

Appendix A
FORMS

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Ohio Environmental Protection Agency
 Lazarus Government Center
 P.O. Box 1049
 Columbus, Ohio 43216-1049

For EPA Use Only

Application
 Or ID Number _____
 Date Received _____
 Check No. _____ Check ID No. _____
 Check Date _____ Amount _____
 Revenue ID No. _____

- DAPC
- DDAGW
- DHWM
- DSW
- DSIWM
- RTK
- DEFA
- TRI
- _____

GENERAL COVER SHEET

1. Facility Information

Core Place ID _____
 Legal Name Middletown Coke Company
 Alternate Name NA
 Street Address 7014 Hamilton Middletown Road
 City/State/Zip Middletown, OH 45044
 Location _____

 County Butler

2. Owner Information

Owner Name Sun Coke Energy
 Effective Date _____
 Mailing Address Parkside Plaza
 11400 Parkside Drive
 City/State/Zip Knoxville, TN 37934
 Phone Number 865 – 288 5200
 Billing Address Same as Above

 City/State/Zip _____

3. Operator Information

Operator Name Same as Owner

Effective Date

Mailing Address

City/State/Zip

Phone Number

Billing Address

City/State/Zip

4. Division/Program Specific Secondary ID Numbers (for existing facilities only)

DAPC Facility ID

DAPC TRI ID

DDAGW PWS ID

DHWM RCRA ID

DSW NPDES ID

DSIWM Facility ID

RTK RTK ID

Other (_____)

5. Supplemental Information

Primary SIC Code 3312

Primary NAICS Code 324199

D&B D-U-N-S No. 021562483

Lat./Long. 84.4105 W 39.4732 N

Point Description Heat Recovery Coke Plant (100 Ovens)

Section I - General Permit To Install (PTI) Application Information

This section should be filled out for each permit to install (PTI) application. A PTI is required for all air contaminant sources (emissions units) installed or modified after 1/1/74. See the line by line PTI instructions for additional information.

1. State the reason(s) for the application.

- new installation (for which construction has not yet begun)
- initial application for an air contaminant source already installed or under construction
- modification to an existing air contaminant source/facility - List previous PTI number(s) for air contaminant sources included in this application, if applicable, and describe requested modification (attach an additional sheet, if necessary):

reconstruction of an existing air contaminant source/facility. Please explain:

startup of an air contaminant source/facility that has been shutdown for _____ years.

other, please explain: _____

2. Please check the appropriate boxes below. If you check exempt/not subject, explain why.

- not affected subject to Subpart: Y **New Source Performance Standards (NSPS)**
- exempt/not subject - explain below
- unknown

New Source Performance Standards are listed under 40 CFR 60 - Standards of Performance for New Stationary Sources.

- not affected subject to Subpart: _____ **National Emission Standards for Hazardous Air Pollutants (NESHAPS)**
- exempt/not subject - explain below
- unknown

National Emissions Standards for Hazardous Air Pollutants are listed under 40 CFR 61. (These include asbestos, benzene, beryllium, mercury, and vinyl chloride).

- not affected subject to Subpart: L and CCCCC **Maximum Achievable Control Technology (MACT)**
- exempt/not subject - explain below
- unknown

The Maximum Achievable Control Technology standards are listed under 40 CFR 63 and OAC rule 3745-31-28.

- not affected subject to regulation **Prevention of Significant Deterioration (PSD)**
- unknown

These rules are found under OAC rule 3745-31-10 through OAC rule 3745-31-20.

- not affected subject to regulation **Non-Attainment New Source Review**
- unknown

These rules are found under OAC rule 3745-31-21 through OAC rule 3745-31-27.

Please describe any of the above applicable rules and/or exemptions. Identify whether they apply to the entire facility and/or to specific air contaminant sources included in this PTI application (attach additional page if necessary):

Section I - General Permit To Install (PTI) Application Information

3. Do you qualify for permit to install registration status as determined by Ohio Administrative Code(OAC) rule 3745-31-05?

- yes
- no

If yes, are you requesting registration status per OAC rule 3745-31-05?

- yes
- no

4. Is any information included in this application being claimed as a trade secret per Ohio Revised Code (ORC) 3704.08?

WARNING: IF YOU ARE SENDING YOUR PTI APPLICATION ELECTRONICALLY, E-MAIL IS NOT A SECURE METHOD TO TRANSFER DATA. IF YOUR PTI APPLICATION CONTAINS CONFIDENTIAL INFORMATION YOU MAY NOT WANT TO SEND IT USING E-MAIL. OHIO EPA IS NOT RESPONSIBLE FOR ANY BREACH OF SECURITY THAT MAY OCCUR DURING ELECTRONIC TRANSMISSION OF THE E-MAIL.

- yes (A "non-confidential" version must be submitted in order for this application to be deemed complete.)
- no

5. Person to contact for this application:

Delauna Pack Director Corporate Health, Environmental, and Safety
Name Title

Parkside Plaza, 11400 Parkside Drive, Knoxville, TN 37934

Address (Street, City/Township, State and Zip Code)

(865) 288-5200 (865) 288-5280 DPACK@sunocoinc.com
Phone Fax E-mail

6. Authorized Signature: Under OAC rule 3745-31-04, this signature shall constitute personal affirmation that all statements or assertions of fact made in the application are true and complete, comply fully with applicable state requirements, and shall subject the signatory to liability under applicable state laws forbidding false or misleading statements.

Authorized Signature (for facility) Date

Michael J. Thomson, Executive VP and COO
Title

OAC rule 3745-31-04 states that applications for permits to install shall be signed:

- (1) In the case of a corporation, by a principal executive officer of at least the level of vice president, or his duly authorized representative, if such representative is responsible for the overall operation of the facility.
- (2) In the case of a partnership by a general partner.
- (3) In the case of sole proprietorship, by the proprietor, and
- (4) In the case of a municipal, state, federal or other governmental facility, by the principal executive officer, the ranking elected official, or other duly authorized employee.

Section II - Specific Air Contaminant Source Information

REVISED JULY 2008

NOTE: One copy of this section should be filled out for each air contaminant source covered by this PTI application. See the line by line PTI instructions for additional information.

1. Company identification (name for air contaminant source for which you are applying): Paved Roadways and Parking Areas (F001)
2. List all equipment that are part of this air contaminant source: Light, Medium and Heavy Duty Vehicles
3. Air Contaminant Source Installation or Modification Schedule (must be completed regardless of date of installation or modification):

When did/will you begin to install or modify the air contaminant source? (month/year) October 2008

When did/will you begin to operate the air contaminant source? (month/year) December 2009 **OR** after issuance of PTI

4. Emissions Information: The following table requests information needed to determine the applicable requirements and the compliance status of this air contaminant source with those requirements. Suggestions for how to estimate emissions may be found in the instructions to the Emissions Activity Category (EAC) forms required with this application. If you need further assistance, contact your Ohio EPA permit representative.

- If total potential emissions of HAPs or any Air Toxic is greater than 1 ton/yr, fill in the table for that (those) pollutant(s). For all other pollutants, if "Emissions before controls (max), lb/hr" multiplied by 24 hours/day is greater than 10 lb/day, fill in the table for that pollutant.
- If you have no add-on control equipment, "Emissions before controls" will be the same as "Actual emissions"
- Annual emissions should be based on operating 8760 hr/yr unless you are requesting operating restrictions to limit emissions in line # 8 or have described inherent limitations below.
- If you use units other than lb/hr or ton/yr, specify the units used (e.g., gr/dscf, lb/ton charged, lb/MMBtu, ton/12-months).
- Requested Allowable (ton/yr) is often equivalent to Potential to Emit (PTE) as defined in OAC rule 3745-31-01 and OAC rule 3745-77-01.

Pollutant	Emissions before controls (max) (lb/hr)	Actual emissions (lb/hr)	Actual emissions (ton/year)	Requested Allowable (lb/hr)	Requested Allowable (ton/year)
Particulate emissions (PE) (formerly particulate matter, PM)			21.57		21.57
PM ₁₀ (PM < 10 microns in diameter)			4.21		4.21
Sulfur dioxide (SO ₂)					
Nitrogen oxides (NO _x)					
Carbon monoxide (CO)					
Organic compounds (OC)					
Volatile organic compounds (VOC)					
Total HAPs					
Highest single HAP:					
Air Toxics (see instructions):					

Section II - Specific Air Contaminant Source Information

REVISED JULY 2008

Provide your calculations as an attachment and explain how all process variables and emission factors were selected. Note the emissions factor(s) employed and document the origin. Example: AP-42, Table 4.4-3 (8/97); stack test, Method 5, 4/96; mass balance based on MSDS; etc.

5. Does this air contaminant source employ emissions control equipment?

Yes - fill out the applicable information below.

No - proceed to item # 6.

Note: Pollutant abbreviations used below: Particulates = PE; Organic compounds = OC; Sulfur dioxide = SO2; Nitrogen oxides = NOx; Carbon monoxide = CO

Cyclone/Multiclone

Manufacturer: _____ Year installed: _____
What do you call this control equipment: _____
Pollutant(s) controlled: PE OC SO2 NOx CO Other _____
Estimated capture efficiency (%): _____ Basis for efficiency: _____
Design control efficiency (%): _____ Basis for efficiency: _____
Type: Cyclone Multiclone Rotoclone Other _____
 This is the only control equipment on this air contaminant source
If no, this control equipment is: Primary Secondary Parallel
List any other air contaminant sources that are also vented to this control equipment:

Fabric Filter/Baghouse

Manufacturer: _____ Year installed: _____
What do you call this control equipment: _____
Pollutant(s) controlled: PE OC SO2 NOx CO Other _____
Estimated capture efficiency (%): _____ Basis for efficiency: _____
Design control efficiency (%): _____ Basis for efficiency: _____
Operating pressure drop range (inches of water): Minimum: _____ Maximum: _____
Pressure type: Negative pressure Positive pressure
Fabric cleaning mechanism: Reverse air Pulse jet Shaker Other _____
 Lime injection or fabric coating agent used: Type: _____ Feed rate: _____
 This is the only control equipment on this air contaminant source
If no, this control equipment is: Primary Secondary Parallel
List any other air contaminant sources that are also vented to this control equipment:

Wet Scrubber

Manufacturer: _____ Year installed: _____
What do you call this control equipment: _____
Pollutant(s) controlled: PE OC SO2 NOx CO Other _____
Estimated capture efficiency (%): _____ Basis for efficiency: _____
Design control efficiency (%): _____ Basis for efficiency: _____
Type: Spray chamber Packed bed Impingement Venturi Other _____
Operating pressure drop range (inches of water): Minimum: _____ Maximum: _____
pH range for scrubbing liquid: Minimum: _____ Maximum: _____
Scrubbing liquid flow rate (gal/min): _____
Is scrubber liquid recirculated? Yes No
Water supply pressure (psig): _____ NOTE: This item for spray chambers only.
 This is the only control equipment on this air contaminant source
If no, this control equipment is: Primary Secondary Parallel
List any other air contaminant sources that are also vented to this control equipment:

Electrostatic Precipitator

Manufacturer: _____ Year installed: _____
What do you call this control equipment: _____
Pollutant(s) controlled: PE OC SO2 NOx CO Other _____

Estimated capture efficiency (%): _____ Basis for efficiency: _____
Design control efficiency (%): _____ Basis for efficiency: _____
Type: Plate-wire Flat-plate Tubular Wet Other _____
Number of operating fields: _____

This is the only control equipment on this air contaminant source
If no, this control equipment is: Primary Secondary Parallel
List any other air contaminant sources that are also vented to this control equipment:

Concentrator

Manufacturer: _____ Year installed: _____
What do you call this control equipment: _____
Pollutant(s) controlled: PE OC SO₂ NO_x CO Other _____
Estimated capture efficiency (%): _____ Basis for efficiency: _____
Design regeneration cycle time (minutes): _____
Minimum desorption air stream temperature (°F): _____
Rotational rate (revolutions/hour): _____

This is the only control equipment on this air contaminant source
If no, this control equipment is: Primary Secondary Parallel
List any other air contaminant sources that are also vented to this control equipment:

Catalytic Incinerator

Manufacturer: _____ Year installed: _____
What do you call this control equipment: _____
Pollutant(s) controlled: PE OC SO₂ NO_x CO Other _____
Estimated capture efficiency (%): _____ Basis for efficiency: _____
Design control efficiency (%): _____ Basis for efficiency: _____
Minimum inlet gas temperature (°F): _____
Combustion chamber residence time (seconds): _____
Minimum temperature difference (°F) across catalyst during air contaminant source operation: _____

This is the only control equipment on this air contaminant source
If no, this control equipment is: Primary Secondary Parallel
List any other air contaminant sources that are also vented to this control equipment:

Thermal Incinerator/Thermal Oxidizer

Manufacturer: _____ Year installed: _____
What do you call this control equipment: _____
Pollutant(s) controlled: PE OC SO₂ NO_x CO Other _____
Estimated capture efficiency (%): _____ Basis for efficiency: _____
Design control efficiency (%): _____ Basis for efficiency: _____
Minimum operating temperature (°F) and location: _____ (See line by line instructions.)
Combustion chamber residence time (seconds): _____

This is the only control equipment on this air contaminant source
If no, this control equipment is: Primary Secondary Parallel
List any other air contaminant sources that are also vented to this control equipment:

Flare

Manufacturer: _____ Year installed: _____
What do you call this control equipment: _____
Pollutant(s) controlled: PE OC SO₂ NO_x CO Other _____
Estimated capture efficiency (%): _____ Basis for efficiency: _____
Design control efficiency (%): _____ Basis for efficiency: _____
Type: Enclosed Elevated (open)

Ignition device: Electric arc Pilot flame
Flame presence sensor: Yes No
 This is the only control equipment on this air contaminant source

If no, this control equipment is: Primary Secondary Parallel
List any other air contaminant sources that are also vented to this control equipment:

Condenser

Manufacturer: _____ Year installed: _____
What do you call this control equipment: _____
Pollutant(s) controlled: PE OC SO₂ NO_x CO Other _____
Estimated capture efficiency (%): _____ Basis for efficiency: _____
Design control efficiency (%): _____ Basis for efficiency: _____

Type: Indirect contact Direct contact
Maximum exhaust gas temperature (°F) during air contaminant source operation: _____
Coolant type: _____
Design coolant temperature (°F): Minimum _____ Maximum _____
Design coolant flow rate (gpm): _____

This is the only control equipment on this air contaminant source
If no, this control equipment is: Primary Secondary Parallel
List any other air contaminant sources that are also vented to this control equipment:

Carbon Absorber

Manufacturer: _____ Year installed: _____
What do you call this control equipment: _____
Pollutant(s) controlled: PE OC SO₂ NO_x CO Other _____
Estimated capture efficiency (%): _____ Basis for efficiency: _____
Design control efficiency (%): _____ Basis for efficiency: _____

Type: On-site regenerative Disposable
Maximum design outlet organic compound concentration (ppmv): _____
Carbon replacement frequency or regeneration cycle time (specify units): _____
Maximum temperature of the carbon bed, after regeneration (including any cooling cycle): _____

This is the only control equipment on this air contaminant source
If no, this control equipment is: Primary Secondary Parallel
List any other air contaminant sources that are also vented to this control equipment:

Dry Scrubber

Manufacturer: _____ Year installed: _____
What do you call this control equipment: _____
Pollutant(s) controlled: PE OC SO₂ NO_x CO Other _____
Estimated capture efficiency (%): _____ Basis for efficiency: _____
Design control efficiency (%): _____ Basis for efficiency: _____

Reagent(s) used: Type: _____ Injection rate(s): _____
Operating pressure drop range (inches of water): Minimum: _____ Maximum: _____
 This is the only control equipment on this air contaminant source
If no, this control equipment is: Primary Secondary Parallel
List any other air contaminant sources that are also vented to this control equipment:

Paint booth filter

Type: Paper Fiberglass Water curtain Other _____
Design control efficiency (%): _____ Basis for efficiency: _____

Other, describe _____

Manufacturer: _____ Year installed: _____
What do you call this control equipment: _____
Pollutant(s) controlled: PE OC SO₂ NO_x CO Other _____
Estimated capture efficiency (%): _____ Basis for efficiency: _____
Design control efficiency (%): _____ Basis for efficiency: _____
 This is the only control equipment on this air contaminant source

- or inhibits the air flow in a vertical direction.
- C. non-vertical stack: The stack directs the air flow in a direction which is not directly upward.

