

Commonwealth of Virginia
Department of Environmental Quality
Division of Waste Operations Guidance Document No. 97-2001

SUBJECT: DISCARDED SAND BLAST GRIT POLICY

DATE: February 14, 1997

I. INTRODUCTION

This guidance document is intended to clarify the Division of Waste Operation's position on the permitting requirements for the management of spent and/or discarded sand blast grit. This policy establishes guidelines to determine what type of solid waste management of sand blast grit needs a solid waste permit. This policy is written with the understanding that it is the responsibility of the generator of the spent or discarded sand blast grit to determine if the material is a hazardous waste according to the Virginia Hazardous Waste Management Regulations VAC 20-60 et seq.). This policy uses terms which are defined in Section III, "Definitions." Also included in Section V is a product specification for beneficial use.

II. BACKGROUND

In the Tidewater region of the Commonwealth, there are numerous ship repair and refurbishing facilities associated with the intense marine activities in the Chesapeake Bay and its tributaries. Best Management Practices (BMP) surveys conducted periodically have noted a considerable number of BMP violations related to work performed within the confines of these facilities. Spent abrasive used in the preparation of ship hulls and other surfaces for coating is often left behind after site cleanup, and is stockpiled on the bare ground with no run-on or run-off controls. In some instances, state waters are in contiguous contact with this material. Stormwater, cooling water, and process water often flow through this material and into state waters.

Debris resulting from the abrasive blasting of ships may consist of any number of things, including, but not limited to, marine organisms (previously attached to the ships' hulls), spent grit, old paint flakes and chips, and rust particles and flakes. In addition, such debris may also contain other process wastes such as fresh paints, fuel oils, and oily bilge water accidentally spilled within the work area. Studies indicate 1) that high levels of priority pollutants (primarily metals) are associated with spent abrasive on the ground and in the water at these facilities, 2) water in contact with such debris may extract these pollutants, and 3) such extracts are potentially toxic to indigenous marine organisms residing in these waters.

These facilities should be required to install an impervious surface beneath storage and stockpile areas to collect and contain run-off, and should also be covered when feasible to prevent run-on. The work areas should be required (or at least encouraged) to institute BMPs to protect state waters; however, this document is primarily intended to address the storage and stockpile areas.

III. DEFINITIONS

"Appropriate container" as pertains to spent and/or discarded sand blast grit falls into two categories; long term (i.e., longer than 90 days) and short term (i.e., less than or equal to 90 days):

- for long term storage, means an enclosed building, tank, or impermeable pad with curbs and drains. Containers which are not covered must be capable of collecting and controlling, in addition to the material contained, the water volume resulting from a 24-hour, 25 year storm event. Also, containers for long term storage must have outlets or drains for proper removal of collected liquids to a sanitary sewer or holding tank for ultimate disposal at an approved publicly-owned treatment works (POTW) or other permitted wastewater treatment facility; and
- for short term storage, means dumpsters or roll off containers which are covered with a tarp, or an enclosed building, or if material is piled on the ground (i.e., a waste pile), a berm around such pile, with the pile covered with a tarp. These containers must be designed to minimize run-on and run-off.

"Beneficial Use" means a use which is demonstrated to be of benefit as a substitute for natural or commercial products and does not contribute to adverse effects on human health or the environment.

"Off-site" means any site that does not meet the definition of on-site as defined herein.

"On-site" means the same or geographically contiguous property which may be divided by public or private right-of-way, provided the entrance and exit of the facility are controlled by the owner or operator of the facility. Non-contiguous properties owned by the same person, but connected by a right-of-way which he controls and to which the public does not have access, is also considered on-site property.

"Screening" for the purpose of this guidance document means the use of a device (i.e., screen) to separate or sift material based on particle size.

"Spent sandblast grit" (AKA Spent Abrasive) means a granular material, usually of specified grain size, which is used as an abrasive in the preparation of ship hulls and other surfaces for coating. When this material is used, it breaks down into very fine particles, such as dust, and is considered spent. For the purposes of this guidance document, spent sandblast grit is discarded and is considered a solid waste. Once spent, the material is contaminated with debris from the surface blasted and may contain any number of things, including but not limited to, marine organisms, spent grit, old paint flakes and chips and rust particles and flakes. In addition, such debris may also contain other process wastes such as fresh paints, fuel oils, and oily bilge water accidentally spilled within the work area. Such material is known to contain relatively high concentrations of priority pollutants which may be released to water coming into contact with the material.

IV. GUIDANCE

A. SITES THAT ARE CONDITIONALLY EXEMPT FROM PERMITTING

1. Spent sandblast grit from sandblasting operations that is being generated on a site shall be stored on or in appropriate containers for no more than 90 days. No spent sandblast grit may be brought from off-site. Best management practices for the sandblasting operations shall be implemented so that the spent sandblast material is not discharged to state waters.
2. A site that beneficially uses or reuses that spent sandblast grit as an ingredient to make a product according to the product specification in Section V is conditionally exempt, provided the spent sandblast grit is stored in appropriate containers prior to beneficial use.

B. SITES THAT NEED A SOLID WASTE PERMIT PURSUANT TO 9 VAC 20-80-10 et. seq.

1. Sites that store spent sandblast grit for more than 90 days where sandblasting operations are occurring [site of generation]; or,

2. A site where spent sandblast grit is being brought on-site and the material is not being used, reused, or the material is speculatively accumulated; or,
3. A site [on-site or off-site] that screens the spent sand blast grit prior to making a product, or
4. Any site that reclaims, screens, processes, treats, or stores this material, or is not specifically excluded as defined in § 3.2, VR 672-20-10 (9 VAC 20-80-150) needs a permit.

C. DISCLAIMER

Notwithstanding the guidance established in subsections A and B of this section, in the event any such facility poses a nuisance, open dump, or threat to human health and the environment, said facility may be required to obtain a solid waste permit for these waste management activities.

V. **PRODUCT SPECIFICATION**

**PRODUCT SPECIFICATION
FOR
STABILIZED FILL/FLOWABLE FILL/SELECT FILL
AND
COAL SLAY (ASH) FROM SAND BLAST OPERATIONS**

The contractor shall submit a mix design for the Project Engineer's review. The proportion shall be such that the mixture will have a CBR value of 15 when tested in accordance with VTM-8 [Virginia Test Method], or a minimum 1500 psi 28 day compressive strength when tested in accordance with ASTM D 1633-84. The mixture shall be pug-milled unless an equivalent in-place method can be adequately demonstrated.

Stabilized fills containing ash shall not be constructed below elevation of mean high-water or below the seasonal high groundwater elevation. The thickness of flowable fill used for pipe bedding, and which is in contact with groundwater, may not exceed 3 feet in any dimension from the outside circumference of the pipe.

Stabilized ash fills shall be constructed in accordance with Section 303 of the VDOT specifications. The ash mixture shall be placed and compacted within two hours of the introduction of the lime or cement and shall be compacted at optimum

moisture ± 2 percentage points. The contractor shall conduct moisture tests on an hourly basis and report results to the Project Engineer. If moisture results are consistent, the Project Engineer may reduce the frequency of the tests.

Stabilized ash will not be permitted to be exposed or placed on the top 12 inches of any fill slope greater than 25% unless the top surface of the fill is pavement.

The stabilized ash shall be protected against surface drying by application of moisture, placing of next course or an approved cover material.

APPROVED:

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