SAFE WORK INSTRUCTION
HEPA Vacuum Care and Maintenance

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The following safe work instructions (SWI) are for HEPA vacuum care and maintenance.

DEFINITIONS

- **ACM:** Asbestos-Containing Materials

- **HEPA Filter:** A high efficiency particulate air filter rated at 99.97% effective at trapping particulate greater than 3µm in size.

- **HEPA Filtered Vacuum Cleaner:** High powered vacuum equipped with a HEPA Filter. HEPA Vacuums require regular proficiency testing to ensure they are functioning properly.

- **Proficiency Testing:** A quantitative filter challenge completed by a third party to ensure a HEPA filter is properly installed in a vacuum and able to perform at its rated efficiency. Proficiency test records are to be retained and provided to University of Calgary personnel upon request for review.

HAZARD COMMUNICATION AND HAZARD ASSESSMENT

University of Calgary Personnel:

Proficiency tested HEPA vacuums used to clean-up potential ACM, dust and debris are equipped with strong motors, HEPA filters, and vacuum bags that require periodic changing. All workers must receive training in applicable SWI from their Supervisor, and complete the University Online Asbestos Awareness Training.

This SWI requires the use of a fit tested half face respirator equipped with P100 particulate filters (HEPA). Prior completion of respiratory protective equipment fit testing and training, as per the University's Respiratory Protection Program is required.

REQUIRED TOOLS & EQUIPMENT

- Eye protection
- Disposable coveralls
- Rubber boots or boot covers
- Latex or nitrile gloves
- Fit tested half-face respirator with P100 particulate filters (HEPA)
- Replacement HEPA filter vacuum bag
- Duct tape
- Damp cloths / wash buckets
    - One set for worker decontamination
    - One set for cleaning and/or removal of visible dust and debris
- Polyethylene drop sheet
- Sealable container and/or 6mil polyethylene bags

SAFE WORK INSTRUCTION
Use and storage of HEPA vacuums

1. Prior to using a HEPA vacuum ensure the filter has been proficiency tested within 6 months. A sticker should be present on the unit identifying the last time it was proficiency tested.

2. Turn on HEPA vacuum to ensure strong suction. If suction is weak check hose for blockages or leaks. If hose is not the cause of poor suction proceed to bag changing instructions or Tag out and report the equipment.

3. Upon completion of work ensure all surfaces of the HEPA vacuum and attachments are free of dust.

4. Seal the end of the hose with duct tape and store attachments in a sealed bag.

Changing HEPA vacuum bags

1. Position barriers and warning signs in the area where access needs to be restricted until the work is complete. Ensure occupants are not in the immediate work area. Set up a wash bucket for worker decontamination with clean water and clean rags within the work area for worker and worker respiratory protective equipment cleaning. An additional wash bucket and rags will be used for cleaning and/or removal of visible dust and debris that may be generated during the work activities.

2. Personal protective equipment must be worn consisting of a half-face respirator with P100 particulate filters (HEPA), disposable coveralls, rubber boots or boot covers, gloves and safety glasses to perform the work.

3. Place a polyethylene drop sheet on the floor.

4. Place HEPA vacuum onto the drop sheet along with the replacement vacuum bag.

5. Disassemble the HEPA vacuum to expose the used vacuum bag.

6. Carefully remove the used vacuum bag and place into a sealable container or 6mil polyethylene bag.

7. Replace with a new vacuum bag and reassemble the HEPA vacuum cleaner.

8. Use the HEPA vacuum cleaner to vacuum and/or cleaning rags to remove any dust and debris from the drop sheet. Cleaning rags may be discarded as regular waste.

9. The drop sheet may be discarded as regular waste or used at the next location.

10. Before leaving the work area:
    a. While still wearing the half-face respirator, remove disposable coveralls, boot covers (if rubber boots not worn) and place in a sealable container or 6mil polyethylene bag.
    b. Using the clean water and rags provided wipe rubber boots (if boot covers not worn), half-face respirator, hands, face and any other exposed skin surfaces. Cleaning rags may be discarded as regular waste.
    c. The sealed polyethylene bag must be sealed inside a second 6mil bag.
    d. Rubber boots and half-face respirators should be placed in appropriate bags and sealed for transport.

11. Remove barriers and warning signs from the work area.

12. Sealable containers or 6mil polyethylene bags should be sealed and labeled as follows for disposal as asbestos waste:

CAUTION ASBESTOS WASTE
Keep Sealed
Avoid Making Dust
Breathing Asbestos Fibres May Cause Serious Bodily Harm

TRANSPORT & DISPOSAL

Asbestos waste generated as a result of activities will be disposed of by External Asbestos Abatement Contractors as arranged through Facilities.