Complete Table 7-B below for each fugitive emissions egress point. List each individual egress point on a separate line. Refer to the description of the fugitive egress point type codes below the table for use in completing the type code column of the table. For air contaminant sources like roadways and storage piles, only the first 5 columns need to be completed. For an air contaminant source with multiple fugitive emissions egress points, include only the primary egress points.

Table 7-B, Fugitive Egress Point Information					
Company ID for the Egress Point (examples; Garage Door B, Building C; Roof Monitor; etc.)	Type Code*	Egress Point Description (examples: garage door, 12 X 30 feet, west wall; outside gravel storage piles; etc.)	Fugitive Egress Point Height from the Ground (ft)	Minimum Distance to the Property Line (ft)	Exit Gas Temp. (F)
Roads	F	Paved Roadways and Parking Area			

*Type codes for fugitive egress point:

- D. door or window
- E. other opening in the building without a duct
- F. no stack and no building enclosing the air contaminant source (e.g., roadways)

Complete Table 7-C below for each Stack Egress Point identified in Table 7-A above. In each case, use the dimensions of the largest nearby building, building segment or structure. List each individual egress point on a separate line. Use the same Company Name or ID for the Egress Point in Table 7-C that was used in Table 7-A. See the line by line PTI instructions for additional information.

Table 7-C, Egress Point Additional Information (Add rows as necessary)			
Company ID or Name for the Egress Point	Building Height (ft)	Building Width (ft)	Building Length (ft)

8. Request for Federally Enforceable Limits

As part of this permit application, do you wish to propose voluntary restrictions to limit emissions in order to avoid specific requirements listed below, (i.e., are you requesting federally enforceable limits to obtain synthetic minor status)?

- yes
- no
- not sure - please contact me if this affects me

If yes, why are you requesting federally enforceable limits? Check all that apply.

- a. to avoid being a major source (see OAC rule 3745-77-01)
- b. to avoid being a major MACT source (see OAC rule 3745-31-01)
- c. to avoid being a major modification (see OAC rule 3745-31-01)
- d. to avoid being a major stationary source (see OAC rule 3745-31-01)
- e. to avoid an air dispersion modeling requirement (see Engineering Guide # 69)
- f. to avoid another requirement. Describe: _____

If you checked a., b. or d., please attach a facility-wide potential to emit (PTE) analysis (for each pollutant) and synthetic minor strategy to this application. (See line by line instructions for definition of PTE.) If you checked c., please attach a net emission change analysis to this application.

9. If this air contaminant source utilizes any continuous emissions monitoring equipment for indicating or demonstrating compliance, complete the following table. This does not include continuous parametric monitoring systems.

Company ID for Egress Point	Type of Monitor	Applicable performance specification (40 CFR 60, Appendix B)	Pollutant(s) Monitored

10. Do you wish to permit this air contaminant source as a portable source, allowing relocation within the state in accordance with OAC rule 3745-31-03 or OAC rule 3745-31-05?

- yes - Note: notification requirements in rules cited above must be followed.
- no

11. The appropriate Emissions Activity Category (EAC) form(s) must be completed and attached for each air contaminant source. At least one complete EAC form must be submitted for each air contaminant source for the application to be considered complete. Refer to the list attached to the PTI instructions.

FOR OHIO EPA USE
FACILITY ID _____
EU ID _____ PTI# _____

EMISSIONS ACTIVITY CATEGORY FORM ROADWAYS AND PARKING AREAS: FUGITIVE DUST EMISSIONS

This form is to be completed for all Roadways and Parking Areas. State/Federal regulations which may apply to Roadways and Parking Areas are listed in the instructions. Note that there may be other regulations which apply to this emissions unit which are not included in this list.

1. Reason this form is being submitted (Check one)

New Permit Renewal or Modification of Air Permit Number(s) (e.g. F001) F001

2. Maximum Operating Schedule: 24 hours per day; 365 days per year

If the schedule is less than 24 hours/day or 365 days/year, what limits the schedule to less than maximum? See instructions for examples. _____

3. Complete the table below for each road segment or parking area.

ID	Road Segment or Parking Area Description	Length (miles) or Area (ft ²)	Year Installed	Surface Type (check one)	Surface Composition (check one)
A	Paved roads and parking area			<input checked="" type="checkbox"/> paved <input type="checkbox"/> unpaved	<input checked="" type="checkbox"/> asphalt <input type="checkbox"/> gravel <input type="checkbox"/> concrete <input type="checkbox"/> dirt <input type="checkbox"/> chip & seal <input type="checkbox"/> other _____
B				<input type="checkbox"/> paved <input type="checkbox"/> unpaved	<input type="checkbox"/> asphalt <input type="checkbox"/> gravel <input type="checkbox"/> concrete <input type="checkbox"/> dirt <input type="checkbox"/> chip & seal <input type="checkbox"/> other _____
C				<input type="checkbox"/> paved <input type="checkbox"/> unpaved	<input type="checkbox"/> asphalt <input type="checkbox"/> gravel <input type="checkbox"/> concrete <input type="checkbox"/> dirt <input type="checkbox"/> chip & seal <input type="checkbox"/> other _____
D				<input type="checkbox"/> paved <input type="checkbox"/> unpaved	<input type="checkbox"/> asphalt <input type="checkbox"/> gravel <input type="checkbox"/> concrete <input type="checkbox"/> dirt <input type="checkbox"/> chip & seal <input type="checkbox"/> other _____
E				<input type="checkbox"/> paved <input type="checkbox"/> unpaved	<input type="checkbox"/> asphalt <input type="checkbox"/> gravel <input type="checkbox"/> concrete <input type="checkbox"/> dirt <input type="checkbox"/> chip & seal <input type="checkbox"/> other _____
F				<input type="checkbox"/> paved <input type="checkbox"/> unpaved	<input type="checkbox"/> asphalt <input type="checkbox"/> gravel <input type="checkbox"/> concrete <input type="checkbox"/> dirt <input type="checkbox"/> chip & seal <input type="checkbox"/> other _____

4. Complete the table below for each paved road segment or parking area.

ID	Silt Loading (g/m ²)	Vehicle Type	Avg. Weight (tons)	Avg. Speed (mph)	Vehicle Miles Traveled (vmt/yr)	Control Method(s)	Application or Usage Frequency
A	9.7	Light Duty Vehicles	2.0		35,000	<input type="checkbox"/> sweeping <input type="checkbox"/> flushing <input checked="" type="checkbox"/> watering <input type="checkbox"/> good housekeeping <input type="checkbox"/> other: _____	As needed
B	9.7	Medium Duty Vehicles	7.5		30,000	<input type="checkbox"/> sweeping <input type="checkbox"/> flushing <input checked="" type="checkbox"/> watering <input type="checkbox"/> good housekeeping <input type="checkbox"/> other: _____	As needed
C	9.7	Heavy Duty Vehicles	27.5		5,000	<input type="checkbox"/> sweeping <input type="checkbox"/> flushing <input checked="" type="checkbox"/> watering <input type="checkbox"/> good housekeeping <input type="checkbox"/> other: _____	As needed
D						<input type="checkbox"/> sweeping <input type="checkbox"/> flushing <input type="checkbox"/> watering <input type="checkbox"/> good housekeeping <input type="checkbox"/> other: _____	
E						<input type="checkbox"/> sweeping <input type="checkbox"/> flushing <input type="checkbox"/> watering <input type="checkbox"/> good housekeeping <input type="checkbox"/> other: _____	
F						<input type="checkbox"/> sweeping <input type="checkbox"/> flushing <input type="checkbox"/> watering <input type="checkbox"/> good housekeeping <input type="checkbox"/> other: _____	

5. Identify all the places that the permittee's roadways and parking lots meet a public road. Use the Road Segment or Parking Area ID from the table above to identify the permittee's roadway and parking lots that are involved.

Plant entrance on Hamilton Middletown Road.

REVISED JULY 2008

Describe how any foreign materials deposited on public paved roadways will be removed.

Flushing with water Wet sweeping Sweeping with vacuum truck Other. Describe _____

6. Complete the table below for each unpaved road segment or parking area.

ID	Silt Content (%)	Surface Material Moisture Content (%)	Vehicle Type	Avg. Weight (tons)	Avg. Speed (mph)	Vehicle Miles Traveled (vmt/yr)	Control Method(s)	Application or Usage Frequency
A	NA						<input type="checkbox"/> oiling <input type="checkbox"/> watering <input type="checkbox"/> surface improvement <input type="checkbox"/> chemical stabilization	
B							<input type="checkbox"/> oiling <input type="checkbox"/> watering <input type="checkbox"/> surface improvement <input type="checkbox"/> chemical stabilization	
C							<input type="checkbox"/> oiling <input type="checkbox"/> watering <input type="checkbox"/> surface improvement <input type="checkbox"/> chemical stabilization	
D							<input type="checkbox"/> oiling <input type="checkbox"/> watering <input type="checkbox"/> surface improvement <input type="checkbox"/> chemical stabilization	
E							<input type="checkbox"/> oiling <input type="checkbox"/> watering <input type="checkbox"/> surface improvement <input type="checkbox"/> chemical stabilization	
F							<input type="checkbox"/> oiling <input type="checkbox"/> watering <input type="checkbox"/> surface improvement <input type="checkbox"/> chemical stabilization	

7. The use of used oil for dust suppression is prohibited. Used oil is any oil that has been refined from crude oil, or any synthetic oil, that has been used, and, as a result of that use, is contaminated by physical or chemical impurities. See OAC rule 3745-279-01. Used oil does not include oils that have been refined from crude oil that have not been used or any synthetic oil that has not been used.

If oiling is being used for dust suppression, is only virgin oil being used?

Yes No Not using oil

Section II - Specific Air Contaminant Source Information

REVISED JULY 2008

NOTE: One copy of this section should be filled out for each air contaminant source covered by this PTI application. See the line by line PTI instructions for additional information.

1. Company identification (name for air contaminant source for which you are applying): Coal and Coke Storage Piles (F002)
2. List all equipment that are part of this air contaminant source: Open coal storage piles, emergency coke ground storage pile, emergency coke breeze storage pile, and emergency screened coke pile.
3. Air Contaminant Source Installation or Modification Schedule (must be completed regardless of date of installation or modification):

When did/will you begin to install or modify the air contaminant source? (month/year) October 2008

When did/will you begin to operate the air contaminant source? (month/year) December 2009 **OR** after issuance of PTI

4. Emissions Information: The following table requests information needed to determine the applicable requirements and the compliance status of this air contaminant source with those requirements. Suggestions for how to estimate emissions may be found in the instructions to the Emissions Activity Category (EAC) forms required with this application. If you need further assistance, contact your Ohio EPA permit representative.

- If total potential emissions of HAPs or any Air Toxic is greater than 1 ton/yr, fill in the table for that (those) pollutant(s). For all other pollutants, if "Emissions before controls (max), lb/hr" multiplied by 24 hours/day is greater than 10 lb/day, fill in the table for that pollutant.
- If you have no add-on control equipment, "Emissions before controls" will be the same as "Actual emissions"
- Annual emissions should be based on operating 8760 hr/yr unless you are requesting operating restrictions to limit emissions in line # 8 or have described inherent limitations below.
- If you use units other than lb/hr or ton/yr, specify the units used (e.g., gr/dscf, lb/ton charged, lb/MMBtu, ton/12-months).
- Requested Allowable (ton/yr) is often equivalent to Potential to Emit (PTE) as defined in OAC rule 3745-31-01 and OAC rule 3745-77-01.

Pollutant	Emissions before controls (max) (lb/hr)	Actual emissions (lb/hr)	Actual emissions (ton/year)	Requested Allowable (lb/hr)	Requested Allowable (ton/year)
Particulate emissions (PE) (formerly particulate matter, PM)			7.51		7.51
PM ₁₀ (PM < 10 microns in diameter)			3.64		3.64
Sulfur dioxide (SO ₂)					
Nitrogen oxides (NO _x)					
Carbon monoxide (CO)					
Organic compounds (OC)					
Volatile organic compounds (VOC)					
Total HAPs					
Highest single HAP:					
Air Toxics (see instructions):					

Provide your calculations as an attachment and explain how all process variables and emission factors were selected. Note the emissions factor(s) employed and document the origin. Example: AP-42, Table 4.4-3 (8/97); stack test, Method 5, 4/96; mass balance based on MSDS; etc.

5. Does this air contaminant source employ emissions control equipment?

Yes - fill out the applicable information below.

No - proceed to item # 6.

Note: Pollutant abbreviations used below: Particulates = PE; Organic compounds = OC; Sulfur dioxide = SO₂; Nitrogen oxides = NO_x; Carbon monoxide = CO

Cyclone/Multiclone

Manufacturer: _____ Year installed: _____
 What do you call this control equipment: _____
 Pollutant(s) controlled: PE OC SO₂ NO_x CO Other _____
 Estimated capture efficiency (%): _____ Basis for efficiency: _____
 Design control efficiency (%): _____ Basis for efficiency: _____
 Type: Cyclone Multiclone Rotoclone Other _____
 This is the only control equipment on this air contaminant source
 If no, this control equipment is: Primary Secondary Parallel
 List any other air contaminant sources that are also vented to this control equipment:

Fabric Filter/Baghouse

Manufacturer: _____ Year installed: _____
 What do you call this control equipment: _____
 Pollutant(s) controlled: PE OC SO₂ NO_x CO Other _____
 Estimated capture efficiency (%): _____ Basis for efficiency: _____
 Design control efficiency (%): _____ Basis for efficiency: _____
 Operating pressure drop range (inches of water): Minimum: _____ Maximum: _____
 Pressure type: Negative pressure Positive pressure
 Fabric cleaning mechanism: Reverse air Pulse jet Shaker Other _____
 Lime injection or fabric coating agent used: Type: _____ Feed rate: _____
 This is the only control equipment on this air contaminant source
 If no, this control equipment is: Primary Secondary Parallel
 List any other air contaminant sources that are also vented to this control equipment:

Wet Scrubber

Manufacturer: _____ Year installed: _____
 What do you call this control equipment: _____
 Pollutant(s) controlled: PE OC SO₂ NO_x CO Other _____
 Estimated capture efficiency (%): _____ Basis for efficiency: _____
 Design control efficiency (%): _____ Basis for efficiency: _____
 Type: Spray chamber Packed bed Impingement Venturi Other _____
 Operating pressure drop range (inches of water): Minimum: _____ Maximum: _____
 pH range for scrubbing liquid: Minimum: _____ Maximum: _____
 Scrubbing liquid flow rate (gal/min): _____
 Is scrubber liquid recirculated? Yes No
 Water supply pressure (psig): _____ NOTE: This item for spray chambers only.
 This is the only control equipment on this air contaminant source
 If no, this control equipment is: Primary Secondary Parallel
 List any other air contaminant sources that are also vented to this control equipment:

Electrostatic Precipitator

Manufacturer: _____ Year installed: _____
 What do you call this control equipment: _____
 Pollutant(s) controlled: PE OC SO₂ NO_x CO Other _____

