

MIDDLETOWN COKE COMPANY

MIDDLETOWN, OHIO

WORK PRACTICE CONTROL PLAN

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1. Introduction

The purpose of this Work Practice Control Plan is to comply with the Ohio EPA, Federal EPA, and permit to install (PTI) conditions concerning coke oven emissions for non-recovery coke ovens and to provide guidance for plant personnel.

All contractors and employees of Middletown Coke Company shall follow these guidelines as detailed in this plan.

The Work Practice Control Plan gives a description of the procedures for complying with the requirements.

Preliminary

2. Work practice control plan training requirements 40 CFR 63.306

- 2.1. A list, by job title, of all personnel that are required to be trained and the emission point(s) associated with each job title.

Position	Emission point
Turn Managers	Pushing/Charging, baghouses, Quench towers, and Oven Doors
Machine Operators	Pushing/Charging, baghouses, Quench towers, and Oven Doors
Product Technicians	Pushing/Charging, baghouses, Quench towers, and Oven Doors
Mechanics	Pushing/Charging, baghouses, Quench towers, and Oven Doors
Motor Inspectors	Pushing/Charging, baghouses, Quench towers, and Oven Doors

- 2.2. Outline of the subjects to be covered in the initial and refresher training for each group of personnel.

- a. Basic understanding of baghouse functions and procedures associated with baghouses
- b. Oven inspection prior to pushing and approval for pushing process
- c. Pushing procedures to control emissions
- d. Charging procedures to control emissions
- e. Uptake damper operations and emission control
- f. Door sill cleaning
- g. Quench tower procedures

- 2.3. Statement of the duration of initial training and the duration and frequency of refresher training.

Initial training will be 30 minutes and refresher training will be 30 minutes of classroom/ bulletins completed annually.

- 2.4. Description of the methods to be used at the completion of initial or refresher training to demonstrate and document successful completion of the initial and refresher training.

Successful completion of training will be demonstrated through employee testing and documentation of pass/fail performance. Failure to adequately display a working knowledge of systems and equipment will result in retraining.

Training records for all participants, including managers, will be kept in the MCC employee training documentation system to demonstrate compliance with provisions of the Work Practice Control Plan.

- 2.5. Description of the training method(s) that will be used.

Training will include lectures and written bulletins issued by the Health, Environmental and Safety Department of MCC.

3. Work practice control plan for charging operations 40 CFR 63.306

3.1. Procedures for charging coal into the oven.

After pushing is completed, the coke side door is replaced and door secured with door latching mechanism. The oven uptake dampers automatically open after the Pushing /Charging Machine (PCM) Operator enters coal charge in the computer. The Pushing/Charging Machine Operator uses the PCM computer to deliver coal specifying the tonnage of charge, or if the PCM terminal is not available the Control Room Operator calls for coal using control system terminal.

The PCM screen displays oven uptake positions. The PCM Operator records that the uptake damper is open on the MCC Pushing Report. If coal is sent to PCM from the control system console, the Control Room Operator notifies the PCM Operator that the uptakes are open and PCM Operator records the information on the MCC Pushing Report.

To initiate charging of coal into an oven the charging conveyor is lined up with the oven and then slowly moved towards the back of the oven depositing coal evenly on the bed of the oven. When charging is completed, the charging conveyor is retracted and the door replaced promptly and latched to minimize emissions. The Sill Raker cleans the door sill of any coke, or coal prior to door replacement on the oven.

3.2. Procedures for the capture and control of charging emissions.

To minimize emissions the baghouse hood is stationary over the charging conveyor and operates continuously. The baghouse is turned on and operating before the PCM Operator trams to first oven of sequence to be pushed. Baghouse amp and differential pressure readings are taken during charging and recorded on the MCC Pushing Report.

At the end of charging sequence and prior to moving to next oven the PCM operator verifies on the human machine interface (HMI) screen that uptakes are open. Adjustments are made to oven manual dampers closest to the oven being pushed/charged to maximize oven draft by Product Technician.

