

## Example Packed Bed Wet Scrubber Agency Operation & Maintenance Plan

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Facility:

EIQ Number:

Emission Unit:

Emission Point:

Control Equipment: Packed Bed Wet Scrubbers (2 in series)

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### **Monitoring Guidelines**

The facility makes a commitment to take timely corrective action during periods of excursion where the indicators are out of range. A corrective action may include an investigation of the reason for the excursion, evaluation of the situation and necessary follow-up action to return operation within the indicator range. An excursion is determined by the averaged discrete data point over a period of time, or the presence of a monitored abnormal condition. An excursion does not necessarily indicate a violation of an applicable requirement. If the corrective action measures fail to return the indicators to the appropriate range, the facility will report the excursion to the department and conduct source testing within 90 days of the excursion to demonstrate compliance with applicable requirements. If the test demonstrates compliance with emission limits then new indicator ranges must be set for monitoring and the new ranges must be incorporated in the operating permit. If the test demonstrates noncompliance with emission limits, then the facility, within 60 days, proposes a schedule to implement corrective action to bring the source into compliance and demonstrate compliance.

### **Monitoring Methods & Corrective Actions**

#### **General**

- Periodic Monitoring is not required during periods of time greater than one day in which the source does not operate.
- The appropriate measures and/or action plan for remediation, if pressure drop levels are occurring outside the normal operating range, are:
  - Either the control equipment causing the problem shall be repaired in an expeditious manner, or the process generating the emissions shall be shutdown within a reasonable period of time.
- An expeditious manner is the time necessary to determine the cause of the problem and to correct it within a reasonable period of time.
- A reasonable period of time is eight hours plus the period of time required to shut down the process without damaging the process equipment or control equipment.

### **Daily**

- Check and document the pressure drop across the scrubber. If the pressure drop falls out of the normal operating range, *to be specified by the facility*, corrective action will be taken within 8 hours to return the pressure drop to normal.
- Conduct observations of the stack and areas adjacent to the stack to determine if droplet reentrainment is occurring from an improperly operating mist eliminator. The signs of droplet reentrainment may include fallout of solid-containing droplets, discoloration of the stack and adjacent surfaces, or a mud lip around the stack. If droplet reentrainment is occurring, the appropriate measures for remediation will be implemented within eight (8) hours.

### **Weekly**

- Check liquid pressure gauges on supply headers to the scrubber to monitor for problems such as nozzle pluggage, header pluggage, and nozzle erosion. Pluggage problems are indicated by higher than normal pressures and erosion problems are indicated by less than normal pressures. If the liquid pressure is out of the normal operating range, *to be specified by the facility*, corrective action will be taken within eight (8) hours to return the pressure to normal.

### **Quarterly**

- Conduct a walk-around inspection of the entire system to search for leaks. If leaks in the system are detected, the appropriate measures for remediation will be implemented within eight (8) hours.

### **Semi-annually**

- Conduct an internal inspection of the scrubber to search for signs of :
  1. corrosion and erosion
  2. solids deposits in packed beds or tray orifices
  3. solids accumulation in mist eliminators
  4. Plugged or eroded spray nozzlesIf any of these conditions exist the appropriate measures for remediation will be implemented within eight (8) hours.

### **Record Keeping**

The following records shall be maintained on-site for five (5) years and available for inspection upon request by representatives of the Department of Natural Resources:

1. Maintain a record of all inspections and any action resulting from the inspection.
2. Maintenance and inspection records.

### **Quality Control**

- All instruments and control equipment will be calibrated, maintained, and operated according to the manufactures specifications.

Authority for Requirement: 567 IAC 22.108(3)"b"