Estimated capture efficiency (%): _____ Basis for efficiency: _____
 Design control efficiency (%): _____ Basis for efficiency: _____
 Type: Plate-wire Flat-plate Tubular Wet Other _____
 Number of operating fields: _____

This is the only control equipment on this air contaminant source
 If no, this control equipment is: Primary Secondary Parallel
 List any other air contaminant sources that are also vented to this control equipment:

 Concentrator

Manufacturer: _____ Year installed: _____
 What do you call this control equipment: _____
 Pollutant(s) controlled: PE OC SO₂ NO_x CO Other _____
 Estimated capture efficiency (%): _____ Basis for efficiency: _____
 Design regeneration cycle time (minutes): _____
 Minimum desorption air stream temperature (°F): _____
 Rotational rate (revolutions/hour): _____

This is the only control equipment on this air contaminant source
 If no, this control equipment is: Primary Secondary Parallel
 List any other air contaminant sources that are also vented to this control equipment:

 Catalytic Incinerator

Manufacturer: _____ Year installed: _____
 What do you call this control equipment: _____
 Pollutant(s) controlled: PE OC SO₂ NO_x CO Other _____
 Estimated capture efficiency (%): _____ Basis for efficiency: _____
 Design control efficiency (%): _____ Basis for efficiency: _____
 Minimum inlet gas temperature (°F): _____
 Combustion chamber residence time (seconds): _____
 Minimum temperature difference (°F) across catalyst during air contaminant source operation: _____

This is the only control equipment on this air contaminant source
 If no, this control equipment is: Primary Secondary Parallel
 List any other air contaminant sources that are also vented to this control equipment:

 Thermal Incinerator/Thermal Oxidizer

Manufacturer: _____ Year installed: _____
 What do you call this control equipment: _____
 Pollutant(s) controlled: PE OC SO₂ NO_x CO Other _____
 Estimated capture efficiency (%): _____ Basis for efficiency: _____
 Design control efficiency (%): _____ Basis for efficiency: _____
 Minimum operating temperature (°F) and location: _____ (See line by line instructions.)
 Combustion chamber residence time (seconds): _____

This is the only control equipment on this air contaminant source
 If no, this control equipment is: Primary Secondary Parallel
 List any other air contaminant sources that are also vented to this control equipment:

 Flare

Manufacturer: _____ Year installed: _____
 What do you call this control equipment: _____
 Pollutant(s) controlled: PE OC SO₂ NO_x CO Other _____
 Estimated capture efficiency (%): _____ Basis for efficiency: _____
 Design control efficiency (%): _____ Basis for efficiency: _____

Type: Enclosed Elevated (open)
 Ignition device: Electric arc Pilot flame
 Flame presence sensor: Yes No
 This is the only control equipment on this air contaminant source

If no, this control equipment is: Primary Secondary Parallel
 List any other air contaminant sources that are also vented to this control equipment:

 Condenser

Manufacturer: _____ Year installed: _____

What do you call this control equipment: _____

Pollutant(s) controlled: PE OC SO₂ NO_x CO Other _____

Estimated capture efficiency (%): _____ Basis for efficiency: _____

Design control efficiency (%): _____ Basis for efficiency: _____

Type: Indirect contact Direct contact

Maximum exhaust gas temperature (°F) during air contaminant source operation: _____

Coolant type: _____

Design coolant temperature (°F): Minimum _____ Maximum _____

Design coolant flow rate (gpm): _____

This is the only control equipment on this air contaminant source

If no, this control equipment is: Primary Secondary Parallel

List any other air contaminant sources that are also vented to this control equipment:

 Carbon Absorber

Manufacturer: _____ Year installed: _____

What do you call this control equipment: _____

Pollutant(s) controlled: PE OC SO₂ NO_x CO Other _____

Estimated capture efficiency (%): _____ Basis for efficiency: _____

Design control efficiency (%): _____ Basis for efficiency: _____

Type: On-site regenerative Disposable

Maximum design outlet organic compound concentration (ppmv): _____

Carbon replacement frequency or regeneration cycle time (specify units): _____

Maximum temperature of the carbon bed, after regeneration (including any cooling cycle): _____

This is the only control equipment on this air contaminant source

If no, this control equipment is: Primary Secondary Parallel

List any other air contaminant sources that are also vented to this control equipment:

 Dry Scrubber

Manufacturer: _____ Year installed: _____

What do you call this control equipment: _____

Pollutant(s) controlled: PE OC SO₂ NO_x CO Other _____

Estimated capture efficiency (%): _____ Basis for efficiency: _____

Design control efficiency (%): _____ Basis for efficiency: _____

Reagent(s) used: Type: _____ Injection rate(s): _____

Operating pressure drop range (inches of water): Minimum: _____ Maximum: _____

This is the only control equipment on this air contaminant source

If no, this control equipment is: Primary Secondary Parallel

List any other air contaminant sources that are also vented to this control equipment:

 Paint booth filter

Type: Paper Fiberglass Water curtain Other _____

Design control efficiency (%): _____ Basis for efficiency: _____

 Other, describe Watering/wet material

Manufacturer: _____ Year installed: _____

What do you call this control equipment: _____

Pollutant(s) controlled: PE OC SO₂ NO_x CO Other _____

Estimated capture efficiency (%): Refer to EAC Basis for efficiency: AP-40, AP-42, Ohio RACM

Design control efficiency (%): _____ Basis for efficiency: _____

This is the only control equipment on this air contaminant source

- or inhibits the air flow in a vertical direction.
- C. non-vertical stack: The stack directs the air flow in a direction which is not directly upward.

Complete Table 7-B below for each fugitive emissions egress point. List each individual egress point on a separate line. Refer to the description of the fugitive egress point type codes below the table for use in completing the type code column of the table. For air contaminant sources like roadways and storage piles, only the first 5 columns need to be completed. For an air contaminant source with multiple fugitive emissions egress points, include only the primary egress points.

Table 7-B, Fugitive Egress Point Information					
Company ID for the Egress Point (examples; Garage Door B, Building C; Roof Monitor; etc.)	Type Code*	Egress Point Description (examples: garage door, 12 X 30 feet, west wall; outside gravel storage piles; etc.)	Fugitive Egress Point Height from the Ground (ft)	Minimum Distance to the Property Line (ft)	Exit Gas Temp. (F)
Emergency Coke Storage Pile	F	1.5 ac. coke storage pile			
Coal Storage Pile #1	F	1.2 ac. coal storage pile			
Coal Storage Pile #2	F	1.3 ac. coal storage pile			
Emergency Coke Breeze Pile	F	0.2 ac. coke breeze storage pile			
Emergency Screened Coke Pile	F	0.3 ac. screened coke storage pile			

*Type codes for fugitive egress point:

- D. door or window
 E. other opening in the building without a duct
 F. no stack and no building enclosing the air contaminant source (e.g., roadways)

Complete Table 7-C below for each Stack Egress Point identified in Table 7-A above. In each case, use the dimensions of the largest nearby building, building segment or structure. List each individual egress point on a separate line. Use the same Company Name or ID for the Egress Point in Table 7-C that was used in Table 7-A. See the line by line PTI instructions for additional information.

Table 7-C, Egress Point Additional Information (Add rows as necessary)			
Company ID or Name for the Egress Point	Building Height (ft)	Building Width (ft)	Building Length (ft)

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8. Request for Federally Enforceable Limits

As part of this permit application, do you wish to propose voluntary restrictions to limit emissions in order to avoid specific requirements listed below, (i.e., are you requesting federally enforceable limits to obtain synthetic minor status)?

- yes
 no
 not sure - please contact me if this affects me

If yes, why are you requesting federally enforceable limits? Check all that apply.

- a. to avoid being a major source (see OAC rule 3745-77-01)
 b. to avoid being a major MACT source (see OAC rule 3745-31-01)
 c. to avoid being a major modification (see OAC rule 3745-31-01)
 d. to avoid being a major stationary source (see OAC rule 3745-31-01)
 e. to avoid an air dispersion modeling requirement (see Engineering Guide # 69)
 f. to avoid another requirement. Describe: _____

If you checked a., b. or d., please attach a facility-wide potential to emit (PTE) analysis (for each pollutant) and synthetic minor strategy to this application. (See line by line instructions for definition of PTE.) If you checked c., please attach a net emission change analysis to this application.

9. If this air contaminant source utilizes any continuous emissions monitoring equipment for indicating or demonstrating compliance, complete the following table. This does not include continuous parametric monitoring systems.

Company ID for Egress Point	Type of Monitor	Applicable performance specification (40 CFR 60, Appendix B)	Pollutant(s) Monitored

10. Do you wish to permit this air contaminant source as a portable source, allowing relocation within the state in accordance with OAC rule 3745-31-03 or OAC rule 3745-31-05?

- yes - Note: notification requirements in rules cited above must be followed.
 no

11. The appropriate Emissions Activity Category (EAC) form(s) must be completed and attached for each air contaminant source. At least one complete EAC form must be submitted for each air contaminant source for the application to be considered complete. Refer to the list attached to the PTI instructions.

EMISSIONS ACTIVITY CATEGORY FORM STORAGE PILES

This form is to be completed for each storage pile. State/Federal regulations which may apply to storage piles are listed in the instructions. Note that there may be other regulations which apply to this emissions unit which are not included in this list.

1. Reason this form is being submitted (Check one)

- New Permit Renewal or Modification of Air Permit Number(s) (e.g. F001) F002

2. Maximum Operating Schedule: 24 hours per day; 365 days per year

If the schedule is less than 24 hours/day or 365 days/year, what limits the schedule to less than maximum? See instructions for examples. _____

3. Meteorological data at or near storage pile area:

- a. mean number of days per year in which >0.01 inch of precipitation occurred 130 days
- b. percentage of time wind speed exceeds 12 miles per hour: 29 %
- c. mean wind speed: 9.9 miles per hour
- d. source of meteorological data: (a) AP-42, Figure 13.2.2-1
 (b) Dayton International Airport 1984 - 1992 wind rose
 (c) Tanks 4.09 Meteorological Data (Dayton, OH)

4. Description of storage pile activities:

ID	Type of Material Stored	Method of Load-in (check one or more)	Method of Load-out (check one or more)
A	Open Emergency Coke Pile	<input checked="" type="checkbox"/> conveyor/stacker: <input type="checkbox"/> front-end loader <input type="checkbox"/> other (describe): _____	<input type="checkbox"/> bucket wheel reclaimer <input type="checkbox"/> under pile feed <input type="checkbox"/> rake reclaimer <input type="checkbox"/> pan scraper <input checked="" type="checkbox"/> front-end loader <input type="checkbox"/> other: _____
B	Open Coal Pile #1 (Dead Pile)	<input checked="" type="checkbox"/> conveyor/stacker: <input type="checkbox"/> front-end loader <input type="checkbox"/> other (describe): _____	<input type="checkbox"/> bucket wheel reclaimer <input type="checkbox"/> under pile feed <input type="checkbox"/> rake reclaimer <input type="checkbox"/> pan scraper <input checked="" type="checkbox"/> front-end loader <input type="checkbox"/> other: _____
C	Open Coal Pile #2 (Live Pile)	<input checked="" type="checkbox"/> conveyor/stacker: <input type="checkbox"/> front-end loader <input type="checkbox"/> other (describe): _____	<input type="checkbox"/> bucket wheel reclaimer <input checked="" type="checkbox"/> under pile feed <input type="checkbox"/> rake reclaimer <input type="checkbox"/> pan scraper <input type="checkbox"/> front-end loader <input type="checkbox"/> other: _____
D	Open Emergency Coke Breeze Pile	<input checked="" type="checkbox"/> conveyor/stacker: <input type="checkbox"/> front-end loader <input type="checkbox"/> other (describe): _____	<input type="checkbox"/> bucket wheel reclaimer <input type="checkbox"/> under pile feed <input type="checkbox"/> rake reclaimer <input type="checkbox"/> pan scraper <input checked="" type="checkbox"/> front-end loader <input type="checkbox"/> other: _____
E	Open Emergency Screened Coke Pile	<input checked="" type="checkbox"/> conveyor/stacker: <input type="checkbox"/> front-end loader <input type="checkbox"/> other (describe): _____	<input type="checkbox"/> bucket wheel reclaimer <input type="checkbox"/> under pile feed <input type="checkbox"/> rake reclaimer <input type="checkbox"/> pan scraper <input checked="" type="checkbox"/> front-end loader <input type="checkbox"/> other: _____

5. STORAGE PILE ACTIVITIES:

ID	Number of Separate Piles	Average Silt Content (wt %)	Average Moisture Content (wt %)	Average Pile Surface Area (acres)	Max. Load-in Rate (tons/hr)	Max. Load-in Rate (tons/yr)	Max. Load-out Rate (tons/hr)	Max. Load-out Rate (tons/yr)
A	1	1.0	7.0	1.50	500 ^a	654,449	500 ^a	654,449
B	1	4.6	8.0	1.20	600 ^b	456,250	600 ^b	456,250
C	1	4.6	8.0	1.30	600 ^b	456,250	600 ^b	456,250
D	1	4.9	7.0	0.2	500 ^c	40,621	500 ^c	40,621
E	1	1.0	7.0	0.3	500 ^d	613,828	500 ^d	613,828

^a Emissions based on 1,793 tons coke/day

^c Emissions based on 111 tons breeze/day

^b Emissions based on 2,500 tons coal/day

^d Emissions based on 1,682 tons screened coke/day

6. WIND EROSION CONTROL METHODS

ID	Enclosure, Covering, and/or Operating Practices (describe)	Chemical Stabilization (check one or more)	Application Frequency	Overall Control Eff. (%)	Basis for Overall Wind Erosion Control Efficiency
A	Wet Material	<input type="checkbox"/> water <input type="checkbox"/> crusting agents <input type="checkbox"/> other: _____		0%	
B	Water Sprays	<input checked="" type="checkbox"/> water <input type="checkbox"/> crusting agents <input type="checkbox"/> other: _____	As needed	50%	Ohio RACM
C	Water Sprays	<input checked="" type="checkbox"/> water <input type="checkbox"/> crusting agents <input type="checkbox"/> other: _____	As needed	50%	Ohio RACM
D	Wet Material	<input type="checkbox"/> water <input type="checkbox"/> crusting agents <input type="checkbox"/> other: _____		0%	
E	Wet Material	<input type="checkbox"/> water <input type="checkbox"/> crusting agents <input type="checkbox"/> other: _____		0%	

7. LOAD-IN CONTROL METHODS

ID	Enclosure and/or Operating Practices (describe)	Chemical Stabilization	Application Frequency	Overall Control Eff. (%)	Basis for Overall Load-in Control Efficiency
A	Wet Material	<input type="checkbox"/> water <input type="checkbox"/> dust suppressant <input type="checkbox"/> other: _____		0%	
B	Wet Material	<input type="checkbox"/> water <input type="checkbox"/> dust suppressant <input type="checkbox"/> other: _____		0%	
C	Wet Material	<input type="checkbox"/> water <input type="checkbox"/> dust suppressant <input type="checkbox"/> other: _____		0%	
D	Wet Material	<input type="checkbox"/> water <input type="checkbox"/> dust suppressant <input type="checkbox"/> other: _____		0%	
E	Wet Material	<input type="checkbox"/> water <input type="checkbox"/> dust suppressant <input type="checkbox"/> other: _____		0%	

8. LOAD-OUT CONTROL METHODS

ID	Enclosure and/or Operating Practices (describe)	Chemical Stabilization	Application Frequency	Overall Control Eff. (%)	Basis for Overall Load-out Control Efficiency
A	Wet Material	<input type="checkbox"/> water <input type="checkbox"/> dust suppressant <input type="checkbox"/> other: _____		0%	
B	Wet Material	<input type="checkbox"/> water <input type="checkbox"/> dust suppressant <input type="checkbox"/> other: _____		0%	
C	Wet Material	<input type="checkbox"/> water <input type="checkbox"/> dust suppressant <input checked="" type="checkbox"/> other: enclosure		95%	Ohio RACM
D	Wet Material	<input type="checkbox"/> water <input type="checkbox"/> dust suppressant <input type="checkbox"/> other: _____		0%	
E	Wet Material	<input type="checkbox"/> water <input type="checkbox"/> dust suppressant <input type="checkbox"/> other: _____		0%	

Section II - Specific Air Contaminant Source Information**REVISED JULY 2008**

NOTE: One copy of this section should be filled out for each air contaminant source covered by this PTI application. See the line by line PTI instructions for additional information.

