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performance test as specified in §63.1384 for more than 5 percent of the total operating time in a 6-month block reporting period.

- (iii) The owner or operator must operate each scrubber such that each monitored parameter is not outside the limit(s) established during the performance test as specified in §63.1384 for more than 10 percent of the total operating time in a 6-month block reporting period.
- (8)(i) The owner or operator must initiate corrective action within 1 hour when the monitored process parameter level(s) is outside the limit(s) established during the performance test as specified in §63.1384 for the process modification(s) used to control formaldehyde emissions and complete corrective actions in a timely manner according to the procedures in the operations, maintenance, and monitoring plan.
- (ii) The owner or operator must implement a QIP consistent with the compliance assurance monitoring provisions of 40 CFR part 64, subpart D when the process parameter(s) is outside the limit(s) established during the performance test as specified in §63.1384 for more than 5 percent of the total operating time in a 6-month block reporting period.
- (iii) The owner or operator must operate the process modifications such that the monitored process parameter(s) is not outside the limit(s) established during the performance test as specified in §63.1384 for more than 10 percent of the total operating time in a 6-month block reporting period.
- (9) The owner or operator must use a resin in the formulation of binder such that the free-formaldehyde content of the resin used does not exceed the free-formaldehyde range contained in the specification for the resin used during the performance test as specified in § 63.1384.
- (10) The owner or operator must use a binder formulation that does not vary from the specification and operating range established and used during the performance test as specified in \$63.1384. For the purposes of this standard, adding or increasing the quantity of urea and/or lignin in the binder for-

mulation does not constitute a change in the binder formulation.

§ 63.1383 Monitoring requirements.

On and after the date on which the performance test required to be conducted by §§63.7 and 63.1384 is completed, the owner or operator must monitor all affected control equipment and processes according to the following requirements.

- (a) The owner or operator of each wool fiberglass manufacturing facility must prepare for each glass-melting furnace, rotary spin manufacturing line, and flame attenuation manufacturing line subject to the provisions of this subpart, a written operations, maintenance, and monitoring plan. The plan must be submitted to the Administrator for review and approval as part of the application for a part 70 permit. The plan must include the following information:
- (1) Procedures for the proper operation and maintenance of process modifications and add-on control devices used to meet the emission limits in §63.1382:
- (2) Procedures for the proper operation and maintenance of monitoring devices used to determine compliance, including quarterly calibration and certification of accuracy of each monitoring device according to the manufacturers's instructions; and
- (3) Corrective actions to be taken when process parameters or add-on control device parameters deviate from the limit(s) established during initial performance tests.
- (b)(1) Where a baghouse is used to control PM emissions from a glass-melting furnace, the owner or operator shall install, calibrate, maintain, and continuously operate a bag leak detection system.
- (i) The bag leak detection system must be certified by the manufacturer to be capable of detecting PM emissions at concentrations of 10 milligrams per actual cubic meter (0.0044 grains per actual cubic foot) or less.
- (ii) The bag leak detection system sensor must produce output of relative PM emissions.
- (iii) The bag leak detection system must be equipped with an alarm system that will sound automatically

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when an increase in relative PM emissions over a preset level is detected and the alarm must be located such that it can be heard by the appropriate plant personnel.

(iv) For positive pressure fabric filter systems, a bag leak detection system must be installed in each baghouse compartment or cell. If a negative pressure or induced air baghouse is used, the bag leak detection system must be installed downstream of the baghouse. Where multiple bag leak detection systems are required (for either type of baghouse), the system instrumentation and alarm may be shared among the monitors.

(v) A triboelectric bag leak detection system shall be installed, operated, adjusted, and maintained in a manner consistent with the U.S. Environmental Protection Agency guidance, "Fabric Filter Bag Leak Detection Guidance" (EPA-454/R-98-015, September 1997). Other bag leak detection systems shall be installed, operated, adjusted, and maintained in a manner consistent with the manufacturer's written specifications and recommendations.

(vi) Initial adjustment of the system shall, at a minimum, consist of establishing the baseline output by adjusting the range and the averaging period of the device and establishing the alarm set points and the alarm delay time.

