

# Proposed Planned Maintenance Start-up and Shutdown Activities List

Please review the following list of proposed industry-specific non-MSS/MSS activities and provide technical justification for your suggestions:

- Activities that should be added to the list
- Activities that should be removed from the list
- Activities that should be re-categorized
- Any other suggestions for the list

Technical justification could include the following (the more details, the better):

- Is it predictable?
- What is the frequency?
- What are the pollutants and quantities emitted?
- How should the activity be authorized?
- How can you demonstrate compliance?
- How is the activity unique from production?

## Foam

- Polyurethane
  - Non-MSS
    - Tank Loading
    - Production equipment leak fugitives: piping, pumps, valves, flanges, etc.
  - Possibly MSS
    - Filter replacements on process baghouses or cartridge filters
  - MSS
    - Fugitive component repair, replacement, and leaks (piping, pumps, valves, flanges, etc.)
    - Tank degassing
    - Operations with oxidizer (catalytic and/or thermal) bypassed for oxidizer maintenance
    - Oxidizer startup and shutdown
- Extruded Polyethylene
  - Non-MSS
    - Solid material handling
    - Production equipment leak fugitives: piping, pumps, valves, flanges, etc.
  - Possibly MSS
    - Filter replacements on process baghouses or cartridge filters
  - MSS
    - Fugitive component repair, replacement, and leaks (piping, pumps, valves, flanges, etc.)

- Operations with oxidizer (catalytic and/or thermal) bypassed for oxidizer maintenance
- Oxidizer startup and shutdown
- Extruded Polystyrene
  - Non-MSS
    - Solid material handling
    - Production equipment leak fugitives: piping, pumps, valves, flanges, etc.
  - Possibly MSS
    - Filter replacements on process baghouses or cartridge filters
  - MSS
    - Fugitive component repair, replacement, and leaks (piping, pumps, valves, flanges, etc.)
    - Operations with oxidizer (catalytic and/or thermal) bypassed for oxidizer maintenance
    - Oxidizer startup and shutdown
- Expanded Polystyrene (EPS)
  - Non-MSS
    - Bead material handling
    - Production equipment leak fugitives: piping, pumps, valves, flanges, etc.
  - Possibly MSS
    - Filter replacements on process baghouses or cartridge filters
  - MSS
    - Fugitive component repair, replacement, and leaks (piping, pumps, valves, flanges, etc.)
    - Operations with oxidizer (catalytic and/or thermal) bypassed for oxidizer maintenance
    - Oxidizer startup and shutdown

## **Printing**

- Non-MSS
  - Line flushing
  - Spill cleanup
  - Collection and storage of waste inks and solvents
  - Roller cleaning (on-press and off-press)
  - Blanket wash
  - Parts washers
  - Ink/Solvent Storage
  - Distillation/Solvent still
- Possibly MSS
  - Baghouse/dust collector maintenance (trimming/hole punching operations)

- MSS
  - Operations with oxidizer (catalytic and/or thermal) bypassed for oxidizer maintenance
  - Oxidizer startup and shutdown

### **Fiber Reinforced Plastics and Cultured Marble**

- Non-MSS
  - Tank Loading
  - Production equipment leak fugitives: piping, pumps, valves, flanges, etc.
  - Line flushing
  - Collection and storage of waste coatings and solvents
  - Spill cleanup
  - Resin application equipment cleanup
- Possibly MSS
  - Filter replacements on process baghouses or cartridge filters
  - Trim/grind booth and spray booth filter replacement
  - Cleanup of overspray on surfaces
  - Cleaning of booth plenums and the interior of stacks
- MSS
  - Tank degassing
  - Fugitive component repair, replacement, and leaks (piping, pumps, valves, flanges, etc.)
  - Operations with oxidizer (catalytic and/or thermal) bypassed for oxidizer maintenance
  - Oxidizer startup and shutdown