1. Company identification (name for air contaminant source for which you are applying): Coal Handling, Processing and Transfer (F003)
2. List all equipment that are part of this air contaminant source: Coal Handling, Transfer System and coal screening
3. Air Contaminant Source Installation or Modification Schedule (must be completed regardless of date of installation or modification):

When did/will you begin to install or modify the air contaminant source? (month/year) October 2008

When did/will you begin to operate the air contaminant source? (month/year) December 2009 **OR** after issuance of PTI

4. Emissions Information: The following table requests information needed to determine the applicable requirements and the compliance status of this air contaminant source with those requirements. Suggestions for how to estimate emissions may be found in the instructions to the Emissions Activity Category (EAC) forms required with this application. If you need further assistance, contact your Ohio EPA permit representative.

- If total potential emissions of HAPs or any Air Toxic is greater than 1 ton/yr, fill in the table for that (those) pollutant(s). For all other pollutants, if "Emissions before controls (max), lb/hr" multiplied by 24 hours/day is greater than 10 lb/day, fill in the table for that pollutant.
- If you have no add-on control equipment, "Emissions before controls" will be the same as "Actual emissions"
- Annual emissions should be based on operating 8760 hr/yr unless you are requesting operating restrictions to limit emissions in line # 8 or have described inherent limitations below.
- If you use units other than lb/hr or ton/yr, specify the units used (e.g., gr/dscf, lb/ton charged, lb/MMBtu, ton/12-months).
- Requested Allowable (ton/yr) is often equivalent to Potential to Emit (PTE) as defined in OAC rule 3745-31-01 and OAC rule 3745-77-01.

Pollutant	Emissions before controls (max) (lb/hr)	Actual emissions (lb/hr)	Actual emissions (ton/year)	Requested Allowable (lb/hr)	Requested Allowable (ton/year)
Particulate emissions (PE) (formerly particulate matter, PM)			6.05		6.05
PM ₁₀ (PM < 10 microns in diameter)			2.88		2.88
Sulfur dioxide (SO ₂)					
Nitrogen oxides (NO _x)					
Carbon monoxide (CO)					
Organic compounds (OC)					
Volatile organic compounds (VOC)					
Total HAPs					
Highest single HAP:					
Air Toxics (see instructions):					

Section II - Specific Air Contaminant Source Information

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Provide your calculations as an attachment and explain how all process variables and emission factors were selected. Note the emissions factor(s) employed and document the origin. Example: AP-42, Table 4.4-3 (8/97); stack test, Method 5, 4/96; mass balance based on MSDS; etc.

5. Does this air contaminant source employ emissions control equipment?

Yes - fill out the applicable information below.

No - proceed to item # 6.

Note: Pollutant abbreviations used below: Particulates = PE; Organic compounds = OC; Sulfur dioxide = SO₂; Nitrogen oxides = NO_x; Carbon monoxide = CO

Cyclone/Multiclone

Manufacturer: _____ Year installed: _____

What do you call this control equipment: _____

Pollutant(s) controlled: PE OC SO₂ NO_x CO Other _____

Estimated capture efficiency (%): _____ Basis for efficiency: _____

Design control efficiency (%): _____ Basis for efficiency: _____

Type: Cyclone Multiclone Rotoclone Other _____

This is the only control equipment on this air contaminant source

If no, this control equipment is: Primary Secondary Parallel

List any other air contaminant sources that are also vented to this control equipment:

Fabric Filter/Baghouse

Manufacturer: _____ Year installed: _____

What do you call this control equipment: _____

Pollutant(s) controlled: PE OC SO₂ NO_x CO Other _____

Estimated capture efficiency (%): _____ Basis for efficiency: _____

Design control efficiency (%): _____ Basis for efficiency: _____

Operating pressure drop range (inches of water): Minimum _____ Maximum _____

Pressure type: Negative pressure Positive pressure

Fabric cleaning mechanism: Reverse air Pulse jet Shaker Other _____

Lime injection or fabric coating agent used: Type: _____ Feed rate: _____

This is the only control equipment on this air contaminant source

If no, this control equipment is: Primary Secondary Parallel

List any other air contaminant sources that are also vented to this control equipment:

Wet Scrubber

Manufacturer: _____ Year installed: _____

What do you call this control equipment: _____

Pollutant(s) controlled: PE OC SO₂ NO_x CO Other _____

Estimated capture efficiency (%): _____ Basis for efficiency: _____

Design control efficiency (%): _____ Basis for efficiency: _____

Type: Spray chamber Packed bed Impingement Venturi Other _____

Operating pressure drop range (inches of water): Minimum: _____ Maximum: _____

pH range for scrubbing liquid: Minimum: _____ Maximum: _____

Scrubbing liquid flow rate (gal/min): _____

Is scrubber liquid recirculated? Yes No

Water supply pressure (psig): _____ NOTE: This item for spray chambers only.

This is the only control equipment on this air contaminant source

If no, this control equipment is: Primary Secondary Parallel

List any other air contaminant sources that are also vented to this control equipment:

Electrostatic Precipitator

Manufacturer: _____ Year installed: _____

What do you call this control equipment: _____

Section II - Specific Air Contaminant Source Information

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Pollutant(s) controlled: PE OC SO₂ NO_x CO Other _____
Estimated capture efficiency (%): _____ Basis for efficiency: _____
Design control efficiency (%): _____ Basis for efficiency: _____
Type: Plate-wire Flat-plate Tubular Wet Other _____
Number of operating fields: _____

This is the only control equipment on this air contaminant source
If no, this control equipment is: Primary Secondary Parallel
List any other air contaminant sources that are also vented to this control equipment:

Concentrator

Manufacturer: _____ Year installed: _____
What do you call this control equipment: _____
Pollutant(s) controlled: PE OC SO₂ NO_x CO Other _____
Estimated capture efficiency (%): _____ Basis for efficiency: _____
Design regeneration cycle time (minutes): _____
Minimum desorption air stream temperature (°F): _____
Rotational rate (revolutions/hour): _____
 This is the only control equipment on this air contaminant source
If no, this control equipment is: Primary Secondary Parallel
List any other air contaminant sources that are also vented to this control equipment:

Catalytic Incinerator

Manufacturer: _____ Year installed: _____
What do you call this control equipment: _____
Pollutant(s) controlled: PE OC SO₂ NO_x CO Other _____
Estimated capture efficiency (%): _____ Basis for efficiency: _____
Design control efficiency (%): _____ Basis for efficiency: _____
Minimum inlet gas temperature (°F): _____
Combustion chamber residence time (seconds): _____
Minimum temperature difference (°F) across catalyst during air contaminant source operation: _____
 This is the only control equipment on this air contaminant source
If no, this control equipment is: Primary Secondary Parallel
List any other air contaminant sources that are also vented to this control equipment:

Thermal Incinerator/Thermal Oxidizer

Manufacturer: _____ Year installed: _____
What do you call this control equipment: _____
Pollutant(s) controlled: PE OC SO₂ NO_x CO Other _____
Estimated capture efficiency (%): _____ Basis for efficiency: _____
Design control efficiency (%): _____ Basis for efficiency: _____
Minimum operating temperature (°F) and location: _____ (See line by line instructions.)
Combustion chamber residence time (seconds): _____
 This is the only control equipment on this air contaminant source
If no, this control equipment is: Primary Secondary Parallel
List any other air contaminant sources that are also vented to this control equipment:

Flare

Manufacturer: _____ Year installed: _____
What do you call this control equipment: _____
Pollutant(s) controlled: PE OC SO₂ NO_x CO Other _____
Estimated capture efficiency (%): _____ Basis for efficiency: _____
Design control efficiency (%): _____ Basis for efficiency: _____
Type: Enclosed Elevated (open)
Ignition device: Electric arc Pilot flame
Flame presence sensor: Yes No

This is the only control equipment on this air contaminant source
 If no, this control equipment is: Primary Secondary Parallel
 List any other air contaminant sources that are also vented to this control equipment:

 Condenser

Manufacturer: _____ Year installed: _____

What do you call this control equipment: _____

Pollutant(s) controlled: PE OC SO₂ NO_x CO Other _____

Estimated capture efficiency (%): _____ Basis for efficiency: _____

Design control efficiency (%): _____ Basis for efficiency: _____

Type: Indirect contact Direct contact

Maximum exhaust gas temperature (°F) during air contaminant source operation: _____

Coolant type: _____

Design coolant temperature (°F): Minimum _____ Maximum _____

Design coolant flow rate (gpm): _____

This is the only control equipment on this air contaminant source

If no, this control equipment is: Primary Secondary Parallel

List any other air contaminant sources that are also vented to this control equipment:

 Carbon Absorber

Manufacturer: _____ Year installed: _____

What do you call this control equipment: _____

Pollutant(s) controlled: PE OC SO₂ NO_x CO Other _____

Estimated capture efficiency (%): _____ Basis for efficiency: _____

Design control efficiency (%): _____ Basis for efficiency: _____

Type: On-site regenerative Disposable

Maximum design outlet organic compound concentration (ppmv): _____

Carbon replacement frequency or regeneration cycle time (specify units): _____

Maximum temperature of the carbon bed, after regeneration (including any cooling cycle): _____

This is the only control equipment on this air contaminant source

If no, this control equipment is: Primary Secondary Parallel

List any other air contaminant sources that are also vented to this control equipment:

 Dry Scrubber

Manufacturer: _____ Year installed: _____

What do you call this control equipment: _____

Pollutant(s) controlled: PE OC SO₂ NO_x CO Other _____

Estimated capture efficiency (%): _____ Basis for efficiency: _____

Design control efficiency (%): _____ Basis for efficiency: _____

Reagent(s) used: Type: _____ Injection rate(s): _____

Operating pressure drop range (inches of water): Minimum: _____ Maximum: _____

This is the only control equipment on this air contaminant source

If no, this control equipment is: Primary Secondary Parallel

List any other air contaminant sources that are also vented to this control equipment:

 Paint booth filter

Type: Paper Fiberglass Water curtain Other _____

Design control efficiency (%): _____ Basis for efficiency: _____

 Other, describe Enclosure, wet material

Manufacturer: _____ Year installed: _____

What do you call this control equipment: Wet Suppression + Enclosure, Wet Suppression + Partial Enclosure

Pollutant(s) controlled: PE OC SO₂ NO_x CO Other _____

Estimated capture efficiency (%): NA Basis for efficiency: _____

Design control efficiency (%): _____

70% (Coal Unloading - Wet Suppression + Partial Enclosure) Basis for efficiency: Ohio RACM

- cap.
- B. vertical stack (obstructed): There are obstructions to the upward flow, such as a rain cap, which prevents or inhibits the air flow in a vertical direction.
- C. non-vertical stack: The stack directs the air flow in a direction which is not directly upward.

Complete Table 7-B below for each fugitive emissions egress point. List each individual egress point on a separate line. Refer to the description of the fugitive egress point type codes below the table for use in completing the type code column of the table. For air contaminant sources like roadways and storage piles, only the first 5 columns need to be completed. For an air contaminant source with multiple fugitive emissions egress points, include only the primary egress points.

Table 7-B, Fugitive Egress Point Information					
Company ID for the Egress Point (examples; Garage Door B, Building C; Roof Monitor; etc.)	Type Code*	Egress Point Description (examples: garage door, 12 X 30 feet, west wall; outside gravel storage piles; etc.)	Fugitive Egress Point Height from the Ground (ft)	Minimum Distance to the Property Line (ft)	Exit Gas Temp. (F)
Coal Unloading	F				
Coal Crushing	F				
Coal Transfer	F				

*Type codes for fugitive egress point:

- D. door or window
- E. other opening in the building without a duct
- F. no stack and no building enclosing the air contaminant source (e.g., roadways)

Complete Table 7-C below for each Stack Egress Point identified in Table 7-A above. In each case, use the dimensions of the largest nearby building, building segment or structure. List each individual egress point on a separate line. Use the same Company Name or ID for the Egress Point in Table 7-C that was used in Table 7-A. See the line by line PTI instructions for additional information.

Table 7-C, Egress Point Additional Information (Add rows as necessary)			
Company ID or Name for the Egress Point	Building Height (ft)	Building Width (ft)	Building Length (ft)

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8. Request for Federally Enforceable Limits

As part of this permit application, do you wish to propose voluntary restrictions to limit emissions in order to avoid specific requirements listed below, (i.e., are you requesting federally enforceable limits to obtain synthetic minor status)?

- yes
 no
 not sure - please contact me if this affects me

If yes, why are you requesting federally enforceable limits? Check all that apply.

- a. to avoid being a major source (see OAC rule 3745-77-01)
 b. to avoid being a major MACT source (see OAC rule 3745-31-01)
 c. to avoid being a major modification (see OAC rule 3745-31-01)
 d. to avoid being a major stationary source (see OAC rule 3745-31-01)
 e. to avoid an air dispersion modeling requirement (see Engineering Guide # 69)
 f. to avoid another requirement. Describe: _____

If you checked a., b. or d., please attach a facility-wide potential to emit (PTE) analysis (for each pollutant) and synthetic minor strategy to this application. (See line by line instructions for definition of PTE.) If you checked c., please attach a net emission change analysis to this application.

9. If this air contaminant source utilizes any continuous emissions monitoring equipment for indicating or demonstrating compliance, complete the following table. This does not include continuous parametric monitoring systems.

Company ID for Egress Point	Type of Monitor	Applicable performance specification (40 CFR 60, Appendix B)	Pollutant(s) Monitored

10. Do you wish to permit this air contaminant source as a portable source, allowing relocation within the state in accordance with OAC rule 3745-31-03 or OAC rule 3745-31-05?

- yes - Note: notification requirements in rules cited above must be followed.
 no

11. The appropriate Emissions Activity Category (EAC) form(s) must be completed and attached for each air contaminant source. At least one complete EAC form must be submitted for each air contaminant source for the application to be considered complete. Refer to the list attached to the PTI instructions.

EMISSIONS ACTIVITY CATEGORY FORM
MATERIAL HANDLING: FUGITIVE DUST EMISSIONS

This form is to be completed for any material handling operation with fugitive dust emissions. State/Federal regulations which may apply to material handling operations are listed in the instructions. Note that there may be other regulations which apply to this emissions unit which are not included in this list.

