M-16 Remove Asbestos-Containing Flexible Duct Connector

Pre-Job Checklist:

1. Obtain WSU Asbestos Maintenance Work Authorization Form from foreman or the Environmental Safety Office ext. 8004
2. Obtain necessary tools
   - Utility knife
   - Ground Fault interrupters (GFCI) to be used if work Is to performed where water might be in use or present in the work area
   - Lockout Tags
   - Ladder or Scaffolding
   - Wet Wipes or Bucket with clean water for wet wiping
   - Polyethylene sheeting
   - Duct tape
   - Disposal bags with labels
   - High efficiency particulate air (HEPA) vacuum
   - Asbestos barrier tape
   - Garden sprayer with amended water
   - Garden sprayer with encapsulant
   - Warning signs
   - Scraper 2-3" stiff blade
   - Stiff nylon bristle brush
   - Manual or power screwdriver with screwdriver bit and hex head socket
3. Obtain personal protective equipment specified on Authorisation Form, may include:
   - Respiratory Protection with HEPA filters (PAPR or Half face Negative Pressure)
   - Disposable Coveralls
   - Disposable towels or wet wipes for decontamination
   - Safety glasses

Work Practices

1. Lockout any equipment or lines to be worked on
2. Shut down and lockout HVAC system for the work area
3. Prepare work area with drop cloth or erect mini-enclosure and set up negative pressure system (Determined on Asbestos Work Authorization Form)
4. Apply critical barriers in ductwork of HVAC unit adjacent to both sides of connector to be removed.
5. Place tools, equipment, and materials into work area
6. Use sprayer to wet connector with amended water or removal encapsulant
Remove Flexible Duct Connector continued

7. Unscrew all screws holding flexible connector in place. Place screws into disposal bag if they will not be reused. Clean screws with water and nylon brush if they are to be reused.
8. Rewet connector and metal flanges of flexible connector and slide off of ductwork. Pull connector out of space and package as ACM.
9. HEPA vacuum and wet wipe all surfaces where flanges were attached and interior of ducts at both sides of the connector.
10. Remove critical barriers installed and place into disposal bag
11. Perform any maintenance work needed
12. HEPA vacuum or wet wipe inside of mini-enclosure or drop cloth
13. Decontaminate tools/protective clothing by HEPA vacuuming and/or wet wiping, and place disposable materials in disposal bags
14. Tear down mini-enclosure and place in disposal bags (if mini-enclosure is needed)
15. Remove lockout tags and restart HVAC

Post Job Checklist

1. Make sure all waste is in disposal bags and is labeled properly
2. Obtain WSU Asbestos Work Evaluation Form
M-17 Remove Asbestos-Containing Flexible Ductwork Taping Cloth

Pre-Job Checklist:

1. Obtain WSU Asbestos Maintenance Work Authorization Form from foreman or the Environmental Safety Office ext 8004
2. Obtain necessary tools
   - Utility knife
   - Ground Fault interrupters (GFCI) to be used if work is to performed where water might be in use or present in the work area
   - Lockout Tags
   - Ladder or Scaffolding
   - Wet Wipes or Bucket with clean water for wet wiping
   - Polyethylene sheeting
   - Duct tape
   - Disposal bags with labels
   - High efficiency particulate air (HEPA) vacuum
   - Asbestos barrier tape
   - Garden sprayer with amended water
   - Garden sprayer with encapsulant
   - Warning signs
   - Scraper 2-3" stiff blade
   - Stiff nylon bristle brush
   - Glovebags
3. Obtain personal protective equipment specified on Authorization Form, may include
   - Respiratory Protection with HEPA filters (PAPR or Half face Negative Pressure)
   - Disposable Coveralls
   - Disposable towels or wet wipes for decontamination
   - Safety glasses

Work Practices

1. Lockout any equipment or lines to be worked on
2. Shut down and lockout HVAC system for the work area
3. Prepare work area with drop cloth or erect mini-enclosure and set up negative pressure system (Determined on Asbestos Work Authorization Form)
4. Place tools, equipment, and materials into work area
5. Install glovebag over taping cloth to be removed (Be sure all needed tools are in glovebag pouch before installing).
Remove Taping Cloth continued

6. Insert wand of garden sprayer with ammoniated water into glovebag and adequately wet ACM to be removed.
8. Clean remaining visible debris off ductwork using scraper and nylon brush.
9. HEPA vacuum or wet wipe area where tape was removed.
10. Seal and remove glovebags from ductwork and dispose of as ACM waste
11. Perform any maintenance work needed
12. HEPA vacuum or wet wipe inside of mini-enclosure or drop cloth
13. Decontaminate tools/protective clothing by HEPA vacuuming and/or wet wiping, and place disposable materials in disposal bags
14. Tear down mini-enclosure and place in disposal bags (if mini-enclosure is needed)
15. Remove lockout tags and restart HVAC

