

Vermont Air Quality & Climate Division

O&M Plan Guideline



The Operation, Inspection and Maintenance (also called O&M) Plan required by the Vermont Air Quality & Climate Division is a description of the work practices which ensure that potential sources of air pollution, and the associated emission control equipment, are being properly maintained. A properly developed and implemented O&M Plan helps ensure that excess emissions are unlikely to occur and demonstrates that a facility is committed to detecting and correcting air pollution related problems in a timely manner. The Plan also provides an information resource for employees when a problem occurs.

The Division considers the plan to be a “working document” subject to occasional revision. The plan should be dated, and the use of a revision numbering system is recommended.

The following pages contain an outline of the information the Vermont Air Quality & Climate Division expects to find in an O&M Plan submitted to meet permit or other regulatory requirements. The outline is general in nature because each plan is unique: it is developed to meet the needs of that specific facility. The order of the items is optional. The Division may determine, on a case-by-case basis, that additional data is required for some processes.

When referencing a contact person, please provide the job position or title of that individual. Due to personnel turnover, a list consisting solely of people’s names can become obsolete relatively quickly.

Please note that there are a number of requirements that apply specifically to a Continuous Emissions Monitoring System (CEMS/COMS) that are not mentioned in this guideline. If you are using this monitoring equipment please contact the Division to obtain further information.

Questions and requests for further information about O&M plans and process monitoring should be directed to:

Enforcement Section
Air Quality & Climate Division
Davis Building - 2nd Floor
One National Life Drive
Montpelier, VT 05620-3802

Phone: 802-828-1288

Vermont AQCD -- O&M Plan Guideline

- I. Facility Description
 1. Provide a general description of the facility, mailing address, phone numbers, etc.
 2. Describe in additional detail each process covered by the O&M plan. This includes process equipment and any associated air pollution control devices. Summarize what the process does and what the significant air pollution emissions are. Include diagrams or schematics if helpful.

- II. General Contact Persons
 1. Name of primary contact person(s) for general permit or regulatory requirements.
 2. Name of contact persons for equipment maintenance, data collection and reporting.
 3. "Chain-of-command" for contact persons.
 4. Brief explanation of training provided to contact persons related to O&M plan.

- III. Monitoring Parameters
 1. For each process, list the parameters (temperature, pressure, pH, visible emissions, etc.) that will be monitored and the physical location(s) that the measurements will be taken.
 2. Briefly describe the type of instrument that is used to take measurements, such as the manufacturer and principal of operation. Consider including manufacturer's fact-sheets or similar literature as an appendix to the O&M plan.
 3. Specify the monitoring frequency and whether the monitoring will be electronic (computer-based) or be performed manually by facility personnel.
 4. Specify the normal ranges for the parameters being monitored. If the process is new or has not been previously monitored, this will have to be determined during the first few days or weeks of monitored operation and added to the O&M plan.
 5. Provide example pages of checklists, logs, or any other written records that will be used to record the parameters. Place them in this section or in the appendices.

- IV. Inspection and Maintenance
 1. List the routine inspections and maintenance activities that will be performed for each process, including the frequency they are performed. A "process" includes the manufacturing equipment, any emission control devices, and any parameter monitoring instruments.
 2. Provide example pages of checklists, logs, or any other written records that will be used to record the inspection and maintenance activities. Place them in this section or in the appendices. Your equipment manufacturer may have an assortment of checklists and logs already prepared.
 3. List the spare parts inventory (on-site and available for immediate repairs) in this section or in the appendices.

Vermont AQCD -- O&M Plan Guideline

4. List names of manufacturer's representatives or consultants who assist with inspection, maintenance and repair activities.
- V. Emergency or Special Operations
1. Provide a summary of the common or expected malfunctions for each process. Briefly describe how they are determined to exist and how long it takes to perform a safe process shut-down/restart or other corrective actions.
 2. List the name(s) of those persons who detect or determine if an emergency exists and those who are responsible for taking corrective action.
 3. Include the procedure that will be used to notify the Division of malfunctions where applicable. Typically, a deadline for such notification is listed in your air pollution control permit.
- VI. Appendices
- Can include manufacturer's literature, copies of checklists or example pages from logbooks, list of outside contractors used for inspection and maintenance work, etc.

Checklists and Logs:

Minimum information in a monitoring parameter checklist for manually recorded parameters would be the process name, parameter monitored, date, reading taken, and initials of the person taking the reading. Minimum information in an inspection and maintenance log would be the process name, inspection or procedure performed, date, results (pass/fail, etc.), initials of the person performing the work, and a reference to any corrective actions taken. Typically, procedures with the same frequency (daily, weekly, etc.) are grouped together on the same checklist.

Generally, records should be kept for five years and made available to the Division upon request. Please refer to your Air Pollution Control permit to determine if any O&M records should be submitted to the Division on a routine basis.

Examples of Monitored Parameters:

- Baghouses: Visible emissions, exhaust pressure differential, temperature, broken bag detector reading, date of last bag changes.
- Wet Scrubbers: Pressure differentials, liquid pH, liquid flow rate, frequency of chemical addition to liquid (pH adjustments, biocide, etc.)
- Carbon Adsorbers: Regeneration frequency, inlet temperature, exhaust VOC concentration.

Vermont AQCD -- O&M Plan Guideline

ESPs:	Voltage, amperage, and spark rate for each field; total power consumption, rapping frequency and duration.
Boilers:	Breech temperature, oil temperature, fuel consumption, fuel sulfur, flue gas O ₂ , emissions (CEMS/COMS or opacity alarm).
Incinerators:	Charge weight, secondary chamber temperature, visible emissions.
Spray Booths:	Face velocity or exhaust pressure differential, date of last filter change, visible emissions.
Diesel Generator:	Fuel consumption, exhaust NO _x concentration, catalyst temperature.