Jackhammers and Handheld Powered Chipping Tools - Dust Collection

Description of Task:

Using a jackhammer or handheld powered chipping tools (chipping hammer, chipping gun, chisel gun, demolition hammer) to chip/hammer concrete, pavers, or other silica-containing materials. This exposure control plan describes dust controls that can be used to minimize the amount of airborne dust when using this equipment as listed in OSHA's Table 1 of the RCS Standard for Construction.

Engineering Controls - Ventilation:

- ✓ When using the jackhammer or chipping tool indoors or in an enclosed area outdoors, always use a portable exhaust unit/fan to direct air away from the cutting area and discharge the exhaust outdoors to minimize exposure to RCS.
- ✓ If the exhausted air creates a RCS hazard to those outside the work area, or if sending the exhaust directly outdoors is not feasible, you must use a HEPA filtered exhaust fan/unit to trap the RCS.

Engineering Controls - Dust Suppression

- ✓ Always use jackhammer or handheld powered chipping tool equipped with a commercially available vacuum dust collection system with a recommended shroud sized to fit around the bit. The vacuum dust collection system will help minimize RSC dust and reduce RSC exposure.
- ✓ Use a vacuum that meets the specifications recommended by the tool manufacturer, with enough suction to capture dust at the hammer/drill point.
- ✓ The vacuum dust collection system must be equipped with a filter that has 99 percent or greater efficiency.
- ✓ Use a vacuum exhaust hose capable of providing the airflow recommended by the tool manufacturer. A 1.25" to 2" diameter vacuum hose is typically adequate.

Work Practices:

- ✓ Operate and maintain tool in accordance with manufacturer's instructions to minimize RCS dust generation.
- ✓ Check that vacuum hoses are securely connected and are not kinked, cracked or broken.
- ✓ Visually inspect the equipment and dust collection system for missing or damaged parts.
- ✓ Ensure vacuum air flow at rates recommended by the manufacturer to minimize release of visible dust.
- ✓ Regularly check and replace the filter when necessary to prevent clogging.
- ✓ Empty the dust collection system at recommended intervals or as needed.
- ✓ Avoid exposure to dust when replacing filters or emptying dust collection system. Use of disposable filter bags is recommended.

Housekeeping Practices:

- ✓ Clean any residual dust from work surfaces/equipment/drilled holes using wet methods or HEPA filtered vacuums.
- ✓ Never use compressed air to clean off surfaces or clothes.

Respiratory Protection:

A respirator (N95 or tight-fitting APR w/P100 filter) must be worn when using a jackhammer/powered chipper for RCS activities:

- OUTDOORS: For more than 4 hours per shift
- INDOORS: For any amount of time

To wear a respirator you must be enrolled in the University's Respiratory Protection Program and properly fit tested, trained and medically cleared.
All other exposure control requirements in the Exposure Control Plan must still be followed when wearing a respirator.

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Procedures Used to Restrict Access to Work Areas:

Individuals not performing or supporting the RCS activities must be out of the work area whenever:

- RCS activities require the use of a respirator as defined in the exposure control plan, or
- Clearly visible dust is being generated despite the exposure controls in place

Restrict access to the work area by:

- Using physical barriers such as traffic cones, barrier tape.
- Scheduling tasks when personnel are absent

Restrict access until all RCS dust has been cleaned up.