content of each vent stream and a definition of the acceptable operating ranges of key process and control device parameters during the test program.

3.4 Recordkeeping Requirements (264.1035 and 265.1035)

Records must be kept which identify all affected process vents and provide data and information on the annual throughput and operating hours of each affected unit, estimated emission rates for each affected vent, estimated emission rates for the overall facility and the approximate location of each vent within the facility. Information and data on waste determinations, performance test plans, and emission reductions achieved by add-on control devices based on engineering calculations or sources tests must also be maintained. Documentation supporting compliance with the Subpart AA emissions limits must include a list of the references and sources that were used to prepare the documentation. If performance tests are used to demonstrate compliance, all test results must be provided.

Owners or operators using a closed-vent system and/or control device must include a detailed engineering description of the system in the facility operating record. The records must include the manufacturer's name and the model number of each control device, the type of control device, the dimensions of the control device, the capacity, and the construction materials. Records, including the dates of each compliance test must also be kept.

The owner or operator of more than one hazardous waste management unit subject to Subpart AA standards may comply with the recordkeeping requirements for these hazardous waste management units in one recordkeeping system if the system identifies each record by each hazardous waste management unit. All records must be maintained by the owner or operator for at least three years. The records may be kept either in a hard copy format or electronically and the records should be easily accessible during inspections.

Design documentation and monitoring, operating, and inspection information for each closed-vent system and control device required to comply with the provisions of this part must be included and kept up-to-date in the facility operating record. This information must include a description and date of each modification that is made to the closed-vent system or control device design. Identification of each operating parameter, description of each monitoring device, and diagram of each monitoring sensor location is required. Additional information

to be provided include monitoring, operating, inspection information, records of date, time and duration of each period when any monitored parameter exceeds the value established in the control device design analysis.

Information regarding APTI Course 415: Control of Gaseous Emissions and other APTI courses can be obtained at http://www.epa.gov/oar/oaqps/eog/

If engineering calculations are used to support compliance with Subpart AA standards, the calculations should include information such as a design analysis, speculations, drawings, schematics, and piping and instrumentation diagrams based on the appropriate sections of "APTI Course 415: Control of Gaseous Emissions" or other engineering texts acceptable to the Regional Administrator that present basic control device design information. Documentation provided by the control device manufacturer or vendor that describes the control device design should also be kept in the facility records. The design analysis must address the vent stream characteristics and control device operation parameters.

- For a thermal vapor incinerator, the design analysis must consider the vent stream composition, constituent concentrations, and flow rate. The design analysis must also establish the design minimum and average temperature in the combustion zone and the combustion zone residence time.

- For a catalytic vapor incinerator, the design analysis must consider the vent stream composition, constituent concentrations, and flow rate. The design analysis must also establish the design minimum and average temperature across the catalyst bed inlet and outlet.

- For a boiler or process heater, the design analysis must consider the vent stream composition, constituent concentrations and flow rate. The design analysis must also establish the design minimum and average flame zone temperatures, combustion zone residence time, and description of method and location where the vent stream is introduced into the combustion zone.

- For a flare, the design analysis must consider the vent stream composition, constituent concentrations and flow rate. The design analysis must also consider the other design and operating requirements for a flare as specified in 40 CFR 264.1033(d) and 265.1033(d).

- For a condenser, the design analysis must consider the vent stream composition, constituent concentrations, flow rate,

relative humidity and temperature. The design analysis must also establish the design outlet organic compound concentrations, flow rate, relative humidity, and temperature. The design analysis must also establish the design outlet organic compound concentration level, design average temperature of the condenser, exhaust vent stream, and design average temperatures of the coolant fluid at the condenser inlet and outlet.

- For a carbon adsorption system such as a fixed-bed adsorber that regenerates the carbon bed directly onsite in the control device, the design analysis must consider the vent stream composition, constituent concentrations, flow rate, relative humidity, and temperature. The design analysis must also establish the design exhaust vent stream organic compound concentration level, number and capacity of carbon beds, design total steam flow over the period of each complete carbon bed regeneration cycle, duration of the carbon bed steaming and cooling/drying cycles, design carbon bed temperature after regeneration, design carbon bed regeneration time, and design service life of carbon.

- For a carbon adsorption system such as a carbon canister that does not regenerate the carbon bed directly on-site in the control device, the design analysis must consider the vent stream composition, constituent concentrations, flow rate, relative humidity, and temperature. The design analysis must also establish the design outlet organic concentration level, capacity of carbon bed, type and working capacity of activated carbon used for carbon bed, and design carbon replacement interval based on the total carbon working capacity of the control device and source operating schedule.

A statement must be included in the facility operating record that is signed and dated by the owner or operator certifying that the operating parameters used in the design analysis reasonably represent the conditions that exist when the hazardous waste management unit is or would be operating at the highest load or capacity level reasonably expected to occur. Another statement that must be included in the facility operating record, signed and dated by the owner or operator, is a statement certifying that the control devices in use at the facility are designed to operate at an efficiency of 95 percent or greater unless the total organic concentration limit is achieved at an efficiency less than 95 weight percent or the total organic

emission limits for affected process vents at the facility can be attained by a control device involving vapor recovery at an efficiency less than 95 weight percent. A statement provided by the control device manufacturer or vendor certifying that the control equipment meets the design specifications may be used to comply with this requirement.

A detailed description of sampling and monitoring procedures, including sampling and monitoring locations in the system, the equipment to be used, sampling and monitoring frequency and planned analytical procedures for sample analysis must also be included in the operating record.

The owner or operator designating any components of a closed-vent system as unsafe to monitor must record in a log that is kept in the facility operating record the identification of closed-vent system components that are designated as unsafe to monitor, an explanation for each closed-vent system component stating why the closed-vent system component is unsafe to monitor, and the plan for monitoring each closed-vent system component.

When a leak is detected in the closed-vent system, the instrument identification number and the closed-vent system component identification number must be recorded along with the operator name, initials or identification number. The date the leak was repaired, the date of first attempt to repair the leak and the date of successful repair of the leak must also be recorded. The maximum instrument reading measured by Method 21 of 40 CFR part 60, Appendix A after it is successfully repaired or determined to be nonrepairable must also be recorded. If a repair was not completed within 15 calendar days, the reason for delay must be recorded. The owner or operator must have a written procedure that identifies the conditions that justify a delay of repair. In such cases, reasons for delay may be documented by citing the relevant section of the written procedure.