603) 271-2456



December 19, 2003

To: Commercial Paving

From: Anthony P. Giunta, P.G.   
Director, Waste Management Division  
Department of Environmental Services

Subject: Certified Waste-Derived Product No. 17, "AGGRAPHALT"

Pursuant to Env-Wm 3207.05 and Env-Wm 3208 of the New Hampshire Solid Waste Rules (Rules), the Department of Environmental Services, Waste Management Division (Department) has added "AGGRAPHALT" (product) made with asphalt roofing shingles (waste) to the Department's list of certified waste derived products. Use of the waste must adhere to Part Env-Wm 3202.04 of the Rules which are designed to protect public health and the environment. Before using the waste to produce the product, be sure to note any specifications or restrictions that have been placed on the use, storage, handling, and production of the waste and/or product. **Waste and product specifications and restrictions are attached.**

**Product shall only be produced by Commercial Recycling Systems of Portland, Maine.**

This certification granted by the Department shall not affect the user's obligation to obtain all requisite federal, state, or local permits, licenses or approvals, and to comply with all other applicable federal, state, district or local permits, ordinances, laws or approvals or conditions pertaining to the use of the product.

For permitting information and questions, please call the Department's Permitting and Design Review Section at (603) 271-2925 for assistance.

cc: PDRS CWDP File

**Certified Waste-Derived Product No. 17**  
**“Aggraphalt”**  
**Specifications and Restrictions**

**A. Definitions**

1. “Surface Course” means one or more layers of a specified material of designed thickness, to accommodate the traffic load, placed on base courses. The top layer is sometimes called the “wearing course”.
2. “Base Course” means the layer or layers of specified or selected material placed on a subbase or subgrade to support pavement or other structure.
3. “Subbase” means the layer or layers of specified or selected material placed on a subgrade to support a base course.
4. “Subgrade” means the top soil surface upon which a subbase or base courses are placed.

**B. Asphalt Shingle Acceptance Limitations**

The following acceptance limitations are currently in existence for the product:

1. No commercial asphalt roofing;
2. No asphalt siding shingles;
3. No asbestos fibers; and
4. No hazardous waste, hazardous substances, toxic substances, or toxic pollutants as those terms are used in the Resource Conservation and Recovery Act, the Comprehensive Environmental Response, Comprehensive and Liability Act, the Hazardous Materials Transportation Act, the Toxic Substance Control Act, the Clean Air Act and the Clean Water Act.

**C. Specifications**

Product is manufactured from crushed and screened demolition aggregate-based materials. This crusher processed and sized material may include brick, concrete, asphalt pavement, stone tailings, ledge and similar aggregate-based demolition materials. Ground asphalt roofing shingles are added to the product in varying proportions to meet the varying compaction requirements of the crushed materials. The uses of product are as described below.

The following specifications shall be met for the product:

1. Maximum roofing shingle content: 40% (by weight)
2. Fines: maximum passing No. 100 sieve: 15% (by weight)  
maximum passing No. 200 sieve: 7% (by weight)
3. Maximum deleterious matter (i.e., organics, paper, metal, etc.): 1% (by weight)
4. Maximum Screening Concentrations (mg/kg):

| <u>PAHs</u>    | <u>Screening Concentrations (mg/kg)<sup>1</sup></u> |
|----------------|---|
| Benzo(a)pyrene | 35.7  |

| <u>Metals</u> | <u>Screening Concentrations (mg/kg)<sup>2</sup></u> |
|---------------|---|
| Arsenic       | 11  |
| Barium        | 750   |
| Cadmium       | 32  |
| Chromium VI   | 130   |
| Lead          | 400   |
| Mercury       | 13  |
| Selenium      | 260   |
| Silver        | 45  |

Notes: <sup>1</sup> Product health based screening concentration calculated by the New Hampshire Department of Health and Human Services.

<sup>2</sup> Equivalent to Risk Characterization and Management Policy (RCMP) S-1 standards for protecting groundwater.

**D. Permissible Uses**

1. Base course and subbase aggregate for the construction of a portland cement concrete or asphaltic concrete paved lot;
2. Base course and subbase aggregate for the construction of a paved federal, state, or municipal roadway;
3. Unbonded surface course, including the use as a surface course for municipal roads, non-residential driveways, non-residential parking areas, and recreation or exercise trails; and
4. Roadway shoulder aggregate.