Post Job Checklist

1. Make sure all waste is in disposal bags and is labeled properly
2. Obtain WSU Asbestos Work Evaluation Form
M-18 Remove Asbestos-Wrapped Wiring

Pre-Job Checklist:

1. Obtain WSU Asbestos Maintenance Work Authorization Form from foreman or the Environmental Safety Office ext 8004
2. Obtain necessary tools
   - Utility knife
   - Ground Fault interrupters (GFCI) to be used if work is to be performed where water might be in use or present in the work area
   - Lockout Tags
   - Ladder or Scaffolding
   - Wet Wipes or Bucket with clean water for wet wiping
   - Polyethylene sheeting
   - Duct tape
   - Disposal bags with labels
   - High efficiency particulate air (HEPA) vacuum
   - Asbestos barrier tape
   - Garden sprayer with amended water
   - Garden sprayer with encapsulant
   - Warning signs
   - Wire cutters
   - Screwdrivers
   - Voltmeter
   - Soldering iron for soldered connections
3. Obtain personal protective equipment specified on Authorization Form, may include:
   - Respiratory Protection with HEPA filters (PAPR or Half face Negative Pressure)
   - Disposable Coveralls
   - Disposable towels or wet wipes for decontamination
   - Electricians insulated gloves
   - Safety glasses

Work Practices

1. Lockout any equipment or lines to be worked on. Test circuits using voltmeter.
2. Shut down and lockout HVAC system for the work area
3. Prepare work area with drop cloth or erect mini-enclosure and set up negative pressure system (Determined on Asbestos Work Authorization Form)
4. Place tools, equipment, and materials into work area
Remove Wiring Continued

5. Put on insulated gloves and cut out exposed wiring to be removed. Roll up wiring and place in disposal bags.
6. Open any junction boxes or equipment as needed to remove wiring back to screw terminals or soldered connections.
7. Disconnect remaining wiring from terminals or connections. Place wiring into disposal bags,
8. HEPA vacuum any surfaces that were in contact with the wiring.
9. HEPA vacuum or wet wipe inside of mini-enclosure or drop cloth
10. Decontaminate tools/protective clothing by HEPA vacuuming and/or wet wiping, and place disposable materials in disposal bags.
11. Tear down mini-enclosure and place in disposal bags
12. Remove lockout tags and restart HVAC

Post Job Checklist

1. Make sure all waste is in disposal bags and is labeled properly
2. Obtain WSU Asbestos Work Evaluation Form
M-19 Replace Asbestos-Containing Gaskets

Pre-Job Checklist:

1. Obtain WSU Asbestos Maintenance Work Authorization Form from foreman or the Environmental Safety Office ext. 8004
2. Obtain necessary tools
   Utility knife
   Ground Fault interrupters (GFCI) to be used if work is to performed where water might be in use or present in the work area
   Lockout Tags
   Ladder or Scaffolding
   Wet Wipes or Bucket with clean water for wet wiping
   Polyethylene sheeting
   Duct tape
   Disposal bags with labels
   High efficiency particulate air (HEPA) vacuum
   Asbestos barrier tape
   Garden sprayer with amended water
   Garden sprayer with encapsulant
   Warning signs
   Scraper 2-3"stiff blade
   Stiff nylon bristle brush
   Glovebags
   Tools required to access or remove gaskets
   Non-ACM replacement materials
3. Obtain personal protective equipment specified on Authorization Form, may include:
   Respiratory Protection with HEPA filters (PAPR or Half face Negative Pressure)
   Disposable Coveralls
   Disposable towels or wet wipes for decontamination
   Safety glasses

Work Practices

1. Lockout any equipment or lines to be worked on
2. Shut down and lockout HVAC system for the work area
3. Prepare work area with drop cloth or erect mini-enclosure and set up negative pressure system (Determined on Asbestos Work Authorization Form)
4. Place tools, equipment, and materials into work area
5. Enter work area and dissemble equipment needed to expose entire gasket
Replace Gasket continued

6. Remove gasket using one of the following procedures
   A. If entire gasket can be contained in a glovebag, install glovebag over gasket.
      Be sure all needed tools are in glovebag pouch before installing.
      Adequately wet gasket and debris with wand of sprayer inserted into
      glovebag. Remove gasket and place in the bottom of the glovebag. Use
      nylon brushes to clean surfaces where gasket was attached. Wet wipe
      interior of glovebag, seal off, and remove glovebag from gasket area.

   B. If gasket cannot be contained in a glovebag, adequately wet gasket, set up
      HEPA filtered local exhaust ventilation, and remove gasket and debris.
      Use nylon brushes and scraper to clean surfaces to which gasket was
      attached.