1. Reason this form is being submitted (Check one)

- New Permit Renewal or Modification of Air Permit Number(s) (e.g. F001) F003

2. Maximum Operating Schedule: 24 hours per day; 365 days per year

If the schedule is less than 24 hours/day or 365 days/year, what limits the schedule to less than maximum? See instructions for examples. _____

3. What is the material being handled? Coal

4. Mean wind speed at or near facility 9.9 miles per hour

5. Complete the following table for all unloading operations.

ID	Type of Unloading (see examples below)	Material Unloaded	Annual Quantity Unloaded (tons/yr)	Hourly Maximum Unloading Rate (tons/hr)	Avg. Moisture Content, as Unloaded (%)
A	Truck: <input type="checkbox"/> dump <input type="checkbox"/> pneumatic Vessel: <input type="checkbox"/> clamshell <input type="checkbox"/> bucket ladder Rail car: <input type="checkbox"/> side dump <input checked="" type="checkbox"/> bottom dump <input type="checkbox"/> rotary dump <input type="checkbox"/> pneumatic Other: _____	Coal	912,500	600	8%
B	Truck: <input type="checkbox"/> dump <input type="checkbox"/> pneumatic Vessel: <input type="checkbox"/> clamshell <input type="checkbox"/> bucket ladder Rail car: <input type="checkbox"/> side dump <input type="checkbox"/> bottom dump <input type="checkbox"/> rotary dump <input type="checkbox"/> pneumatic Other: _____				
C	Truck: <input type="checkbox"/> dump <input type="checkbox"/> pneumatic Vessel: <input type="checkbox"/> clamshell <input type="checkbox"/> bucket ladder Rail car: <input type="checkbox"/> side dump <input type="checkbox"/> bottom dump <input type="checkbox"/> rotary dump <input type="checkbox"/> pneumatic Other: _____				

D	Truck: <input type="checkbox"/> dump <input type="checkbox"/> pneumatic Vessel: <input type="checkbox"/> clamshell <input type="checkbox"/> bucket ladder Rail car: <input type="checkbox"/> side dump <input type="checkbox"/> bottom dump <input type="checkbox"/> rotary dump <input type="checkbox"/> pneumatic Other: _____				
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6. Complete the following table for all loading operations.

ID	Type of Loading (see examples below)	Material Loaded	Annual Quantity Loaded (tons/yr)	Hourly Maximum Loading Rate (tons/hr)	Avg. Moisture Content, as Loaded (%)
E	<input type="checkbox"/> front end loader <input type="checkbox"/> under pile load out <input type="checkbox"/> bucket well reclaimer <input type="checkbox"/> rake reclaimer <input type="checkbox"/> other: _____				
F	<input type="checkbox"/> front end loader <input type="checkbox"/> under pile load out <input type="checkbox"/> bucket well reclaimer <input type="checkbox"/> rake reclaimer <input type="checkbox"/> other: _____				
G	<input type="checkbox"/> front end loader <input type="checkbox"/> under pile load out <input type="checkbox"/> bucket well reclaimer <input type="checkbox"/> rake reclaimer <input type="checkbox"/> other: _____				
H	<input type="checkbox"/> front end loader <input type="checkbox"/> under pile load out <input type="checkbox"/> bucket well reclaimer <input type="checkbox"/> rake reclaimer <input type="checkbox"/> other: _____				

7. Complete the following table for all transfer operations.

ID	Type of Transfer Point (see examples below)	Number of Such Points	Type of Material Handled	Max. Transfer Rate (tons/hr)
I	<input type="checkbox"/> Load/unload conveyor: <input type="checkbox"/> vibrating <input type="checkbox"/> belt <input type="checkbox"/> screw <input type="checkbox"/> bucket elevator <input checked="" type="checkbox"/> belt conveyor to belt conveyor Other: _____	12	Coal	600
J	<input type="checkbox"/> Load/unload conveyor: <input type="checkbox"/> vibrating <input type="checkbox"/> belt <input type="checkbox"/> screw <input type="checkbox"/> bucket elevator <input checked="" type="checkbox"/> belt conveyor to belt conveyor Other: _____	6	Coal	600
K	<input type="checkbox"/> Load/unload conveyor: <input type="checkbox"/> vibrating <input type="checkbox"/> belt <input type="checkbox"/> screw <input type="checkbox"/> bucket elevator <input type="checkbox"/> belt conveyor to belt conveyor Other: _____			
L	<input type="checkbox"/> Load/unload conveyor: <input type="checkbox"/> vibrating <input type="checkbox"/> belt <input type="checkbox"/> screw <input type="checkbox"/> bucket elevator <input type="checkbox"/> belt conveyor to belt conveyor Other: _____			
M	<input type="checkbox"/> Load/unload conveyor: <input type="checkbox"/> vibrating <input type="checkbox"/> belt <input type="checkbox"/> screw <input type="checkbox"/> bucket elevator <input type="checkbox"/> belt conveyor to belt conveyor Other: _____			
N	<input type="checkbox"/> Load/unload conveyor: <input type="checkbox"/> vibrating <input type="checkbox"/> belt <input type="checkbox"/> screw <input type="checkbox"/> bucket elevator <input type="checkbox"/> belt conveyor to belt conveyor Other: _____			
O	<input type="checkbox"/> Load/unload conveyor: <input type="checkbox"/> vibrating <input type="checkbox"/> belt <input type="checkbox"/> screw <input type="checkbox"/> bucket elevator <input type="checkbox"/> belt conveyor to belt conveyor Other: _____			

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8. Summarize the material handling operations covered in items 5 through 7 above and identify the applicable control method(s) from available options. Complete the remaining table based upon the selected control method(s).

ID	Enclosure, Control Equipment (describe)	Chemical Stabilization	Application Frequency	Overall Control Eff. (%)	Basis for Overall Control Efficiency
A	Enclosure (Coal Unloading)	<input checked="" type="checkbox"/> water <input type="checkbox"/> dust suppressant <input type="checkbox"/> other: _____		70%	Ohio RACM
B		<input type="checkbox"/> water <input type="checkbox"/> dust suppressant <input type="checkbox"/> other: _____			
C		<input type="checkbox"/> water <input type="checkbox"/> dust suppressant <input type="checkbox"/> other: _____			
D		<input type="checkbox"/> water <input type="checkbox"/> dust suppressant <input type="checkbox"/> other: _____			
E		<input type="checkbox"/> water <input type="checkbox"/> dust suppressant <input type="checkbox"/> other: _____			
F		<input type="checkbox"/> water <input type="checkbox"/> dust suppressant <input type="checkbox"/> other: _____			
G		<input type="checkbox"/> water <input type="checkbox"/> dust suppressant <input type="checkbox"/> other: _____			
H		<input type="checkbox"/> water <input type="checkbox"/> dust suppressant <input type="checkbox"/> other: _____			
I	Enclosure (coal transfer)	<input type="checkbox"/> water <input type="checkbox"/> dust suppressant <input checked="" type="checkbox"/> other: <u>wet material</u>		95%	Ohio RACM
J	No enclosure (coal transfer)	<input type="checkbox"/> water <input type="checkbox"/> dust suppressant <input checked="" type="checkbox"/> other: <u>wet material</u>			

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K		<input type="checkbox"/> water <input type="checkbox"/> dust suppressant <input type="checkbox"/> other: _____			
L		<input type="checkbox"/> water <input type="checkbox"/> dust suppressant <input type="checkbox"/> other: _____			
M		<input type="checkbox"/> water <input type="checkbox"/> dust suppressant <input type="checkbox"/> other: _____			
N		<input type="checkbox"/> water <input type="checkbox"/> dust suppressant <input type="checkbox"/> other: _____			
O		<input type="checkbox"/> water <input type="checkbox"/> dust suppressant <input type="checkbox"/> other: _____			

Section II - Specific Air Contaminant Source Information

REVISED JULY 2008

NOTE: One copy of this section should be filled out for each air contaminant source covered by this PTI application. See the line by line PTI instructions for additional information.

1. Company identification (name for air contaminant source for which you are applying): Coke and breeze handling and processing (F004)
2. List all equipment that are part of this air contaminant source: Conveying and coke transfer towers and coke screening
3. Air Contaminant Source Installation or Modification Schedule (must be completed regardless of date of installation or modification):

When did/will you begin to install or modify the air contaminant source? (month/year) October 2008

When did/will you begin to operate the air contaminant source? (month/year) December 2009 **OR** after issuance of PTI _____

4. Emissions Information: The following table requests information needed to determine the applicable requirements and the compliance status of this air contaminant source with those requirements. Suggestions for how to estimate emissions may be found in the instructions to the Emissions Activity Category (EAC) forms required with this application. If you need further assistance, contact your Ohio EPA permit representative.

- If total potential emissions of HAPs or any Air Toxic is greater than 1 ton/yr, fill in the table for that (those) pollutant(s). For all other pollutants, if "Emissions before controls (max), lb/hr" multiplied by 24 hours/day is greater than 10 lb/day, fill in the table for that pollutant.
- If you have no add-on control equipment, "Emissions before controls" will be the same as "Actual emissions"
- Annual emissions should be based on operating 8760 hr/yr unless you are requesting operating restrictions to limit emissions in line # 8 or have described inherent limitations below.
- If you use units other than lb/hr or ton/yr, specify the units used (e.g., gr/dscf, lb/ton charged, lb/MMBtu, ton/12-months).
- Requested Allowable (ton/yr) is often equivalent to Potential to Emit (PTE) as defined in OAC rule 3745-31-01 and OAC rule 3745-77-01.

Pollutant	Emissions before controls (max) (lb/hr)	Actual emissions (lb/hr)	Actual emissions (ton/year)	Requested Allowable (lb/hr)	Requested Allowable (ton/year)
Particulate emissions (PE) (formerly particulate matter, PM)			21.47		21.47
PM ₁₀ (PM < 10 microns in diameter)			18.07		18.07
Sulfur dioxide (SO ₂)					
Nitrogen oxides (NO _x)					
Carbon monoxide (CO)					
Organic compounds (OC)					
Volatile organic compounds (VOC)					
Total HAPs					
Highest single HAP:					
Air Toxics (see instructions):					

Section II - Specific Air Contaminant Source Information

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Provide your calculations as an attachment and explain how all process variables and emission factors were selected. Note the emissions factor(s) employed and document the origin. Example: AP-42, Table 4.4-3 (8/97); stack test, Method 5, 4/96; mass balance based on MSDS; etc.

5. Does this air contaminant source employ emissions control equipment?

Yes - fill out the applicable information below.

No - proceed to item # 6.

Note: Pollutant abbreviations used below: Particulates = PE; Organic compounds = OC; Sulfur dioxide = SO₂; Nitrogen oxides = NO_x; Carbon monoxide = CO

Cyclone/Multiclone

Manufacturer: _____ Year installed: _____

What do you call this control equipment: _____

Pollutant(s) controlled: PE OC SO₂ NO_x CO Other _____

Estimated capture efficiency (%): _____ Basis for efficiency: _____

Design control efficiency (%): _____ Basis for efficiency: _____

Type: Cyclone Multiclone Rotoclone Other _____

This is the only control equipment on this air contaminant source

If no, this control equipment is: Primary Secondary Parallel

List any other air contaminant sources that are also vented to this control equipment:

Fabric Filter/Baghouse

Manufacturer: _____ Year installed: _____

What do you call this control equipment: Baghouse (for coke screening)

Pollutant(s) controlled: PE OC SO₂ NO_x CO Other _____

Estimated capture efficiency (%): 99% Basis for efficiency: Engineering Estimate

Design control efficiency (%): 99% Basis for efficiency: Engineering Estimate

Operating pressure drop range (inches of water): Minimum: 3 Maximum: 12

Pressure type: Negative pressure Positive pressure

Fabric cleaning mechanism: Reverse air Pulse jet Shaker Other _____

Lime injection or fabric coating agent used: Type: _____ Feed rate: _____

This is the only control equipment on this air contaminant source

If no, this control equipment is: Primary Secondary Parallel

List any other air contaminant sources that are also vented to this control equipment:

Wet Scrubber

Manufacturer: _____ Year installed: _____

What do you call this control equipment: _____

Pollutant(s) controlled: PE OC SO₂ NO_x CO Other _____

Estimated capture efficiency (%): _____ Basis for efficiency: _____

Design control efficiency (%): _____ Basis for efficiency: _____

Type: Spray chamber Packed bed Impingement Venturi Other _____

Operating pressure drop range (inches of water): Minimum: _____ Maximum: _____

pH range for scrubbing liquid: Minimum: _____ Maximum: _____

Scrubbing liquid flow rate (gal/min): _____

Is scrubber liquid recirculated? Yes No

Water supply pressure (psig): _____ NOTE: This item for spray chambers only.

This is the only control equipment on this air contaminant source

If no, this control equipment is: Primary Secondary Parallel

List any other air contaminant sources that are also vented to this control equipment:

Electrostatic Precipitator

Manufacturer: _____ Year installed: _____

What do you call this control equipment: _____

Pollutant(s) controlled: PE OC SO₂ NO_x CO Other _____

Estimated capture efficiency (%): _____ Basis for efficiency: _____
 Design control efficiency (%): _____ Basis for efficiency: _____
 Type: Plate-wire Flat-plate Tubular Wet Other _____
 Number of operating fields: _____

This is the only control equipment on this air contaminant source
 If no, this control equipment is: Primary Secondary Parallel
 List any other air contaminant sources that are also vented to this control equipment:

 Concentrator

Manufacturer: _____ Year installed: _____
 What do you call this control equipment: _____
 Pollutant(s) controlled: PE OC SO₂ NO_x CO Other _____
 Estimated capture efficiency (%): _____ Basis for efficiency: _____
 Design regeneration cycle time (minutes): _____
 Minimum desorption air stream temperature (°F): _____
 Rotational rate (revolutions/hour): _____

This is the only control equipment on this air contaminant source
 If no, this control equipment is: Primary Secondary Parallel
 List any other air contaminant sources that are also vented to this control equipment:

 Catalytic Incinerator

Manufacturer: _____ Year installed: _____
 What do you call this control equipment: _____
 Pollutant(s) controlled: PE OC SO₂ NO_x CO Other _____
 Estimated capture efficiency (%): _____ Basis for efficiency: _____
 Design control efficiency (%): _____ Basis for efficiency: _____
 Minimum inlet gas temperature (°F): _____
 Combustion chamber residence time (seconds): _____
 Minimum temperature difference (°F) across catalyst during air contaminant source operation: _____

This is the only control equipment on this air contaminant source
 If no, this control equipment is: Primary Secondary Parallel
 List any other air contaminant sources that are also vented to this control equipment:

 Thermal Incinerator/Thermal Oxidizer

Manufacturer: _____ Year installed: _____
 What do you call this control equipment: _____
 Pollutant(s) controlled: PE OC SO₂ NO_x CO Other _____
 Estimated capture efficiency (%): _____ Basis for efficiency: _____
 Design control efficiency (%): _____ Basis for efficiency: _____
 Minimum operating temperature (°F) and location: _____ (See line by line instructions.)
 Combustion chamber residence time (seconds): _____

This is the only control equipment on this air contaminant source
 If no, this control equipment is: Primary Secondary Parallel
 List any other air contaminant sources that are also vented to this control equipment:

 Flare

Manufacturer: _____ Year installed: _____
 What do you call this control equipment: _____
 Pollutant(s) controlled: PE OC SO₂ NO_x CO Other _____
 Estimated capture efficiency (%): _____ Basis for efficiency: _____
 Design control efficiency (%): _____ Basis for efficiency: _____

Type: Enclosed Elevated (open)
 Ignition device: Electric arc Pilot flame
 Flame presence sensor: Yes No
 This is the only control equipment on this air contaminant source

If no, this control equipment is: Primary Secondary Parallel

List any other air contaminant sources that are also vented to this control equipment:

Condenser

Manufacturer: _____ Year installed: _____

What do you call this control equipment: _____

Pollutant(s) controlled: PE OC SO₂ NO_x CO Other _____

Estimated capture efficiency (%): _____ Basis for efficiency: _____

Design control efficiency (%): _____ Basis for efficiency: _____

Type: Indirect contact Direct contact

Maximum exhaust gas temperature (°F) during air contaminant source operation: _____

Coolant type: _____

Design coolant temperature (°F): Minimum _____ Maximum _____

Design coolant flow rate (gpm): _____

This is the only control equipment on this air contaminant source

If no, this control equipment is: Primary Secondary Parallel

List any other air contaminant sources that are also vented to this control equipment:

Carbon Absorber

Manufacturer: _____ Year installed: _____

What do you call this control equipment: _____

Pollutant(s) controlled: PE OC SO₂ NO_x CO Other _____

Estimated capture efficiency (%): _____ Basis for efficiency: _____

Design control efficiency (%): _____ Basis for efficiency: _____

Type: On-site regenerative Disposable

Maximum design outlet organic compound concentration (ppmv): _____

Carbon replacement frequency or regeneration cycle time (specify units): _____

Maximum temperature of the carbon bed, after regeneration (including any cooling cycle): _____

This is the only control equipment on this air contaminant source

If no, this control equipment is: Primary Secondary Parallel

List any other air contaminant sources that are also vented to this control equipment:

Dry Scrubber

Manufacturer: _____ Year installed: _____

What do you call this control equipment: _____

Pollutant(s) controlled: PE OC SO₂ NO_x CO Other _____

Estimated capture efficiency (%): _____ Basis for efficiency: _____

Design control efficiency (%): _____ Basis for efficiency: _____

Reagent(s) used: Type: _____ Injection rate(s): _____

Operating pressure drop range (inches of water): Minimum: _____ Maximum: _____

This is the only control equipment on this air contaminant source

If no, this control equipment is: Primary Secondary Parallel

List any other air contaminant sources that are also vented to this control equipment:

Paint booth filter

Type: Paper Fiberglass Water curtain Other _____

Design control efficiency (%): _____ Basis for efficiency: _____

Other, describe Enclosures

Manufacturer: _____ Year installed: _____

What do you call this control equipment: Partial and total enclosure (transfer point)

Pollutant(s) controlled: PE OC SO₂ NO_x CO Other _____

Estimated capture efficiency (%): NA Basis for efficiency: _____

Design control efficiency (%): 70% Basis for efficiency: Ohio RACM

This is the only control equipment on this air contaminant source

If no, this control equipment is: Primary Secondary Parallel

List any other air contaminant sources that are also vented to this control equipment:

6. Attach a Process or Activity Flow Diagram to this application for each air contaminant source included in the application. The diagram should indicate their relationships to one another. See the line by line PTI instructions for additional information.