**E. Non-Permissible Uses**

1. Surface course for residential driveways;

2. Surface course for residential parking lots; and
3. Playgrounds.

**F. Storage and Transportation**

1. Stockpile is to be actively managed and shall comply with the universal facility requirements of Env-Wm 2700 of the Rules.
2. Vehicles or containers used to transport product shall be loaded and hauled in such a manner that the contents do not fall, spill or leak. Covers shall be provided to prevent littering and spillage as necessary.
3. Upon the delivery of each load of the product, a "Recommended Use Guidelines" form, contained in Exhibit A, must be signed by an authorized representative of the user. A copy of the form must be maintained at the offices of Commercial Recycling Systems.

**F. Quality Assurance/Quality Control Procedures**

1. One representative composite sample shall be collected from the product for every 10,000 tons of shingles processed and tested at a certified lab for the following:
  - a. Metals per EPA Method 6010 and 7471 (mercury).
  - b. Poly Aromatic Hydrocarbons (PAHs) per EPA Method 8270.
2. One representative composite sample shall be collected from the product for every 25 tons of shingles processed and tested at a certified lab for the presence of asbestos fibers, using Polarized Light Microscopy (PLM) testing methods.
3. All testing must be completed and the results received by the facility prior to releasing the product for distribution.

**G. Third Party Inspections**

1. A qualified and experienced third party licensed asbestos inspector retained by the facility shall inspect the facility twice during the asphalt-manufacturing season (approximately April through December). The first inspection should occur approximately in the midpoint of the season and the second inspection should occur prior to the close of the season.
2. During the inspection, the inspector shall:

2. During the inspection, the inspector shall:
  - a. Evaluate acceptance and sampling programs, including any approved modifications, as required by this determination. Identify any deviations from compliance conditions set forth in this determination.
  - b. Identify any modifications in the facility's process that are not identified in the application. Identify changes that may modify the physical or chemical nature of the processed shingles, or that may present a situation of nuisance or a threat of adverse impacts from the use of this material.
  - c. Sample both a randomly selected truckload of material and a randomly selected stockpile of processed material for the presence of asbestos. The sample shall be analyzed using PLM testing methods.
  - d. Following the inspection, the inspector shall file a report of the findings with the permitted facility. Said report shall be maintained in a file at the facility and any recommendations made by the inspection shall be promptly implemented.

**H. Reporting**

1. Commercial Recycling Systems shall be required to submit an annual report to the Department by March 31 of the year following the calendar year being reported, containing the minimum information and in the format of the sample annual report contained in Exhibit B.
2. Commercial Recycling Systems shall be required to submit Third Party Inspection Reports to the Department within two (2) weeks of receipt.

**EXHIBIT A**

## RECOMMENDED USE GUIDELINES

### AGGRAPHALT™

**MANUFACTURED BY COMMERCIAL RECYCLING SYSTEMS (CRS)  
FOR DISTRIBUTION AND USE IN THE STATE OF NEW HAMPSHIRE  
AS A CERTIFIED WASTE DERIVED PRODUCT**

#### Product Description

AGGRAPHALT™ is an environmental and beneficial recycled product manufactured from miscellaneous crushed and screened demolition aggregate-based materials. In addition asphaltic materials may be added to develop specific gradations for road maintenance and construction materials. The addition of asphaltic materials enhances the superior compaction traits resulting in the prevention of soil erosion and dust. AGGRAPHALT™ may be used as a substitute for virgin crushed aggregates in a wide range of construction products.

#### Usage

AGGRAPHALT™ makes an excellent road surface for non-paved rural roads. AGGRAPHALT™ is also used in roadways and parking lot construction, including bridge approach ramps, embankment, shoulder, sub-base, base, and roadbed materials.

#### Applications and Restrictions

AGGRAPHALT™ can be applied at up to a 2-to-1 slope. Developed and marketed by CRS as a safe and environmentally beneficial construction material, AGGRAPHALT™ should consistently be utilized in a manner that meets or favorably exceeds all applicable local, state, or federal regulatory guidelines or construction codes.

The use of AGGRAPHALT™ in residential driveway surface course, residential parking lot surface course, and playground construction is prohibited in the State of New Hampshire.

I understand and accept Commercial Recycling Systems' recommended use guidelines and use restrictions for this product.