### **Coating and Ink Manufacturing**

- Non-MSS
  - Tank Loading
  - Equipment cleanup
  - Spill cleanup
  - Distillation/Solvent still
  - Collection and storage of waste coatings and solvents
  - Production equipment leak fugitives: piping, pumps, valves, flanges, etc.
- Possibly MSS
  - Filter replacements on process baghouses or cartridge filters
  - Replacement of filters on bulk solids silos or hoppers
- MSS
  - Fugitive component repair, replacement, and leaks (piping, pumps, valves, flanges, etc.)
  - Tank degassing
  - Oxidizer startup and shutdown
  - Operations with oxidizer (catalytic and/or thermal) bypassed for oxidizer maintenance

## **Degreasing/Solvent Cleaners**

- Non-MSS
  - Collection and storage of waste solvents
  - Agitation
  - Pumping - pump
  - Compressed air - air compressor
  - Vertical motion - motor
  - Ultrasonic vibration
  - Spill Cleanup
  - Activate condenser cooling system and check to ensure that it is operating properly
  - Activate, where provided, any auxiliary emission control equipment
  - Check and adjust solvent levels in all compartments
  - Activate heaters
  - Wait until stable vapor blanket has been established before activating spray pumps
  - Wait until stable vapor blanket has been established before introducing work into the unit
  - Stop work processing and clear the machine of all work
  - Deactivate the heaters
  - Activate sump cooling coils, if available
  - Allow vapor blanket to collapse completely
  - Keep the condenser cooling system on
  - Close cover on open-top units
- Possibly MSS
  - None
- MSS
  - Repair solvent leaks

## **Semiconductors and Electronics**

- Non-MSS
  - Tank Loading
  - Collection and storage of waste material
  - Production equipment leak fugitives: piping, pumps, valves, flanges, etc.
  - Spill cleanup
  - Emergency generators
  - Fire pumps
- Possibly MSS
  - Boilers

- MSS
  - Operations with oxidizer (catalytic and/or thermal) bypassed for oxidizer maintenance
  - Oxidizer startup and shutdown
  - Operations with scrubbers (acid and/or NH<sub>3</sub>) bypassed for scrubber maintenance
  - Operations with rotor concentrator bypassed for concentrator maintenance
  - Tank degassing
  - Fugitive component repair, replacement, and leaks (piping, pumps, valves, flanges, etc.)

### **Outdoor Painting**

- Non-MSS
  - Line flushing
  - Coating application equipment cleanup
  - Collection and storage of waste coatings and solvents
  - Spill cleanup
- Possibly MSS
  - None
- MSS
  - None

### **Enclosed Painting**

- Non-MSS
  - Production equipment leak fugitives: piping, pumps, valves, flanges, etc.
  - Distillation/Solvent still
  - Coating application equipment cleanup
  - Line flushing
  - Collection and storage of waste coatings and solvents
  - Spill cleanup
- Possibly MSS
  - Cleanup of overspray on surfaces
  - Booth filter replacement
  - Cleaning of booth plenums and the interior of stacks
- MSS
  - Operations with oxidizer (catalytic and/or thermal) bypassed for oxidizer maintenance
  - Fugitive component repair, replacement, and leaks (piping, pumps, valves, flanges, etc.)
  - Oxidizer startup and shutdown

## **Abrasive Blasting**

- Enclosed Abrasive Blasting
  - Non-MSS
    - Cleanup of media in booth
    - Addition of media to the blast system - recirculating grit
    - Filling blast pots or hoppers
    - Filling of media storage silos
    - Disposal of spent media
  - Possibly MSS
    - Filter replacements on process baghouses or cartridge filters
    - Replacement of filters on bulk solids silos or hoppers
  - MSS
- Non - Enclosed Abrasive Blasting
  - Non-MSS
    - Filling of media storage silos
    - Filling blast pots or hoppers
    - Cleanup of spent media within shrouds
    - Disposal of spent media
  - Possibly MSS
    - Replacement of filters on bulk solids silos or hoppers.
- MSS
  - None