See Permit Application Text

7. Emissions egress point(s) information: PTIs which allow total emissions in excess of the thresholds listed below will be subject to an air quality modeling analysis. This analysis is to assure that the impact from the requested project will not exceed Ohio=s Acceptable Incremental Impacts for criteria pollutants and/or Maximum Allowable Ground Level Concentrations (MAGLC) for air toxics. Permit requests that would have unacceptable impacts can not be approved as proposed. See the line by line PTI instructions for additional information.

Complete the tables below if the requested allowable annual emission rate for this PTI exceeds any of the following:

- Particulate Matter (PM10): 10 tons per year
- Sulfur Dioxide (SO2): 25 tons per year
- Nitrogen Oxides (NOx): 25 tons per year
- Carbon Monoxide (CO): 100 tons per year
- Air Toxic: 1 ton per year. An air toxic is any air pollutant for which the American Council of Governmental Industrial Hygienists (ACGIH) has established a Threshold Limit Value (TLV).

Complete Table 7-A below for each stack emissions egress point. An egress point is a point at which emissions from an air contaminant source are released into the ambient (outside) air. List each individual egress point on a separate line.

Table 7-A, Stack Egress Point Information						
Company Name or ID for the Egress Point (examples: Stack A; Boiler Stack; etc.)	Type Code*	Stack Egress Point Shape and Dimensions (in)(examples: round 10 inch ID; rectangular 14 X 16 inches; etc.)	Stack Egress Point Height from the Ground (ft)	Stack Temp. at Max. Capacity (F)	Stack Flow Rate at Max. Capacity (ACFM)	Minimum Distance to the Property Line (ft)
Coke screening	A	4.3 ft	27	70	50,000	

*Type codes for stack egress points:

- A. vertical stack (unobstructed): There are no obstructions to upward flow in or on the stack such as a rain cap.
- B. vertical stack (obstructed): There are obstructions to the upward flow, such as a rain cap, which prevents

- or inhibits the air flow in a vertical direction.
- C. non-vertical stack: The stack directs the air flow in a direction which is not directly upward.

Complete Table 7-B below for each fugitive emissions egress point. List each individual egress point on a separate line. Refer to the description of the fugitive egress point type codes below the table for use in completing the type code column of the table. For air contaminant sources like roadways and storage piles, only the first 5 columns need to be completed. For an air contaminant source with multiple fugitive emissions egress points, include only the primary egress points.

Table 7-B, Fugitive Egress Point Information					
Company ID for the Egress Point (examples; Garage Door B, Building C; Roof Monitor; etc.)	Type Code*	Egress Point Description (examples: garage door, 12 X 30 feet, west wall; outside gravel storage piles; etc.)	Fugitive Egress Point Height from the Ground (ft)	Minimum Distance to the Property Line (ft)	Exit Gas Temp. (F)
Coke Transfer	F				

*Type codes for fugitive egress point:

- D. door or window
- E. other opening in the building without a duct
- F. no stack and no building enclosing the air contaminant source (e.g., roadways)

Complete Table 7-C below for each Stack Egress Point identified in Table 7-A above. In each case, use the dimensions of the largest nearby building, building segment or structure. List each individual egress point on a separate line. Use the same Company Name or ID for the Egress Point in Table 7-C that was used in Table 7-A. See the line by line PTI instructions for additional information.

Table 7-C, Egress Point Additional Information (Add rows as necessary)			
Company ID or Name for the Egress Point	Building Height (ft)	Building Width (ft)	Building Length (ft)

8. Request for Federally Enforceable Limits

As part of this permit application, do you wish to propose voluntary restrictions to limit emissions in order to avoid specific requirements listed below, (i.e., are you requesting federally enforceable limits to obtain synthetic minor status)?

- yes
- no
- not sure - please contact me if this affects me

If yes, why are you requesting federally enforceable limits? Check all that apply.

- a. to avoid being a major source (see OAC rule 3745-77-01)
- b. to avoid being a major MACT source (see OAC rule 3745-31-01)
- c. to avoid being a major modification (see OAC rule 3745-31-01)
- d. to avoid being a major stationary source (see OAC rule 3745-31-01)
- e. to avoid an air dispersion modeling requirement (see Engineering Guide # 69)
- f. to avoid another requirement. Describe: _____

If you checked a., b. or d., please attach a facility-wide potential to emit (PTE) analysis (for each pollutant) and synthetic minor strategy to this application. (See line by line instructions for definition of PTE.) If you checked c., please attach a net emission change analysis to this application.

9. If this air contaminant source utilizes any continuous emissions monitoring equipment for indicating or demonstrating compliance, complete the following table. This does not include continuous parametric monitoring systems.

Company ID for Egress Point	Type of Monitor	Applicable performance specification (40 CFR 60, Appendix B)	Pollutant(s) Monitored

10. Do you wish to permit this air contaminant source as a portable source, allowing relocation within the state in accordance with OAC rule 3745-31-03 or OAC rule 3745-31-05?

- yes - Note: notification requirements in rules cited above must be followed.
- no

11. The appropriate Emissions Activity Category (EAC) form(s) must be completed and attached for each air contaminant source. At least one complete EAC form must be submitted for each air contaminant source for the application to be considered complete. Refer to the list attached to the PTI instructions.

FOR OHIO EPA USE
 FACILITY ID: _____
 EU ID: _____ PTI#: _____

EMISSIONS ACTIVITY CATEGORY FORM
MATERIAL HANDLING: FUGITIVE DUST EMISSIONS

This form is to be completed for any material handling operation with fugitive dust emissions. State/Federal regulations which may apply to material handling operations are listed in the instructions. Note that there may be other regulations which apply to this emissions unit which are not included in this list.

1. Reason this form is being submitted (Check one)

New Permit Renewal or Modification of Air Permit Number(s) (e.g. F001) F004

2. Maximum Operating Schedule: 24 hours per day; 365 days per year

If the schedule is less than 24 hours/day or 365 days/year, what limits the schedule to less than maximum? See instructions for examples. _____

3. What is the material being handled? Coke

4. Mean wind speed at or near facility 9.9 miles per hour

5. Complete the following table for all unloading operations.

ID	Type of Unloading (see examples below)	Material Unloaded	Annual Quantity Unloaded (tons/yr)	Hourly Maximum Unloading Rate (tons/hr)	Avg. Moisture Content, as Unloaded (%)
A	Truck: <input type="checkbox"/> dump <input type="checkbox"/> pneumatic Vessel: <input type="checkbox"/> clamshell <input type="checkbox"/> bucket ladder Rail car: <input type="checkbox"/> side dump <input type="checkbox"/> bottom dump <input type="checkbox"/> rotary dump <input type="checkbox"/> pneumatic Other: _____				
B	Truck: <input type="checkbox"/> dump <input type="checkbox"/> pneumatic Vessel: <input type="checkbox"/> clamshell <input type="checkbox"/> bucket ladder Rail car: <input type="checkbox"/> side dump <input type="checkbox"/> bottom dump <input type="checkbox"/> rotary dump <input type="checkbox"/> pneumatic Other: _____				
C	Truck: <input type="checkbox"/> dump <input type="checkbox"/> pneumatic Vessel: <input type="checkbox"/> clamshell <input type="checkbox"/> bucket ladder Rail car: <input type="checkbox"/> side dump <input type="checkbox"/> bottom dump <input type="checkbox"/> rotary dump <input type="checkbox"/> pneumatic Other: _____				

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D	Truck: <input type="checkbox"/> dump <input type="checkbox"/> pneumatic Vessel: <input type="checkbox"/> clamshell <input type="checkbox"/> bucket ladder Rail car: <input type="checkbox"/> side dump <input type="checkbox"/> bottom dump <input type="checkbox"/> rotary dump <input type="checkbox"/> pneumatic Other: _____				
----------	---	--	--	--	--

6. Complete the following table for all loading operations.

ID	Type of Loading (see examples below)	Material Loaded	Annual Quantity Loaded (tons/yr)	Hourly Maximum Loading Rate (tons/hr)	Avg. Moisture Content, as Loaded (%)
E	<input type="checkbox"/> front end loader <input type="checkbox"/> under pile load out <input type="checkbox"/> bucket well reclaimer <input type="checkbox"/> rake reclaimer <input checked="" type="checkbox"/> other: <u>Conveyor to AK Steel (alternate rail loadout)</u>	Coke	613,828	500	7%
F	<input type="checkbox"/> front end loader <input type="checkbox"/> under pile load out <input type="checkbox"/> bucket well reclaimer <input type="checkbox"/> rake reclaimer <input checked="" type="checkbox"/> other: <u>Truck</u>	Coke Breeze	40,621	500	7%
G	<input type="checkbox"/> front end loader <input type="checkbox"/> under pile load out <input type="checkbox"/> bucket well reclaimer <input type="checkbox"/> rake reclaimer <input type="checkbox"/> other: _____				
H	<input type="checkbox"/> front end loader <input type="checkbox"/> under pile load out <input type="checkbox"/> bucket well reclaimer <input type="checkbox"/> rake reclaimer <input type="checkbox"/> other: _____				

7. Complete the following table for all transfer operations.

ID	Type of Transfer Point (see examples below)	Number of Such Points	Type of Material Handled	Max. Transfer Rate (tons/hr)
I	<input type="checkbox"/> Load/unload conveyor: <input type="checkbox"/> vibrating <input type="checkbox"/> belt <input type="checkbox"/> screw <input type="checkbox"/> bucket elevator <input checked="" type="checkbox"/> belt conveyor to belt conveyor Other: _____	19	Coke	500
J	<input type="checkbox"/> Load/unload conveyor: <input type="checkbox"/> vibrating <input type="checkbox"/> belt <input type="checkbox"/> screw <input type="checkbox"/> bucket elevator <input checked="" type="checkbox"/> belt conveyor to belt conveyor Other: _____	6	Coke	500
K	<input type="checkbox"/> Load/unload conveyor: <input type="checkbox"/> vibrating <input type="checkbox"/> belt <input type="checkbox"/> screw <input type="checkbox"/> bucket elevator <input checked="" type="checkbox"/> belt conveyor to belt conveyor Other: _____	1	Coke	500
L	<input type="checkbox"/> Load/unload conveyor: <input type="checkbox"/> vibrating <input type="checkbox"/> belt <input type="checkbox"/> screw <input type="checkbox"/> bucket elevator <input type="checkbox"/> belt conveyor to belt conveyor Other: _____			
M	<input type="checkbox"/> Load/unload conveyor: <input type="checkbox"/> vibrating <input type="checkbox"/> belt <input type="checkbox"/> screw <input type="checkbox"/> bucket elevator <input type="checkbox"/> belt conveyor to belt conveyor Other: _____			
N	<input type="checkbox"/> Load/unload conveyor: <input type="checkbox"/> vibrating <input type="checkbox"/> belt <input type="checkbox"/> screw <input type="checkbox"/> bucket elevator <input type="checkbox"/> belt conveyor to belt conveyor Other: _____			
O	<input type="checkbox"/> Load/unload conveyor: <input type="checkbox"/> vibrating <input type="checkbox"/> belt <input type="checkbox"/> screw <input type="checkbox"/> bucket elevator <input type="checkbox"/> belt conveyor to belt conveyor Other: _____			

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8. Summarize the material handling operations covered in items 5 through 7 above and identify the applicable control method(s) from available options. Complete the remaining table based upon the selected control method(s).

ID	Enclosure, Control Equipment (describe)	Chemical Stabilization	Application Frequency	Overall Control Eff. (%)	Basis for Overall Control Efficiency
A		<input type="checkbox"/> water <input type="checkbox"/> dust suppressant <input type="checkbox"/> other: _____			
B		<input type="checkbox"/> water <input type="checkbox"/> dust suppressant <input type="checkbox"/> other: _____			
C		<input type="checkbox"/> water <input type="checkbox"/> dust suppressant <input type="checkbox"/> other: _____			
D		<input type="checkbox"/> water <input type="checkbox"/> dust suppressant <input type="checkbox"/> other: _____			
E	Conveyor to AK Steel (enclosed)	<input type="checkbox"/> water <input type="checkbox"/> dust suppressant <input checked="" type="checkbox"/> other: <u>wet material</u>		70%	Ohio RACM
F	Coke breeze bin loadout (enclosed)	<input type="checkbox"/> water <input type="checkbox"/> dust suppressant <input type="checkbox"/> other: _____		70%	Ohio RACM
G		<input type="checkbox"/> water <input type="checkbox"/> dust suppressant <input type="checkbox"/> other: _____			
H		<input type="checkbox"/> water <input type="checkbox"/> dust suppressant <input type="checkbox"/> other: _____			
I	Enclosure (coke transfer)	<input type="checkbox"/> water <input type="checkbox"/> dust suppressant <input checked="" type="checkbox"/> other: <u>wet material</u>		70%	Ohio RACM
J	No enclosure (coke transfer)	<input type="checkbox"/> water <input type="checkbox"/> dust suppressant <input checked="" type="checkbox"/> other: <u>wet material</u>			

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K	Partial enclosure (coke transfer)	<input type="checkbox"/> water <input type="checkbox"/> dust suppressant <input type="checkbox"/> other: _____		70%	Ohio RACM
L		<input type="checkbox"/> water <input type="checkbox"/> dust suppressant <input type="checkbox"/> other: _____			
M		<input type="checkbox"/> water <input type="checkbox"/> dust suppressant <input type="checkbox"/> other: _____			
N		<input type="checkbox"/> water <input type="checkbox"/> dust suppressant <input type="checkbox"/> other: _____			
O		<input type="checkbox"/> water <input type="checkbox"/> dust suppressant <input type="checkbox"/> other: _____			

Section II - Specific Air Contaminant Source Information

REVISED JULY 2008

NOTE: One copy of this section should be filled out for each air contaminant source covered by this PTI application. See the line by line PTI instructions for additional information.

