

**Appendix C**  
**COMPLIANCE ASSURANCE MONITORING PLAN**

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**Compliance Assurance Monitoring Plan  
Middletown Coke Company**

**Background**

**Emission Unit**

**Description:** Spray Dryer Baghouse Flue Gas Desulfurization (FGD) System

**Operation Identification:** FGD System

**Facility:** Middletown Coke Company, Butler County, Ohio

**Applicable Regulation and Emission Limit**

**Regulation Number:** None

**Pollutant:** SO<sub>2</sub> & Filterable PM/ PM<sub>10</sub>

Emission limits:

Annual Average SO<sub>2</sub> Limit – 1091 tons/yr

3-hour Block Average SO<sub>2</sub> Limit – 300 lbs/hr

Average Filterable PM/PM<sub>10</sub> Limit – 10.7 lbs/hr

Annual Average Filterable PM/PM<sub>10</sub> Limit – 46.9 tons/yr

**Applicable Monitoring Requirements**

None. Propose to use procedures in 40 CFR 60, Appendix B.

**Control Technology**

Spray Dryer

Pulse Jet Baghouse operated under negative pressure

**Monitoring Approach**

	Indicator No. 1	Indicator No. 2
I. Indicator Measurement Approach	SO <sub>2</sub> Concentration SO <sub>2</sub> concentration is measured with a CEMS meeting: 1. 40 CFR 60 Appendix B, Performance Specification (PS): • PS2 – Specification for SO <sub>2</sub> CEMS in Stationary Sources 2. 40 CFR 60, Appendix F: Quality Assurance Procedures.	Pressure Drop Pressure drop across the baghouse is measured continuously by using a magnahelic gage or pressure transducer.
II. Indicator Range	An excursion is defined as 3-hour block average greater than 300 lbs SO <sub>2</sub> /hr; excursions trigger an inspection, corrective action, and reporting, requirement. Excursions do not include periods where the FGD system is being maintained (e.g., atomizer change out in the spray dryer).  SO <sub>2</sub> range (0-200 ppm) Flow Rate range (0-100 ft/sec)	An excursion is defined as a pressure drop greater than 12 or less than 3 in. H <sub>2</sub> O. Excursion triggers an inspection, corrective action, and reporting, requirement.

III. Performance Criteria		
A. Data Representativeness	Probes will be located as described in Performance Specification 2. Representativeness validated by RATA testing.	Pressure taps will be located in the baghouse inlet and outlet plenums to measure overall pressure drop. The gage will have a minimum accuracy of 0.5 in H <sub>2</sub> O.
B. Verification of Operational Status	Daily calibration and observation	Recorded each day
C. QA/QC Practices and Criteria	<ol style="list-style-type: none"> <li>1. Daily Calibration Drift (CD) evaluation (with instrument being adjusted whenever the daily CD exceeds 10% range)</li> <li>2. Quarterly Cylinder Gas Audit (CGA)</li> <li>3. Annual Relative Accuracy Test Audit (RATA)</li> <li>4. Maintenance according to manufacturer's specifications</li> </ol>	<p>Calibrate the pressure gage annually.</p> <p>Maintenance according to manufacturer's specifications.</p>
D. Monitoring Frequency	Continuous	Continuous
E. Data Collection Procedures	SO <sub>2</sub> concentration, flow rate, and mass emission rate recorded automatically in a data acquisition system (DAS).	Record pressure drop every day.
F. Averaging Period	3-hour block, monthly, and annual	None

**I. Rationale for Selection**

Procedures in EPA Performance Specifications, as the basis for NSPS monitoring, are generally acceptable for non-NSPS applications.

Pressure drop is an appropriate indicator of baghouse performance as described in the EPA CAM Technical Guidance Document.

**II. References**

1. 40 CFR 60 Appendix B, Performance Specification (PS):

- PS2- Specification for SO<sub>2</sub> CEMS in Stationary Sources

2. 40 CFR 60, Appendix F: Quality Assurance Procedures

3. U.S. EPA Office of Air Quality Planning and Standards Emission Measurements Center, *Technical Guidance Document: Compliance Assurance Monitoring, Revised Draft*, August 1998.