Date: \_\_\_\_\_ Customer (Company/Municipality): \_\_\_\_\_

Name (Please Print): \_\_\_\_\_ Signature: \_\_\_\_\_

Intended Use: \_\_\_\_\_

**EXHIBIT B**



February 1, 2005

New Hampshire Department of Environmental Services  
Waste Management Division  
29 Hazen Drive, P.O. Box 95  
Concord, NH 03302-0095

Attn: Richard S. Reed, Administrator  
Solid Waste Management Bureau

RE: **AGGRAPHALT™ Waste Derived Product Annual Report Submittal for 2004**

Dear Mr. Reed:

Commercial Recycling Systems (CRS) is pleased to submit our AGGRAPHALT™ Annual Report for 2004, as required by the New Hampshire Department of Environmental Services, Waste Management Division for Certification of this Waste Derived Product.

**Annual Report for AGGRAPHALT™**

**Incoming Roofing Shingle Wastes**

As shown on Table 1, a total of \_\_\_\_\_ tons of roofing shingles was received from the State of New Hampshire generators from January 1, 2004 through December 31, 2004.

**Product Distribution**

As shown on Table 2, a total of \_\_\_\_\_ tons of AGGRAPHALT™ was distributed in the State of New Hampshire from January 1, 2004 through December 31, 2004.

**Chemical and Physical Testing**

Table 3 summarizes the results of required chemical testing of AGGRAPHALT™ distributed in New Hampshire from January 1, 2004 through December 31, 2004. I certify that there were no exceedances of the maximum roofing shingle content (40% by weight), percent fines passing the #100 sieve (15% by weight), percent fines passing the #200 sieve (7% by weight), maximum deleterious matter (1% by weight), or maximum screening concentrations for eight (8) metals or benzo(a)pyrene in the \_\_\_\_\_ tons of AGGRAPHALT™ processed for distribution in the State of New Hampshire in 2004.

Table 4 contains asbestos tests performed for every 25 tons of AGGRAPHALT™ distributed in New Hampshire from January 1, 2004 through December 31, 2004. I certify that there were no asbestos fibers detected in the \_\_\_\_\_ tons of AGGRAPHALT™ processed for distribution in the State of New Hampshire in 2004.

Annual Report for AGGRAPHALT™  
February 1, 2005  
Page 2 of 4

If you have any questions regarding any of the information provided, please call me at (207) 883-3325.

Sincerely,

Compliance Manager

Attachments

Cc: D. Gleason  
J. Adelman

**Table 1**  
**New Hampshire Unprocessed Roofing Shingle Wastes Received**  
**January 1 through December 31, 2004**

| <b>New Hampshire Shingles Received</b> | <b>Tons</b> |
|--|-------------|
| January                                |             |
| February                               |             |
| March                                  |             |
| April                                  |             |
| May                                    |             |
| June                                   |             |
| July                                   |             |
| August                                 |             |
| September                              |             |
| October                                |             |
| November                               |             |
| December                               |             |
| <b>TOTAL</b>                           |             |

**Table 2**  
**AGGRAPHALT™**  
**New Hampshire Distribution Sites**  
**January 1 through December 31, 2004**

| <b>Customer Name / Address</b> | <b>Distribution Site</b> | <b>Use</b> | <b>Tons</b> |
|--------------------------------|--------------------------|------------|-------------|
|                                |                          |            |             |
|                                |                          |            |             |
|                                |                          |            |             |
|                                |                          |            |             |

Note: Copies of signed "Recommended Use Guidelines" forms for all users of AGGRAPHALT™ are available for review at the offices of Commercial Recycling Systems.





**RECORD OF CERTIFICATION  
OF WASTE-DERIVED PRODUCT FOR DISTRIBUTION & USE**

Pursuant to Section Env-Wm 3200 of the New Hampshire Solid Waste Rules (Rules)

- I. **PRODUCT / PRODUCT NAME:** Certified Waste-Derived Product No. 17,  
"Aggraphalt"
- II. **WASTE TYPE:** Asphalt shingle aggregate
- III. **TRADE NAME:** "Aggraphalt"  
**&/OR PROPRIETORS NAME:** Commercial Paving Co., Inc.
- IV. **AUTHORIZED USE:** Refer to specifications.
- V. **SPECIFICATIONS AND/OR RESTRICTIONS:**  
✓ Specifications and Restrictions are attached
- VI. **APPLICATION LOG NUMBER:** WMD Log # 200200169  
**APPLICANT:** Commercial Paving Co., Inc.
- VII. **DATE APPROVED:** December 19, 2003
- VIII. **COMMENTS:**
- IX. **REVIEWED BY:** WW

Note: This form is filled out when a waste derived product becomes certified, it is a record of that particular certification, and also provides the necessary input data for the data base on Waste Derived Products Certified for Distribution and Use.