7. HEPA vacuum or wet wipe area where gasket was removed.
8. Install new gasket and reassemble equipment to which gasket was attached.
9. Perform any maintenance work that is needed
10. HEPA vacuum or wet wipe inside of mini-enclosure or drop cloth
11. Decontaminate tools/protective clothing by HEPA vacuuming and/or wet wiping, and
    place disposable materials in disposal bags
12. Tear down mini-enclosure and place in disposal bags (if mini-enclosure is needed)
13. Remove lockout tags and restart HVAC

Post Job Checklist

1. Make sure all waste is in disposal bags and is labeled properly
2. Obtain WSU Asbestos Work Evaluation Form
M-20 Emptying or Changing Filter in a HEPA Vacuum

Pre-Job Checklist:

1. Obtain WSU Asbestos Maintenance Work Authorization Form from foreman or the Environmental Safety Office ext. 8004
2. Obtain necessary tools
   - Utility knife
   - Ground Fault interrupters (GFCI) to be used if work is to performed where water might be in use or present in the work area
   - Lockout Tags
   - Ladder or Scaffolding
   - Wet Wipes or Bucket with clean water for wet wiping
   - Polyethylene sheeting
   - Duct tape
   - Disposal bags with labels
   - High efficiency particulate air (HEPA) vacuum
   - Asbestos barrier tape
   - Garden sprayer with amended water
   - Garden sprayer with encapsulant
   - Warning signs
   - Manufacturer's instructions for unit having filter or bag replaced
   - Tools needed to remove filter or bag
   - Replacement filters or bags
3. Obtain personal protective equipment specified on Authorization Form, may include:
   - Respiratory Protection with HEPA filters (PAPR or Half face Negative Pressure)
   - Disposable Coveralls
   - Disposable towels or wet wipes for decontamination

Work Practices

1. Prepare work area with drop cloth and erect mini-enclosure and set up negative pressure system
2. Place tools, equipment, and materials into work area. If available include an operable HEPA vacuum for cleaning up any dust or debris from filter change
3. Enter enclosure and carefully dissemble the unit as needed to access filter or bag.
   - Adequately wet filter and/or bag, remove from unit and place into disposal bag
4. Adequately wet any remaining debris. Pick up any debris or empty debris into disposal bag
Emptying and Changing Filter Continued

5. Using operable HEPA vacuum or wet wiping, clean area where filter or bag was installed
6. Install new filter and/or bag in unit, and reassemble unit
7. HEPA vacuum or wet wipe inside of mini-enclosure or drop cloth
8. Decontaminate tools/protective clothing by HEPA vacuuming and/or wet wiping, and place disposable materials in disposal bags
9. Tear down mini-enclosure and place in disposal bags (if mini-enclosure is needed)

Post Job Checklist

1. Make sure all waste is in disposal bags and is labeled properly
2. Obtain WSU Asbestos Work Evaluation Form
M-21 Removal of Contaminated Filters in HVAC Unit

Pre-Job Checklist;
1. Obtain WSU Asbestos Maintenance Work Authorization Form from foreman or the 
   Environmental Safety office ext. 8004
2. Obtain necessary tools
   Utility knife
   Ground Fault interrupters (GFCI) to be used if work is to performed where water 
   might be in use or present in the work area
   Lockout Tags
   Wet Wipes or Bucket with clean water for wet wiping
   Polyethylene sheeting
   Duct tape
   Disposal bags with labels
   Wet/Dry type High, efficiency particulate air (HEPA) vacuum
   Asbestos barrier tape
   Garden sprayer with amended water
   Garden sprayer with encapsulant
   Warning signs
   Scraper 2-3" stiff wide blade
   Stiff nylon bristle brush
   Replacement filter material
3. Obtain personal protective equipment specified on Authorization Form, may include:
   Respiratory Protection with HEPA filters (PAPR or Half face Negative Pressure)
   Disposable Coveralls
   Disposable towels or wet wipes for decontamination
   Safety Glasses

Work Practices
1. Prepare work area with barrier tape and drop cloth
2. Place tools, equipment, and materials in work area
3. Adequately wet filters to be removed
4. Remove filters and dispose of as ACM. Cut away any exposed portions of roll type 
   filters, wrap in polyethylene sheet, and dispose of as ACM.
5. Wet any debris or dust on drop cloth and dispose of as ACM
6. Clean affected area with HEPA vacuum
7. Decontaminate tools/protective clothing by HEPA vacuuming and/or wet wiping, and 
   place disposable materials in disposal bags
8. Remove barrier tape

Post-Job Checklist
1. Make sure all waste is in disposal bags and is labeled properly
2. Obtain WSU Asbestos Work Evaluation Form