## **Miscellaneous**

- Non-MSS
  - Heat cleaning oven
  - Combustion of sander dust in boilers
  - Collection, storage and processing of off-spec and scrap material
- Possibly MSS
  - Boilers used as a control device
- MSS
  - Operation with ad/absorption system bypassed - system down for maintenance

## **General Facility Maintenance**

- Organic chemical usage - lubricants, cleaners, solvents etc.
- Application of lubricants (including greases and oils) without aerosol propellants other than air and/or nitrogen, for maintaining equipment and other facilities
- Application of aerosol-propelled organic liquids using hand-held devices for maintaining equipment and other facilities where usage is no more than four aerosol cans or 64 ounces per day on a 12-month rolling average basis
- Parts cleaning using cold solvent or remote reservoir cleaners

**TCEQ- (Revised 06/2012) Proposed Planned Maintenance Start-up and Shutdown Activities List**  
This form is for use by facilities subject to air quality permit requirements and may be revised periodically.

- Inspection, repair, replacement, adjusting, testing, calibration of process instruments or monitors
- Application of argon, ethane, helium, hydrogen, methane, neon, nitrogen, and propane for testing, purging, and leak checking of equipment
- Soldering, Brazing, and welding
- Routine Maintenance, Start-up and Shutdown of Facilities, and Temporary Maintenance Facilities
- Hand-held and Manually Operated Machines
- Modular, Self-contained Abrasive Blasting Cabinets (Parts Cleaning)
- Office Equipment
- Aerosol can recycling puncturing and/or crushing equipment limited to 40 aerosol cans per day (24 hours) at the site and only operated with a covered waste storage container
- Manual application of cleaning or stripping solutions or coatings. Manual application includes application using brushes, cloth, pads, sponges, droppers, tube dispensing equipment, or spray bottles and pump-up sprayers without aerosol propellants
- Blast cleaning equipment using only water as the cleaning media
- Equipment used exclusively for steam cleaning of fabrics, plastics, rubber, wood, or vehicle engines or drive trains
- Cleaning and stripping solvents, 50 gallons per year
- Water-based surfactants/detergents, 2,500 gallons per year
- Application of aqueous detergents, surfactants, and other cleaning solutions containing not more than one percent of any organic compound by weight or containing not more than five percent of any organic compound with a vapor pressure less than 0.002 pounds per square inch absolute
- Comfort air conditioning systems or comfort ventilating systems which are not used to remove air contaminants generated by or released from specific units of equipment

### **De Minimis MSS Activities**

- Office Equipment
- Modular, Self-contained Abrasive Blasting Cabinets (Parts Cleaning)
- Equipment used for hydraulic or hydrostatic testing
- Water Treatment System Maintenance
- Aerosol can recycling puncturing and/or crushing equipment limited to 40 aerosol cans per day (24 hours) at the site and only operated with a covered waste storage container
- Application of lubricants (including greases and oils) without aerosol propellants other than air and/or nitrogen, for maintaining equipment and other facilities
- Manual application of cleaning or stripping solutions or coatings. Manual application includes application using brushes, cloth, pads, sponges, droppers, tube dispensing equipment, or spray bottles and pump-up sprayers without aerosol propellants

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- Application of aerosol-propelled organic liquids using hand-held devices for maintaining equipment and other facilities where usage is no more than four aerosol cans or 64 ounces per day on a 12-month rolling average basis
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- Equipment used exclusively for steam cleaning of fabrics, plastics, rubber, wood, or vehicle engines or drive trains
- Comfort air conditioning systems or comfort ventilating systems which are not used to remove air contaminants generated by or released from specific units of equipment
- Application of argon, ethane, helium, hydrogen, methane, neon, nitrogen, and propane for testing, purging, and leak checking of equipment
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