

Abrasive Blasting Operations

MSC-PRAC-30506

Revision 0

Effective Date: January 15, 2010

Topic: Safety and Health

Abrasive Blasting Operations

PURPOSE This practice identifies a key aspect of the Safety and Health (S&H) program, and establishes the requirements to control hazards and prevent overexposure of employees to toxic dust and Hexavalent chromium during abrasive blasting operations.

SCOPE This practice describes the general requirements for using abrasive blasting equipment, personal protective equipment, and air supply.

The requirements of this practice are consistent with the requirements published in the Hanford Mission Support Contract (MSC) Safety and Health virtual manual.

APPLICATION This practice applies to Mission Support Alliance (MSA) Construction.

GENERAL REQUIREMENTS Records generated during the performance of this activity are to be included in the Construction Work Package and will be managed in accordance with [MSC-PRAC-30374](#), *Construction Work Package* and [MSC-PRAC-30376](#), *Construction Document Control*.

A prejob plan identifying the known/suspected hazards associated with the work activity is completed and communicated to the workers prior to the activity commencing [see [MSC-PRAC-30462](#), *Prejob Safety Planning*].

Some blasting materials contain naturally occurring radioactive particles; consult MSA radiation protection when planning blasting work, to determine if additional controls are needed.

Employees do not allow dust to accumulate in an enclosure. Dust spills are promptly cleaned, preferably by wet vacuum cleaning.

Blast cleaning nozzles are equipped with an operating valve that is held open manually and shuts off automatically when released. A support is provided to mount the nozzle when it is not in use.

Operators of abrasive blasting equipment are instructed in the proper use and maintenance of the equipment.

Respiratory equipment is selected, used, and maintained in accordance with practices [MSC-PRAC-30510](#), *Respiratory Protection* and [MSC-PRAC-30515](#), *Supplied Breathing Air Systems*.

Field abrasive blasting operations are conducted in a controlled access work area with warning signs and barricades (refer to [MSC-PRAC-30479](#), *Signs, Signals, and Barriers*).

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Non-silica blasting agents are used.

PERSONAL PROTECTIVE EQUIPMENT

An abrasive blasting respirator constructed so that it covers the wearer's head, neck, shoulders and chest is used to protect the wearer from rebounding abrasive products.

Particulate filter respirators, when properly fitted, may be used for short, intermittent, or occasional dust exposures from cleanup or unloading of materials when it is not feasible to control the dust by engineering methods (such as ventilation, exhaust systems, or wet methods).

Operators wear appropriate extremity and body protection against abrasives. Additional clothing required by the job safety analysis (such as safety shoes or equivalent protection, leather gloves, and clothing made of strong-fibered material) also is worn. Hood view ports are made of impact-resistant safety glass or plastic covered by a metal screen.

The type of protective clothing and equipment needed to protect employees from Cr(VI) hazards will depend on the potential for exposure and the conditions of use in the workplace.

The employer must ensure that protective clothing and equipment contaminated with Cr(VI) is removed at the completion of the work shift or at the completion of tasks involving Cr(VI) exposure, whichever comes first.

NOTE: *For example, if employees perform work tasks involving Cr(VI) exposure for the first two hours of a work shift, and then perform tasks that do not involve Cr(VI) exposure, they must remove their protective clothing after the exposure period (in this case, the first two hours of the shift). If, however, employees are performing tasks involving Cr(VI) exposure intermittently throughout the day, or if employees are exposed to other contaminants where protective clothing and equipment are needed, this provision does not prevent them from wearing the clothing and equipment until the completion of their shift.*

Removal of Cr(VI) from protective clothing and equipment by blowing, shaking, or any other means which disperses Cr(VI) in the air is prohibited.

Hearing protection is used by blasting operators, pot tenders, and others in the immediate work area [refer to [MSC-PRAC-30504](#), *Hearing Protection*].

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Safety and Health determines the need for air monitoring. If air monitoring is required, results of the monitoring are forwarded to employees in accordance with [MSC-PRAC-30509](#), *Hazard Communication*.

Refer to MSC-PRO-31697, *Controlling Exposures to Hexavalent Chromium* for additional controls when performing abrasive blasting operations on chromate containing coatings.

AIR SUPPLY AND AIR COMPRESSORS

Refer to [MSC-PRAC-30515](#), *Supplied Breathing Air Systems* regarding the requirement for using air-supplied respirators and systems.

FORMS

None

RECORDS IDENTIFICATION

Records Capture Table

Name of Document	Submittal Responsibility	Retention Responsibility
Construction Work Package	Construction Supervisor/Superintendent	Project Document Control

REFERENCES

[MSC-PRAC-30374](#), *Construction Work Package*
[MSC-PRAC-30376](#), *Construction Document Control*
[MSC-PRAC-30462](#), *Prejob Safety Planning*
[MSC-PRAC-30479](#), *Signs, Signals, and Barriers*
[MSC-PRAC-30504](#), *Hearing Protection*
[MSC-PRAC-30509](#), *Hazard Communication*
[MSC-PRAC-30510](#), *Respiratory Protection*
[MSC-PRAC-30515](#), *Supplied Breathing Air Systems*
MSC-PRO-31697, *Controlling Exposures to Hexavalent Chromium*