

## VENTILATION CONTROL CHECKPOINTS

### Overall Plan

1. Is the system's control area or process identified?
2. Are all the significant contaminant sources in the subject area (or process) to be ventilated?
3. Have all suspect contaminant sources been evaluated for ventilation need?
4. Is the system being designed by a competent engineer, consultant or contractor?
5. Are there provisions to replace the air to be exhausted?

### Specific Design

6. Are the exhaust hoods selected or designed to control the specific contaminant sources and operating conditions?
7. Are the specified exhaust air volumes adequate for the contaminant and the specified hood?
8. Do the duct layout and specifications call for low-loss elbows, branch duct connections and straight flow connections to the fan?
9. Will the system be handling particulates (dust)? If so:
  1. Is the air velocity in the ducts specified to prevent dust settling?
  2. Are duct clean-out doors specified?
  3. Are sturdy duct hangers specified?
10. Will the system, or any hood, be exhausting moist, dusty air? If so:
  1. Are special precautions being taken to prevent plugging?
  2. Are special clean-out provisions made?
  3. Will duct hangers carry the load of a plugged duct?
11. Is the construction material specified for the hoods and ducts suitable for the service?
12. Will the hoods and ducts be located or protected to minimize damage?
13. Will an air cleaning device be necessary?
14. Will the exhaust fan be located on the clean air side of the air cleaner?
15. Will a filter gage or other permanent air flow gage be appropriate?
16. Is the exhaust fan specified for industrial service?
17. Are belt guards needed? Are they specified?



18. Will the system discharge point (stack outlet) be located to allow the exhaust air to flow away from the building and nearby building?
19. Will special structures or utility changes be required?
20. Has the system or fan noise been considered?

### **Installation**

21. Is an Air Use Permit required before construction? (MDEQ)
22. Is a Water Discharge Permit required before construction? (MDEQ)
23. Are critical supply parts of the system identified for early ordering?
24. Has a completion date been specified?
25. Will a special schedule be necessary for installation?
26. Will installation require interruption of existing control ventilation?

### **Start-up and Acceptance**

27. Does the actual construction and installation match the design?
28. Are necessary Air-Water operating permits obtained?
29. Has the system been tested, adjusted and balanced as necessary to provide design air volumes at all exhaust hoods -- also reference static pressure tests?
30. Have tests been made to determine if health limits are met?
31. Are the test data (#3 and #4) and operating instructions recorded for future use?

### **Preventive Maintenance**

32. Are fan bearings lubricated and belts adjusted regularly (written instructions, schedule and log) including proper fan rotation after motor replacement?
33. Is the collector cleaned and serviced regularly?
34. Are damaged/broken/corroded hoods and ducts repaired or replaced?
35. Are ducts, hoods, fan blades, etc., cleaned as shown necessary?
36. Are static pressure tests made regularly and compared with start-up and acceptance tests?

**NOTE:** This checklist is neither all inclusive nor always appropriate; it is offered as a guide to the less experienced industrial ventilation owner, designer or user. The Consultation Education and Training Division attempts to provide all citizens with answers to their direct questions pertaining to specific occupational health hazards and control plant.

Michigan Department of Labor and Economic Opportunity, Consultation Education and Training Division. Telephone: (517) 284-7720.