

Newport News Shipbuilding  
Contractor Environmental, Health and Safety  
Resource Manual

Abrasive Blasting

## **ABRASIVE BLASTING**

### **1. *Hazard***

At NNS, exposure monitoring data indicate the potential to exceed applicable OSHA exposure limits when abrasive blasting. Therefore, NNS expects contractors who conduct abrasive blasting to monitor and evaluate their operations and to comply with OSHA regulations accordingly.

### **2. *Regulations & Requirements***

Where there is potential for personnel exposure to hazardous materials, OSHA requires each employer to determine the nature and the extent of that exposure. If airborne exposures are above applicable OSHA regulatory limits, the employer must establish and implement a written compliance program(s) and must comply with other applicable requirements of the OSHA regulations.

During the pre-approval process (see General Information) each contractor whose employees may be exposed above applicable OSHA regulatory limits during abrasive blasting operations must provide to the NNS Environmental, Health and Safety Department a copy of that contractor's written health and safety program(s) for that substance(s). This document(s) must describe the contractor's program(s) for complying with each element of the applicable OSHA standard(s). The contractor shall provide copies of any changes to the program(s) at least annually, such as at the beginning of each year.

The employer shall ensure that unprotected personnel will not be exposed to airborne levels of contaminants above the OSHA regulatory limits, or to surfaces contaminated with hazardous materials which may present a health hazard to employees. The contractor shall also ensure that hazardous materials are handled and disposed of in accordance with applicable OSHA regulations and NNS environmental permits.

### **3. *Vendor-supplied Abrasive Blasting Grits***

NNS reserves the right to disallow use of any abrasive blasting grit following an evaluation of the applicable manufacturer's Safety Data Sheet (SDS). However, even with acceptance for use, additional OSHA requirements may be invoked by NNS or the vendor based on the presence of trace material in the grit.

Our experience has indicated that airborne crystalline silica and some metal contaminants can be detected during some abrasive blasting operations, depending on the source of the grit. This has been the case even though

crystalline silica or metals is not reported or is reported as less than detectable levels on the SDS. For that reason we ask for the following:

Prior to use of the a grit at NNS, we ask that the most recent Safety Data Sheet (SDS) be provided for the grit, and that a sample of grit (about 100mL or 3 oz) be provided to NNS.

Also, preferably before use, but in any event as soon as practical, we ask the vendor to provide an analysis of the grit for the following metals: lead, arsenic, cadmium, and beryllium. Our desired limit of detection is between 1 and 10 mg/kg (1 – 10 ppm) for each metal.

This information is to be provided to the contractor Section of NNS Environmental Health and Safety (Department O27).