(vii) Following the initial adjustment, the owner or operator shall not adjust the range, averaging period, alarm setpoints, or alarm delay time except as detailed in the approved operations, maintenance, and monitoring plan required under paragraph (a) of this section. In no event shall the range be increased by more than 100 percent or decreased more than 50 percent over a 365-day period unless a responsible official as defined in \\$63.2 of the general provisions in subpart A of this part certifies that the baghouse has been inspected and found to be in good operating condition.

(2) The operations, maintenance, and monitoring plan required by paragraph (a) of this section must specify corrective actions to be followed in the event of a bag leak detection system alarm. Example corrective actions that may

be included in the plan include the following:

- (i) Inspecting the baghouse for air leaks, torn or broken bags or filter media, or any other conditions that may cause an increase in emissions.
- (ii) Sealing off defective bags or filter media.
- (iii) Replacing defective bags or filter media, or otherwise repairing the control device.
- (iv) Sealing off a defective baghouse compartment.
- (v) Cleaning the bag leak detection system probe, or otherwise repairing the bag leak detection system.
- (vi) Shutting down the process producing the particulate emissions.
- (c)(1) Where an ESP is used to control PM emissions from a glass-melting furnace, the owner or operator must monitor the ESP according to the procedures in the operations, maintenance, and monitoring plan. (2)The operations, maintenance, and monitoring plan for the ESP must contain the following information:
- (i) The ESP operating parameter(s), such as secondary voltage of each electrical field, to be monitored and the minimum and/or maximum value(s) that will be used to identify any operational problems;
- (ii) A schedule for monitoring the ESP operating parameter(s);
- (iii) Recordkeeping procedures, consistent with the recordkeeping requirements of §63.1386, to show that the ESP operating parameter(s) is within the limit(s) established during the performance test; and
- (iv) Procedures for the proper operation and maintenance of the ESP.
- (d) The owner or operator must measure and record at least once per shift the temperature 46 to 61 centimeters (18 to 24 inches) above the surface of the molten glass in a cold top electric furnace that does not use any add-on controls to control PM emissions.
- (e)(1) Where a glass-melting furnace is operated without an add-on control device to control PM emissions, the owner or operator must monitor the glass-melting furnace according to the procedures in the operations, maintenance, and monitoring plan.
- (2) The operations, maintenance, and monitoring plan for the glass-melting

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furnace must contain the following information:

- (i) The operating parameter(s) to be monitored and the minimum and/or maximum value(s) that will be used to identify any operational problems;
- (ii) A schedule for monitoring the operating parameter(s) of the glass-melting furnace:
- (iii) Recordkeeping procedures, consistent with the recordkeeping requirements of §63.1386, to show that the glass-melting furnace parameter(s) is within the limit(s) established during the performance test; and
- (iv) Procedures for the proper operation and maintenance of the glass-melting furnace.
- (f)(1) The owner or operator of an existing glass-melting furnace equipped with continuous glass pull rate monitors must monitor and record the glass pull rate on an hourly basis. For glass-melting furnaces that are not equipped with continuous glass pull rate monitors, the glass pull rate must be monitored and recorded once per day.
- (2) On any new glass-melting furnace, the owner or operator must install, calibrate, and maintain a continuous glass pull rate monitor that monitors and records on an hourly basis the glass pull rate.
- (g)(1) The owner or operator who uses an incinerator to control formaldehyde emissions from forming or curing shall install, calibrate, maintain, and operate a monitoring device that continuously measures and records the operating temperature in the firebox of each incinerator.
- (2) The owner or operator must inspect each incinerator at least once per year according to the procedures in the operations, maintenance, and monitoring plan. At a minimum, an inspection must include the following:
- (i) Inspect all burners, pilot assemblies, and pilot sensing devices for proper operation and clean pilot sensor, as necessary;
- (ii) Ensure proper adjustment of combustion air and adjust, as necessary;
- (iii) Inspect, when possible, internal structures, for example, baffles, to ensure structural integrity per the design specifications;