1. Company identification (name for air contaminant source for which you are applying): Quench Tower (P001)
2. List all equipment that are part of this air contaminant source: Quench tower with water sprays and baffles to cool hot coke
3. Air Contaminant Source Installation or Modification Schedule (must be completed regardless of date of installation or modification):

When did/will you begin to install or modify the air contaminant source? (month/year) October 2008

When did/will you begin to operate the air contaminant source? (month/year) December 2009 **OR** after issuance of PTI

4. Emissions Information: The following table requests information needed to determine the applicable requirements and the compliance status of this air contaminant source with those requirements. Suggestions for how to estimate emissions may be found in the instructions to the Emissions Activity Category (EAC) forms required with this application. If you need further assistance, contact your Ohio EPA permit representative.

- If total potential emissions of HAPs or any Air Toxic is greater than 1 ton/yr, fill in the table for that (those) pollutant(s). For all other pollutants, if "Emissions before controls (max), lb/hr" multiplied by 24 hours/day is greater than 10 lb/day, fill in the table for that pollutant.
- If you have no add-on control equipment, "Emissions before controls" will be the same as "Actual emissions"
- Annual emissions should be based on operating 8760 hr/yr unless you are requesting operating restrictions to limit emissions in line # 8 or have described inherent limitations below.
- If you use units other than lb/hr or ton/yr, specify the units used (e.g., gr/dscf, lb/ton charged, lb/MMBtu, ton/12-months).
- Requested Allowable (ton/yr) is often equivalent to Potential to Emit (PTE) as defined in OAC rule 3745-31-01 and OAC rule 3745-77-01.

Pollutant	Emissions before controls (max) (lb/hr)	Actual emissions (lb/hr)	Actual emissions (ton/year)	Requested Allowable (lb/hr)	Requested Allowable (ton/year)
Particulate emissions (PE) (formerly particulate matter, PM)		60.00	54.75	60.00	54.75
PM ₁₀ (PM < 10 microns in diameter)		22.00	20.08	22.00	20.08
Sulfur dioxide (SO ₂)					
Nitrogen oxides (NO _x)					
Carbon monoxide (CO)					
Organic compounds (OC)					
Volatile organic compounds (VOC)					
Total HAPs					
Highest single HAP:					
Air Toxics (see instructions):					

Note:

1. Based on 10 charges/hr. Number provided is maximum hourly.

Section II - Specific Air Contaminant Source Information

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Provide your calculations as an attachment and explain how all process variables and emission factors were selected. Note the emissions factor(s) employed and document the origin. Example: AP-42, Table 4.4-3 (8/97); stack test, Method 5, 4/96; mass balance based on MSDS; etc.

5. Does this air contaminant source employ emissions control equipment?

Yes - fill out the applicable information below.

No - proceed to item # 6.

Note: Pollutant abbreviations used below: Particulates = PE; Organic compounds = OC; Sulfur dioxide = SO₂; Nitrogen oxides = NO_x; Carbon monoxide = CO

Cyclone/Multiclone

Manufacturer: _____ Year installed: _____

What do you call this control equipment: _____

Pollutant(s) controlled: PE OC SO₂ NO_x CO Other _____

Estimated capture efficiency (%): _____ Basis for efficiency: _____

Design control efficiency (%): _____ Basis for efficiency: _____

Type: Cyclone Multiclone Rotoclone Other _____

This is the only control equipment on this air contaminant source

If no, this control equipment is: Primary Secondary Parallel

List any other air contaminant sources that are also vented to this control equipment:

Fabric Filter/Baghouse

Manufacturer: _____ Year installed: _____

What do you call this control equipment: _____

Pollutant(s) controlled: PE OC SO₂ NO_x CO Other _____

Estimated capture efficiency (%): _____ Basis for efficiency: _____

Design control efficiency (%): _____ Basis for efficiency: _____

Operating pressure drop range (inches of water): Minimum: _____ Maximum: _____

Pressure type: Negative pressure Positive pressure

Fabric cleaning mechanism: Reverse air Pulse jet Shaker Other _____

Lime injection or fabric coating agent used: Type: _____ Feed rate: _____

This is the only control equipment on this air contaminant source

If no, this control equipment is: Primary Secondary Parallel

List any other air contaminant sources that are also vented to this control equipment:

Wet Scrubber

Manufacturer: _____ Year installed: _____

What do you call this control equipment: _____

Pollutant(s) controlled: PE OC SO₂ NO_x CO Other _____

Estimated capture efficiency (%): _____ Basis for efficiency: _____

Design control efficiency (%): _____ Basis for efficiency: _____

Type: Spray chamber Packed bed Impingement Venturi Other _____

Operating pressure drop range (inches of water): Minimum: _____ Maximum: _____

pH range for scrubbing liquid: Minimum: _____ Maximum: _____

Scrubbing liquid flow rate (gal/min): _____

Is scrubber liquid recirculated? Yes No

Water supply pressure (psig): _____ NOTE: This item for spray chambers only.

This is the only control equipment on this air contaminant source

If no, this control equipment is: Primary Secondary Parallel

List any other air contaminant sources that are also vented to this control equipment:

Electrostatic Precipitator

Manufacturer: _____ Year installed: _____

What do you call this control equipment: _____

Pollutant(s) controlled: PE OC SO₂ NO_x CO Other _____

Estimated capture efficiency (%): _____ Basis for efficiency: _____
 Design control efficiency (%): _____ Basis for efficiency: _____
 Type: Plate-wire Flat-plate Tubular Wet Other _____
 Number of operating fields: _____

This is the only control equipment on this air contaminant source
 If no, this control equipment is: Primary Secondary Parallel
 List any other air contaminant sources that are also vented to this control equipment:

Concentrator

Manufacturer: _____ Year installed: _____
 What do you call this control equipment: _____
 Pollutant(s) controlled: PE OC SO₂ NO_x CO Other _____
 Estimated capture efficiency (%): _____ Basis for efficiency: _____
 Design regeneration cycle time (minutes): _____
 Minimum desorption air stream temperature (°F): _____
 Rotational rate (revolutions/hour): _____

This is the only control equipment on this air contaminant source
 If no, this control equipment is: Primary Secondary Parallel
 List any other air contaminant sources that are also vented to this control equipment:

Catalytic Incinerator

Manufacturer: _____ Year installed: _____
 What do you call this control equipment: _____
 Pollutant(s) controlled: PE OC SO₂ NO_x CO Other _____
 Estimated capture efficiency (%): _____ Basis for efficiency: _____
 Design control efficiency (%): _____ Basis for efficiency: _____
 Minimum inlet gas temperature (°F): _____
 Combustion chamber residence time (seconds): _____
 Minimum temperature difference (°F) across catalyst during air contaminant source operation: _____

This is the only control equipment on this air contaminant source
 If no, this control equipment is: Primary Secondary Parallel
 List any other air contaminant sources that are also vented to this control equipment:

Thermal Incinerator/Thermal Oxidizer

Manufacturer: _____ Year installed: _____
 What do you call this control equipment: _____
 Pollutant(s) controlled: PE OC SO₂ NO_x CO Other _____
 Estimated capture efficiency (%): _____ Basis for efficiency: _____
 Design control efficiency (%): _____ Basis for efficiency: _____
 Minimum operating temperature (°F) and location: _____ (See line by line instructions.)
 Combustion chamber residence time (seconds): _____

This is the only control equipment on this air contaminant source
 If no, this control equipment is: Primary Secondary Parallel
 List any other air contaminant sources that are also vented to this control equipment:

Flare

Manufacturer: _____ Year installed: _____
 What do you call this control equipment: _____
 Pollutant(s) controlled: PE OC SO₂ NO_x CO Other _____
 Estimated capture efficiency (%): _____ Basis for efficiency: _____
 Design control efficiency (%): _____ Basis for efficiency: _____
 Type: Enclosed Elevated (open)

Ignition device: Electric arc Pilot flame
 Flame presence sensor: Yes No
 This is the only control equipment on this air contaminant source

If no, this control equipment is: Primary Secondary Parallel
 List any other air contaminant sources that are also vented to this control equipment:

 Condenser

Manufacturer: _____ Year installed: _____

What do you call this control equipment: _____

Pollutant(s) controlled: PE OC SO₂ NO_x CO Other _____

Estimated capture efficiency (%): _____ Basis for efficiency: _____

Design control efficiency (%): _____ Basis for efficiency: _____

Type: Indirect contact Direct contact

Maximum exhaust gas temperature (°F) during air contaminant source operation: _____

Coolant type: _____

Design coolant temperature (°F): Minimum _____ Maximum _____

Design coolant flow rate (gpm): _____

This is the only control equipment on this air contaminant source

If no, this control equipment is: Primary Secondary Parallel

List any other air contaminant sources that are also vented to this control equipment:

 Carbon Absorber

Manufacturer: _____ Year installed: _____

What do you call this control equipment: _____

Pollutant(s) controlled: PE OC SO₂ NO_x CO Other _____

Estimated capture efficiency (%): _____ Basis for efficiency: _____

Design control efficiency (%): _____ Basis for efficiency: _____

Type: On-site regenerative Disposable

Maximum design outlet organic compound concentration (ppmv): _____

Carbon replacement frequency or regeneration cycle time (specify units): _____

Maximum temperature of the carbon bed, after regeneration (including any cooling cycle): _____

This is the only control equipment on this air contaminant source

If no, this control equipment is: Primary Secondary Parallel

List any other air contaminant sources that are also vented to this control equipment:

 Dry Scrubber

Manufacturer: _____ Year installed: _____

What do you call this control equipment: _____

Pollutant(s) controlled: PE OC SO₂ NO_x CO Other _____

Estimated capture efficiency (%): _____ Basis for efficiency: _____

Design control efficiency (%): _____ Basis for efficiency: _____

Reagent(s) used: Type: _____ Injection rate(s): _____

Operating pressure drop range (inches of water): Minimum: _____ Maximum: _____

This is the only control equipment on this air contaminant source

If no, this control equipment is: Primary Secondary Parallel

List any other air contaminant sources that are also vented to this control equipment:

 Paint booth filter

Type: Paper Fiberglass Water curtain Other _____

Design control efficiency (%): _____ Basis for efficiency: _____

 Other, describe Baffles and water with TDS limit

Manufacturer: _____ Year installed: _____

What do you call this control equipment: _____

Pollutant(s) controlled: PE OC SO₂ NO_x CO Other _____

Estimated capture efficiency (%): Include in EF Basis for efficiency: AP-42

Design control efficiency (%): NA Basis for efficiency: _____

This is the only control equipment on this air contaminant source

If no, this control equipment is: Primary Secondary Parallel

List any other air contaminant sources that are also vented to this control equipment:

6. Attach a Process or Activity Flow Diagram to this application for each air contaminant source included in the application. The diagram should indicate their relationships to one another. See the line by line PTI instructions for additional information.

See Permit Application Text

7. Emissions egress point(s) information: PTIs which allow total emissions in excess of the thresholds listed below will be subject to an air quality modeling analysis. This analysis is to assure that the impact from the requested project will not exceed Ohio=s Acceptable Incremental Impacts for criteria pollutants and/or Maximum Allowable Ground Level Concentrations (MAGLC) for air toxics. Permit requests that would have unacceptable impacts can not be approved as proposed. See the line by line PTI instructions for additional information.

Complete the tables below if the requested allowable annual emission rate for this PTI exceeds any of the following:

- Particulate Matter (PM10): 10 tons per year
- Sulfur Dioxide (SO2): 25 tons per year
- Nitrogen Oxides (NOx): 25 tons per year
- Carbon Monoxide (CO): 100 tons per year
- Air Toxic: 1 ton per year. An air toxic is any air pollutant for which the American Council of Governmental Industrial Hygienists (ACGIH) has established a Threshold Limit Value (TLV).

Complete Table 7-A below for each stack emissions egress point. An egress point is a point at which emissions from an air contaminant source are released into the ambient (outside) air. List each individual egress point on a separate line.

Table 7-A, Stack Egress Point Information						
Company Name or ID for the Egress Point (examples: Stack A; Boiler Stack; etc.)	Type Code*	Stack Egress Point Shape and Dimensions (in)(examples: round 10 inch ID; rectangular 14 X 16 inches; etc.)	Stack Egress Point Height from the Ground (ft)	Stack Temp. at Max. Capacity (F)	Stack Flow Rate at Max. Capacity (ACFM)	Minimum Distance to the Property Line (ft)
Quench Tower	A	Rectangular	60	200	750,000	

*Type codes for stack egress points:

- A. vertical stack (unobstructed): There are no obstructions to upward flow in or on the stack such as a rain cap.
- B. vertical stack (obstructed): There are obstructions to the upward flow, such as a rain cap, which prevents

- or inhibits the air flow in a vertical direction.
- C. non-vertical stack: The stack directs the air flow in a direction which is not directly upward.

Complete Table 7-B below for each fugitive emissions egress point. List each individual egress point on a separate line. Refer to the description of the fugitive egress point type codes below the table for use in completing the type code column of the table. For air contaminant sources like roadways and storage piles, only the first 5 columns need to be completed. For an air contaminant source with multiple fugitive emissions egress points, include only the primary egress points.

Table 7-B, Fugitive Egress Point Information					
Company ID for the Egress Point (examples; Garage Door B, Building C; Roof Monitor; etc.)	Type Code*	Egress Point Description (examples: garage door, 12 X 30 feet, west wall; outside gravel storage piles; etc.)	Fugitive Egress Point Height from the Ground (ft)	Minimum Distance to the Property Line (ft)	Exit Gas Temp. (F)

*Type codes for fugitive egress point:

- D. door or window
- E. other opening in the building without a duct
- F. no stack and no building enclosing the air contaminant source (e.g., roadways)

Complete Table 7-C below for each Stack Egress Point identified in Table 7-A above. In each case, use the dimensions of the largest nearby building, building segment or structure. List each individual egress point on a separate line. Use the same Company Name or ID for the Egress Point in Table 7-C that was used in Table 7-A. See the line by line PTI instructions for additional information.

Table 7-C, Egress Point Additional Information (Add rows as necessary)			
Company ID or Name for the Egress Point	Building Height (ft)	Building Width (ft)	Building Length (ft)

8. Request for Federally Enforceable Limits

As part of this permit application, do you wish to propose voluntary restrictions to limit emissions in order to avoid specific requirements listed below, (i.e., are you requesting federally enforceable limits to obtain synthetic minor status)?

- yes
- no
- not sure - please contact me if this affects me

If yes, why are you requesting federally enforceable limits? Check all that apply.

- a. to avoid being a major source (see OAC rule 3745-77-01)
- b. to avoid being a major MACT source (see OAC rule 3745-31-01)
- c. to avoid being a major modification (see OAC rule 3745-31-01)
- d. to avoid being a major stationary source (see OAC rule 3745-31-01)
- e. to avoid an air dispersion modeling requirement (see Engineering Guide # 69)
- f. to avoid another requirement. Describe: _____

If you checked a., b. or d., please attach a facility-wide potential to emit (PTE) analysis (for each pollutant) and synthetic minor strategy to this application. (See line by line instructions for definition of PTE.) If you checked c., please attach a net emission change analysis to this application.

9. If this air contaminant source utilizes any continuous emissions monitoring equipment for indicating or demonstrating compliance, complete the following table. This does not include continuous parametric monitoring systems.

Company ID for Egress Point	Type of Monitor	Applicable performance specification (40 CFR 60, Appendix B)	Pollutant(s) Monitored

10. Do you wish to permit this air contaminant source as a portable source, allowing relocation within the state in accordance with OAC rule 3745-31-03 or OAC rule 3745-31-05?