3.3. Procedures for cleaning door sill area after charging and before replacing the pusher side door.

The Sill Raker cleans the door sill of any coke, coke breeze, or coal, taking care to wash both corners of the door sill on pushing side of the oven. Debris that builds on the bottom sill plate 6 to 10 inches into the oven that might prevent the door from seating properly is washed off with high pressure water spray.

The Flat Push Hot Car (FPHC) - coke side- uses a high pressure air blower to clean the sill on the coke side before replacing the door.

3.4. Procedures for filling gaps around the door perimeter with sealant material.

The kaowool type fiber material is used to seal sides and top of door when necessary. Strips of kaowool are pressed into crease between door and jamb on both sides of door, and on top of the door on as needed basis. When the PCM has moved to next oven, the

Sill Raker replaces kaowool. The FPHC car operator also applies Kao-wool to the coke side doors as needed.

Preliminary

4. Work practice control plan for pushing operations 40 CFR 63.306

4.1. Procedure for inspection of ovens prior to pushing.

Ovens scheduled for pushing are visually inspected before the start of pushing by opening the pushing side door damper and observing the coke bed. Ultimate responsibility to acknowledge that the ovens are ready to be pushed lies with the Product Technician responsible for the battery and the Operations Turn Manager having a consensus on readiness of ovens to be released for pushing.

Oven must not be pushed unless the visual inspection indicates that there is no smoke in the open space above the coke bed and that there is an unobstructed view of the door on the opposite side of the oven.

4.2. Procedure for pushing.

The multiclone is turned on the FPHC prior to pushing. During pushing operations the multiclone amps and differential pressure are checked. The readings should be as follows:

- Fan Amps – Minimum of ____ (to be determined by compliance testing).
- Differential Pressure – Less Than ____ (to be determined by compliance testing).

During pushing operations the uptake dampers for the ovens being pushed must be open. Differential pressure and fan amps should be recorded at a minimum of once per shift and pressure drop recorded for each push.

Prior of start of pushing the PCM baghouse is turned on by the PCM Operator in the PCM controls. The PCM operator checks and records baghouse readings on the “MCC Pushing Report” during charging. The readings should be as follows:

- Fan amps – range (TBD)
- Differential pressure – from (TBD)

The baghouse operates continuously during the entire pushing/charging cycle.

At the start of sequence of pushing of an oven the charging side of the PCM machine is aligned with the oven. The door is unlatched and lifted with the extractor. With the door on the extractor hooks the PCM is trammed to line-up pushing side of the machine with the oven. During this time the coke side door is removed and the FPHC is positioned against the oven to receive coke.

The pushing ram is extended inside the oven pushing the bed of coke into the FPHC. After the pushing ram has been extracted from the oven the charging side of the machine is lined-up on the oven to start the charging operation. Prior to charging the coal, the coke side door is replaced and latched.

5. Work practice standards for quench water 40 CFR 63.7334(e)

Levels of Total Dissolved Solids (TDS) are monitored on a weekly basis to satisfy the conditions of the permit.

Samples are collected from the quench system return piping and analyzed using standard analytical Method 160.1 in CFR 136.3 for determining total dissolved solids. Results of the analysis are reported to the Quality Manager and forwarded to Manager, Health, Safety & Environmental for recordkeeping.

Concentration of total dissolved solids must not exceed 1,100 milligrams per liter.

Quench make up water is sourced from plant service water. Documentation of conformance requirements is obtained and kept by the Environmental, Health & Safety Department.

Preliminary

6. Work practice standards for baffles 63.7295 (b)(1) through (4)

The quench tower is equipped with baffles that cover 95% of the cross sectional area of the top and water spray washing systems.

The baffles are washed at least once a day (24 hours). Activation of cleaning sprays is achieved from the FPHC by the FPHC Operator, or by designated personnel directly at the pump house controls. After initiating the cleaning cycle, the FPHC Operator notifies the PCM Operator. Occurrences of cleaning are recorded on the MCC Pushing Report by the PCM Operator.