- (iv) Inspect dampers, fans, and blowers for proper operation;
- (v) Inspect for proper sealing;
- (vi) Inspect motors for proper operation:
- (vii) Inspect combustion chamber refractory lining and clean and repair/replace lining, as necessary;
- (viii) Inspect incinerator shell for corrosion and/or hot spots;
- (ix) For the burn cycle that follows the inspection, document that the incinerator is operating properly and make any necessary adjustments; and
- (x) Generally observe that the equipment is maintained in good operating condition.
- (xi) Complete all necessary repairs as soon as practicable.
- (h) The owner or operator who uses a wet scrubbing control device to control formaldehyde emissions must install, calibrate, maintain, and operate monitoring devices that continuously monitor and record the gas pressure drop across each scrubber and scrubbing liquid flow rate to each scrubber according to the procedures in the operations, maintenance, and monitoring plan. The pressure drop monitor is to be certified by its manufacturer to be accurate within ±250 pascals (±1 inch water gauge) over its operating range, and the flow rate monitor is to be certified by its manufacturer to be accurate within ±5 percent over its operating range. The owner or operator must also continuously monitor and record the feed rate of any chemical(s) added to the scrubbing liquid.
- (i)(1) The owner or operator who uses process modifications to control formaldehyde emissions must establish a correlation between formaldehyde emissions and a process parameter(s) to be monitored.
- (2) The owner or operator must monitor the established parameter(s) according to the procedures in the operations, maintenance, and monitoring plan.
- (3) The owner or operator must include as part of their operations, maintenance, and monitoring plan the following information:
- (i) Procedures for the proper operation and maintenance of the process;
- (ii) Process parameter(s) to be monitored to demonstrate compliance with

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the applicable emission limits in §63.1382. Examples of process parameters include LOI, binder solids content, and binder application rate;

- (iii) Correlation(s) between process parameter(s) to be monitored and formaldehyde emissions;
- (iv) A schedule for monitoring the process parameter(s); and
- (v) Recordkeeping procedures, consistent with the recordkeeping requirements of §63.1386, to show that the process parameter value(s) established during the performance test is not exceeded.
- (j) The owner or operator must monitor and record the free-formaldehyde content of each resin shipment received and used in the formulation of binder.
- (k) The owner or operator must monitor and record the formulation of each batch of binder used.
- (1) The owner or operator must monitor and record at least once every 8 hours, the product LOI and product density of each bonded wool fiberglass product manufactured.
- (m) For all control device and process operating parameters measured during the initial performance tests, the owners or operators of glass-melting furnaces, rotary spin manufacturing lines or flame attenuation manufacturing lines subject to this subpart may change the limits established during the initial performance tests if additional performance testing is conducted to verify that, at the new control device or process parameter levels, they comply with the applicable emission limits in §63.1382. The owner or operator shall conduct all additional performance tests according to the procedures in this part 63, subpart A and in § 63.1384.

§63.1384 Performance test requirements.

(a) The owner or operator subject to the provisions of this subpart shall conduct a performance test to demonstrate compliance with the applicable emission limits in §63.1382. Compliance is demonstrated when the emission rate of the pollutant is equal to or less than each of the applicable emission limits in §63.1382. The owner or operator shall conduct the performance

test according to the procedures in 40 CFR part 63, subpart A and in this section.

- (1) All monitoring systems and equipment must be installed, operational, and calibrated prior to the performance test.
- (2) Unless a different frequency is specified in this section, the owner or operator must monitor and record process and/or add-on control device parameters at least every 15 minutes during the performance tests. The arithmetic average for each parameter must be calculated using all of the recorded measurements for the parameter.
- (3) During each performance test, the owner or operator must monitor and record the glass pull rate for each glass-melting furnace and, if different, the glass pull rate for each rotary spin manufacturing line and flame attenuation manufacturing line. Record the glass pull rate every 15 minutes during any performance test required by this subpart and determine the arithmetic average of the recorded measurements for each test run and calculate the average of the three test runs.
- (4) The owner or operator shall conduct a performance test for each existing and new glass-melting furnace.
- (5) During the performance test, the owner or operator of a glass-melting furnace controlled by an ESP shall monitor and record the ESP parameter level(s), as specified in the operations, maintenance, and monitoring plan, and establish the minimum and/or maximum value(s) that will be used to demonstrate compliance after the initial performance test.
- (6) During the performance test, the owner or operator of a cold top electric furnace that is not equipped with an add-on control device for PM emissions control, must monitor and record the temperature 46 to 61 centimeters (18 to 24 inches) above the molten glass surface to ensure that the maximum temperature does not exceed 120 °C (250 °F).
- (7) During the performance test, the owner or operator of a glass melting furnace (other than a cold top electric furnace) that is not equipped with an add-on control device for PM emissions control, must monitor and record the furnace parameter level, and establish