

Dry Abrasive Blasting Operations

Draft 10-10-24

SECTION 200 – DEFINITIONS

DRY ABRASIVE BLASTING OPERATION - Cleaning, polishing, conditioning, removing or preparing a surface by propelling abrasive against a surface. Hydroblasting, wet abrasive blasting, or other abrasive blasting operations which continuously and effectively employ liquids to prevent emissions to the air are not dry abrasive blasting operations.

SECTION 300 – NEW SOURCE REVIEW

300.3 Categorical Exemptions from New Source Review

(A) Maintenance/construction:

- (10) Dry abrasive blasting operations used at public bridge projects.
- (11) Vacuum blasting operations that comply with NWCAA Section 515 as applicable.
- (12) Hydroblasting, wet abrasive blasting, or other abrasive blasting operations which continuously and effectively employ liquids to prevent emissions to the air.

(J) Miscellaneous

- (34) Stationary and portable dry abrasive blasting operations that comply with NWCAA Section 515 and use 1,750 pounds per week or less of abrasive, facility-wide.
 - (35) Self-contained, enclosed dry abrasive blasting operations that are not vented to the atmosphere (i.e., no openings in the walls or roof to the outside) such as “glove box” enclosures. “Glove box” enclosures are those where the worker places their hands in openings or gloves that extend into the box and enable the worker to hold the objects as they are being blasted without allowing air and blast material to escape the box.
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SECTION 515 – DRY ABRASIVE BLASTING OPERATIONS

515.1 Purpose.

This section of the NWCAA Regulation establishes general standards to control particulate and toxic air pollutant emissions from stationary and portable dry abrasive blasting operations.

515.2 Applicability.

Except as provided in this paragraph, the provisions of NWCAA Section 515 apply to new and existing, stationary and portable dry abrasive blasting operations.

(A) Compliance Date for Existing Sources

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Subject dry abrasive blasting operations that began actual construction prior to *[adoption date of rule]* shall be in compliance with NWCAA Section 515 by January 1, 2027.

(B) Review Under NWCAA Section 300

Dry abrasive blasting operations that have been issued an Order of Approval or a Notice of Construction Inapplicability Determination under NWCAA Section 300 are exempt from complying with NWCAA Section 515.

(C) Vacuum Blasting

Subject vacuum blasting operations, which are any dry abrasive blasting operations in which the spent abrasive, surface material, and dust are immediately and entirely collected by a vacuum device at the point of abrasive-to-surface contact shall comply with the requirements of NWCAA Section 515 except for NWCAA 515.3(A).

(D) Enclosed Operations

Enclosed dry abrasive blasting operations, including those with filtration that vents internally, where emissions are not released or otherwise escape to the atmosphere (e.g., no openings in the walls or roof to the outside) are exempt from complying with NWCAA Section 515. For example, “glove box” enclosures are those where the worker places their hands in openings or gloves that extend into the box and enable the worker to hold the objects as they are being blasted without allowing air and blast material to escape the box.

(E) Public Bridge Projects

Dry abrasive blasting operations used at public bridge projects are exempt from complying with NWCAA Section 515.

515.3 Dust Collector Enclosures and Filtration Requirements

For subject dry abrasive blasting operations:

(A) Enclosure:

Perform dry abrasive blasting inside a full enclosure that contains all dust and is ventilated to a dust collector prior to being exhausted. A full enclosure shall have no openings to atmosphere during operation (e.g., open doors) other than through the dust collector. The enclosure may be a fully enclosed room within a structure or an entire structure itself. It may be constructed of tarpaulins, plastic barriers, shrink wrap, or other physical barriers having closed seams with no rips, tears, or gaps

(B) Dust Collector Exhaust Filter:

Use dust collection filters with a removal efficiency equal to or greater than 90.0% as measured using American Society of Heating, Refrigerating, and Air-Conditioning Engineers (ASHRAE) Method 52.2 for particles with a diameter of 2.5 micrometers or smaller, or an alternate test method approved by the NWCAA in writing. Published filter efficiency data provided by filter vendors may be used to demonstrate compliance with this requirement.

515.4 General

(A) Prohibited Abrasive:

Use of nickel slag and abrasive with more than 1% free silica such as sand are prohibited.

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(B) Abrasive Reuse:

Abrasive shall not be reused unless contaminants (i.e., paint or any material other than the base material) have been removed by filtration or screening, performed in an enclosure, and the abrasive conforms to its original size.

(C) Visible Emissions

Visible emissions from dry abrasive blasting operations shall not exceed 0% opacity for more than an aggregate of 3 minutes in any consecutive 60-minute period, as measured by Ecology Method 9A. This includes, but is not limited to, enclosures, ductwork, dust collectors, transfer, storage, and disposal. Visible emissions observed at or beyond the property boundary are prohibited.

(D) Fugitive Emissions

Enclose new and spent abrasive storage areas; stockpiles; holding bins; and chutes and conveyors that transport abrasive. Prevent fugitive particulate emissions including those from transfer and disposal of used abrasive and collected waste material.

515.5 Recordkeeping

The records below shall be maintained by the owner or operator of subject dry abrasive blasting operations on-site for no less than 3 years and made available to NWCAA personnel upon request. For subject portable operations, records shall be kept on-site for the duration of each abrasive blasting project and may then be retained off-site. Off-site records for portable operations shall be made available to NWCAA personnel upon request for no less than 3 years.

(A) Usage Tracking

Abrasive usage must be recorded weekly (Sunday-Saturday) where usage can be based on the material expended (single use abrasive), hopper fills and refills (reusable abrasive), or total daily hours of operation using the maximum rated blasting usage rate.

(B) Maintenance

Maintenance performed on each subject dust collector shall be logged and must include a description of maintenance performed (including filter changes), date, and name of person making the record.

(C) Dust Collector Filter

For subject dry abrasive blasting operations, maintain documentation to demonstrate compliance with the dust collection filter standards in NWCAA 515.2(A) or 515.3(B).

(D) Abrasive Specifications

Maintain copies of Safety Data Sheets (SDS), Environmental Data Sheets (EDS), Product Data Sheets (PDS), manufacturer specific formulation data or analytical data for the abrasive used.