The Baffles are washed during the first pushing/charging sequence of the afternoon turn on all batteries. This procedure is followed even on days when ambient temperature is below 30° F. A relief valve is built into the Spray System to facilitate the draining of pipes after the end of each cycle to prevent lines from freezing at low temperatures.

Quench towers are inspected monthly for damaged or missing baffles by maintenance personnel. All repairs are made within 30 days or otherwise noted. The results of inspections are recorded on Monthly Quench Tower Inspection Reports and submitted to the Manager, Environmental, Health, & Safety for recordkeeping.

7. Work practice standard for door leaks 40 CFR 63.303 (c) (1) and (2)

Every door on the pushing side and coke side is observed after charging to determine if there is a door leak. The Sill Raker, Door Machine Operator and Product Technician are responsible for observing oven doors after an oven is charged to determine if there is a door leak. The following information is communicated to and recorded by the PCM operator on the MCC Pushing Report:

1. If the door was observed.
2. If there was a door leak observed.
3. The time the door leak was observed and corrected.
4. What corrective action was taken to stop the door leak?

If a coke side door leak is observed the main baghouse is operated continuously and the main duct damper for the respective battery with the door leak stays open until the leak is contained, even if pushing/charging operations for this battery have been completed.

The common tunnel is monitored at least once daily to ensure it is operating under negative pressure. This information is recorded continuously by the Control Room Operator.

8. Work practice plan for fugitive pushing emissions 40 cfr 63.7293

Visually inspect each oven prior to pushing by opening the door damper and observing the coke bed.

Do not push the oven unless the visual inspection indicates that there is no smoke in the open space above the coke bed and there is an unobstructed view of the door on the opposite side of the oven.

Preliminary

9. Procedures for daily recording of the performance of plan requirements pertaining to the daily operation of the coke oven battery and its emission control equipment 40 CFR 63.306 (b) (7) (i) (ii) subpart L.

9.1. Procedures for recording the performance of plan requirements

EMISSION UNITS	RECORDING	RECORDKEEPING
Coke oven charging pushing units	Weekly, monthly and quarterly preventative maintenance inspections. Daily parametric monitoring Fan amps (TBD) Differential pressure (TBD) Checks of safety devices.	Recorded daily on the “Daily Environmental Equipment Inspection” sheet.
One hundred non-recovery coke ovens distributed in three batteries identified as AB and C	Daily recording of temperature between 1200-2400° F Ovens maintained at negative pressure. Visual inspections of ovens prior to pushing Observation of doors for correct seating	Is recorded once daily on the Stack Lid Report Is recorded once per day on the “MCC Pushing Report” sheet.
Quench tower Quench	Inspect sides and baffles of tower for damage. 95% of cross sectional area should be covered Samples taken weekly and analyzed for TDS Baffle Wash	Recorded on Monthly ‘Quench Tower inspection Report’ Recorded on weekly quench water analysis report. Recorded daily on the “Quench Tower Baffle Spray” logsheet
Coke Transfer Towers	Daily observations for visible emissions notations	Recorded on “Daily Environmental Equipment Inspection” sheet.

9.2. Procedures for certifying the accuracy of records

1. By affixing their electronic signatures to the Daily Environmental Compliance Report and by signing the MCC Pushing Report the Turn Manager attest that their crew is in compliance with the Work Practice Plan requirements.
2. MCC Pushing Reports are checked for accuracy and certified by Operations Turn Managers.
3. Daily Environmental Equipment Inspection Sheet verified for accuracy and certified by Environmental Health and Safety Manager.
4. Daily washing of baffles recorded on MCC Pushing Report and verified by Operations Turn Managers.
5. Monthly Quench Tower Inspection Report certified by the Environmental Health and Safety Manager.
6. Visible emissions notations from Transfer Towers are verified and certified by the Environmental Health and Safety Manager.

Preliminary

ATTACHMENTS (TO BE DEVELOPED):

1. DAILY ENVIRONMENTAL EQUIPMENT INSPECTION SHEET
2. MONTHLY QUENCH TOWER INSPECTION REPORT
3. STACK LID REPORT
4. MCC PUSHING REPORT

Preliminary