- yes - Note: notification requirements in rules cited above must be followed.
- no

11. The appropriate Emissions Activity Category (EAC) form(s) must be completed and attached for each air contaminant source. At least one complete EAC form must be submitted for each air contaminant source for the application to be considered complete. Refer to the list attached to the PTI instructions.

EMISSIONS ACTIVITY CATEGORY FORM GENERAL PROCESS OPERATION

This form is to be completed for each process operation when there is no specific emissions activity category (EAC) form applicable. If there is more than one end product for this process, copy and complete this form for each additional product (see instructions). Several State/Federal regulations which may apply to process operations are listed in the instructions. Note that there may be other regulations which apply to this emissions unit which are not included in this list.

1. Reason this form is being submitted (Check one)

New Permit Renewal or Modification of Air Permit Number(s) (e.g. P001) P001

2. Maximum Operating Schedule: 24 hours per day ; 365 days per year

If the schedule is less than 24 hours/day or 365 days/year, what limits the schedule to less than maximum? See instructions for examples. _____

3. End product of this process: Cooled Coke

4. Hourly production rates (indicate appropriate units). Please see the instructions for clarification of "Maximum" and "Average" for new versus existing operations:

Hourly	Rate	Units (e.g., widgets)
Average production	104	tons coal/hr
Maximum production	2,500	tons coal/day

5. Annual production rates (indicate appropriate units) Please see the instructions for clarification of "Maximum" and "Actual" for new versus existing operations:

Annual	Rate	Units (e.g., widgets)
Actual production	912,500	tons coal/yr
Maximum production	912,500	tons coal/yr

Section II - Specific Air Contaminant Source Information

REVISED JULY 2008

NOTE: One copy of this section should be filled out for each air contaminant source covered by this PTI application. See the line by line PTI instructions for additional information.

1. Company identification (name for air contaminant source for which you are applying): Charging (P901)
2. List all equipment that are part of this air contaminant source: Charging control system – baghouse stack
3. Air Contaminant Source Installation or Modification Schedule (must be completed regardless of date of installation or modification):

When did/will you begin to install or modify the air contaminant source? (month/year) October 2008

When did/will you begin to operate the air contaminant source? (month/year) December 2009 **OR** after issuance of PTI

4. Emissions Information: The following table requests information needed to determine the applicable requirements and the compliance status of this air contaminant source with those requirements. Suggestions for how to estimate emissions may be found in the instructions to the Emissions Activity Category (EAC) forms required with this application. If you need further assistance, contact your Ohio EPA permit representative.

- If total potential emissions of HAPs or any Air Toxic is greater than 1 ton/yr, fill in the table for that (those) pollutant(s). For all other pollutants, if “Emissions before controls (max), lb/hr” multiplied by 24 hours/day is greater than 10 lb/day, fill in the table for that pollutant.
- If you have no add-on control equipment, “Emissions before controls= will be the same as “Actual emissions”
- Annual emissions should be based on operating 8760 hr/yr unless you are requesting operating restrictions to limit emissions in line # 8 or have described inherent limitations below.
- If you use units other than lb/hr or ton/yr, specify the units used (e.g., gr/dscf, lb/ton charged, lb/MMBtu, ton/12-months).
- Requested Allowable (ton/yr) is often equivalent to Potential to Emit (PTE) as defined in OAC rule 3745-31-01 and OAC rule 3745-77-01.

Pollutant	Emissions before controls (max) (lb/hr)	Actual emissions (lb/hr)	Actual emissions (ton/year)	Requested Allowable (lb/hr)	Requested Allowable (ton/year)
Filterable Particulate emissions (PE) (formerly particulate matter, PM)		5.08	4.63	5.08	4.63
Total PM ₁₀ (PM < 10 microns in diameter)		7.77	7.09	7.77	7.09
Sulfur dioxide (SO ₂)		0.15	0.14	0.15	0.14
Nitrogen oxides (NO _x)					
Carbon monoxide (CO)		1.40	1.28	1.40	1.28
Organic compounds (OC)					
Volatile organic compounds (VOC)		1.00	0.91	1.00	0.91
Total HAPs					
Highest single HAP:					
Air Toxics (see instructions):					

Note:

1. Fugitives based on AP-42 Coke Production section emission factor, assuming 90% capture by traveling hood and baghouse.

2. Fugitive PM₁₀ assumed = 30% of PM. Hourly fugitive emissions based on 10 charges/hr. Number is maximum hourly.

Provide your calculations as an attachment and explain how all process variables and emission factors were selected. Note the emissions factor(s) employed and document the origin. Example: AP-42, Table 4.4-3 (8/97); stack test, Method 5, 4/96; mass balance based on MSDS; etc.

5. **Does this air contaminant source employ emissions control equipment?**

Yes - fill out the applicable information below.

No - proceed to item # 6.

Note: Pollutant abbreviations used below: Particulates = PE; Organic compounds = OC; Sulfur dioxide = SO₂; Nitrogen oxides = NO_x; Carbon monoxide = CO

Cyclone/Multiclone

Manufacturer: _____ Year installed: _____

What do you call this control equipment: _____

Pollutant(s) controlled: PE OC SO₂ NO_x CO Other _____

Estimated capture efficiency (%): _____ Basis for efficiency: _____

Design control efficiency (%): _____ Basis for efficiency: _____

Type: Cyclone Multiclone Rotoclone Other _____

This is the only control equipment on this air contaminant source

If no, this control equipment is: Primary Secondary Parallel

List any other air contaminant sources that are also vented to this control equipment:

Fabric Filter/Baghouse

Manufacturer: _____ Year installed: _____

What do you call this control equipment: Traveling hood with baghouse

Pollutant(s) controlled: PE OC SO₂ NO_x CO Other _____

Estimated capture efficiency (%): 90% Basis for efficiency: Engineering Estimate

Design control efficiency (%): 99% Basis for efficiency: Engineering Estimate

Operating pressure drop range (inches of water): Minimum: 3 Maximum: 12

Pressure type: Negative pressure Positive pressure

Fabric cleaning mechanism: Reverse air Pulse jet Shaker Other _____

Lime injection or fabric coating agent used: Type: _____ Feed rate: _____

This is the only control equipment on this air contaminant source

If no, this control equipment is: Primary Secondary Parallel

List any other air contaminant sources that are also vented to this control equipment:

Wet Scrubber

Manufacturer: _____ Year installed: _____

What do you call this control equipment: _____

Pollutant(s) controlled: PE OC SO₂ NO_x CO Other _____

Estimated capture efficiency (%): _____ Basis for efficiency: _____

Design control efficiency (%): _____ Basis for efficiency: _____

Type: Spray chamber Packed bed Impingement Venturi Other _____

Operating pressure drop range (inches of water): Minimum: _____ Maximum: _____

pH range for scrubbing liquid: Minimum: _____ Maximum: _____

Scrubbing liquid flow rate (gal/min): _____

Is scrubber liquid recirculated? Yes No

Water supply pressure (psig): _____ NOTE: This item for spray chambers only.

This is the only control equipment on this air contaminant source

If no, this control equipment is: Primary Secondary Parallel

List any other air contaminant sources that are also vented to this control equipment:

Electrostatic Precipitator

Manufacturer: _____ Year installed: _____

What do you call this control equipment: _____
 Pollutant(s) controlled: PE OC SO₂ NO_x CO Other _____
 Estimated capture efficiency (%): _____ Basis for efficiency: _____
 Design control efficiency (%): _____ Basis for efficiency: _____
 Type: Plate-wire Flat-plate Tubular Wet Other _____
 Number of operating fields: _____

This is the only control equipment on this air contaminant source
 If no, this control equipment is: Primary Secondary Parallel
 List any other air contaminant sources that are also vented to this control equipment:

 Concentrator

Manufacturer: _____ Year installed: _____
 What do you call this control equipment: _____
 Pollutant(s) controlled: PE OC SO₂ NO_x CO Other _____
 Estimated capture efficiency (%): _____ Basis for efficiency: _____
 Design regeneration cycle time (minutes): _____
 Minimum desorption air stream temperature (°F): _____
 Rotational rate (revolutions/hour): _____

This is the only control equipment on this air contaminant source
 If no, this control equipment is: Primary Secondary Parallel
 List any other air contaminant sources that are also vented to this control equipment:

 Catalytic Incinerator

Manufacturer: _____ Year installed: _____
 What do you call this control equipment: _____
 Pollutant(s) controlled: PE OC SO₂ NO_x CO Other _____
 Estimated capture efficiency (%): _____ Basis for efficiency: _____
 Design control efficiency (%): _____ Basis for efficiency: _____
 Minimum inlet gas temperature (°F): _____
 Combustion chamber residence time (seconds): _____
 Minimum temperature difference (°F) across catalyst during air contaminant source operation: _____

This is the only control equipment on this air contaminant source
 If no, this control equipment is: Primary Secondary Parallel
 List any other air contaminant sources that are also vented to this control equipment:

 Thermal Incinerator/Thermal Oxidizer

Manufacturer: _____ Year installed: _____
 What do you call this control equipment: _____
 Pollutant(s) controlled: PE OC SO₂ NO_x CO Other _____
 Estimated capture efficiency (%): _____ Basis for efficiency: _____
 Design control efficiency (%): _____ Basis for efficiency: _____
 Minimum operating temperature (°F) and location: _____ (See line by line instructions.)
 Combustion chamber residence time (seconds): _____

This is the only control equipment on this air contaminant source
 If no, this control equipment is: Primary Secondary Parallel
 List any other air contaminant sources that are also vented to this control equipment:

 Flare

Manufacturer: _____ Year installed: _____
 What do you call this control equipment: _____
 Pollutant(s) controlled: PE OC SO₂ NO_x CO Other _____
 Estimated capture efficiency (%): _____ Basis for efficiency: _____
 Design control efficiency (%): _____ Basis for efficiency: _____
 Type: Enclosed Elevated (open)
 Ignition device: Electric arc Pilot flame

Flame presence sensor: Yes No

This is the only control equipment on this air contaminant source

If no, this control equipment is: Primary Secondary Parallel

List any other air contaminant sources that are also vented to this control equipment:

Condenser

Manufacturer: _____ Year installed: _____

What do you call this control equipment: _____

Pollutant(s) controlled: PE OC SO₂ NO_x CO Other _____

Estimated capture efficiency (%): _____ Basis for efficiency: _____

Design control efficiency (%): _____ Basis for efficiency: _____

Type: Indirect contact Direct contact

Maximum exhaust gas temperature (°F) during air contaminant source operation: _____

Coolant type: _____

Design coolant temperature (°F): Minimum _____ Maximum _____

Design coolant flow rate (gpm): _____

This is the only control equipment on this air contaminant source

If no, this control equipment is: Primary Secondary Parallel

List any other air contaminant sources that are also vented to this control equipment:

Carbon Absorber

Manufacturer: _____ Year installed: _____

What do you call this control equipment: _____

Pollutant(s) controlled: PE OC SO₂ NO_x CO Other _____

Estimated capture efficiency (%): _____ Basis for efficiency: _____

Design control efficiency (%): _____ Basis for efficiency: _____

Type: On-site regenerative Disposable

Maximum design outlet organic compound concentration (ppmv): _____

Carbon replacement frequency or regeneration cycle time (specify units): _____

Maximum temperature of the carbon bed, after regeneration (including any cooling cycle): _____

This is the only control equipment on this air contaminant source

If no, this control equipment is: Primary Secondary Parallel

List any other air contaminant sources that are also vented to this control equipment:

Dry Scrubber

Manufacturer: _____ Year installed: _____

What do you call this control equipment: _____

Pollutant(s) controlled: PE OC SO₂ NO_x CO Other _____

Estimated capture efficiency (%): _____ Basis for efficiency: _____

Design control efficiency (%): _____ Basis for efficiency: _____

Reagent(s) used: Type: _____ Injection rate(s): _____

Operating pressure drop range (inches of water): Minimum: _____ Maximum: _____

This is the only control equipment on this air contaminant source

If no, this control equipment is: Primary Secondary Parallel

List any other air contaminant sources that are also vented to this control equipment:

Paint booth filter

Type: Paper Fiberglass Water curtain Other _____

Design control efficiency (%): _____ Basis for efficiency: _____

Other, describe _____

Manufacturer: _____ Year installed: _____

What do you call this control equipment: _____

Pollutant(s) controlled: PE OC SO₂ NO_x CO Other _____

Estimated capture efficiency (%): _____ Basis for efficiency: _____

Design control efficiency (%): _____ Basis for efficiency: _____

This is the only control equipment on this air contaminant source

If no, this control equipment is: Primary Secondary Parallel

List any other air contaminant sources that are also vented to this control equipment:

6. Attach a Process or Activity Flow Diagram to this application for each air contaminant source included in the application. The diagram should indicate their relationships to one another. See the line by line PTI instructions for additional information.
7. Emissions egress point(s) information: PTIs which allow total emissions in excess of the thresholds listed below will be subject to an air quality modeling analysis. This analysis is to assure that the impact from the requested project will not exceed Ohio's Acceptable Incremental Impacts for criteria pollutants and/or Maximum Allowable Ground Level Concentrations (MAGLC) for air toxics. Permit requests that would have unacceptable impacts can not be approved as proposed. See the line by line PTI instructions for additional information.

Complete the tables below if the requested allowable annual emission rate for this PTI exceeds any of the following:

- Particulate Matter (PM10): 10 tons per year
- Sulfur Dioxide (SO2): 25 tons per year
- Nitrogen Oxides (NOx): 25 tons per year
- Carbon Monoxide (CO): 100 tons per year
- Air Toxic: 1 ton per year. An air toxic is any air pollutant for which the American Council of Governmental Industrial Hygienists (ACGIH) has established a Threshold Limit Value (TLV).

Complete Table 7-A below for each stack emissions egress point. An egress point is a point at which emissions from an air contaminant source are released into the ambient (outside) air. List each individual egress point on a separate line.

Table 7-A, Stack Egress Point Information						
Company Name or ID for the Egress Point (examples: Stack A; Boiler Stack; etc.)	Type Code*	Stack Egress Point Shape and Dimensions (in)(examples: round 10 inch ID; rectangular 14 X 16 inches; etc.)	Stack Egress Point Height from the Ground (ft)	Stack Temp. at Max. Capacity (F)	Stack Flow Rate at Max. Capacity (ACFM)	Minimum Distance to the Property Line (ft)
Charging A	A	Round (4.5 ft)	26.0	300	65,000	

*Type codes for stack egress points:

- A. vertical stack (unobstructed): There are no obstructions to upward flow in or on the stack such as a rain

- cap.
- B. vertical stack (obstructed): There are obstructions to the upward flow, such as a rain cap, which prevents or inhibits the air flow in a vertical direction.
- C. non-vertical stack: The stack directs the air flow in a direction which is not directly upward.

Complete Table 7-B below for each fugitive emissions egress point. List each individual egress point on a separate line. Refer to the description of the fugitive egress point type codes below the table for use in completing the type code column of the table. For air contaminant sources like roadways and storage piles, only the first 5 columns need to be completed. For an air contaminant source with multiple fugitive emissions egress points, include only the primary egress points.

Table 7-B, Fugitive Egress Point Information					
Company ID for the Egress Point (examples; Garage Door B, Building C; Roof Monitor; etc.)	Type Code*	Egress Point Description (examples: garage door, 12 X 30 feet, west wall; outside gravel storage piles; etc.)	Fugitive Egress Point Height from the Ground (ft)	Minimum Distance to the Property Line (ft)	Exit Gas Temp. (F)

*Type codes for fugitive egress point:

- D. door or window
- E. other opening in the building without a duct
- F. no stack and no building enclosing the air contaminant source (e.g., roadways)

Complete Table 7-C below for each Stack Egress Point identified in Table 7-A above. In each case, use the dimensions of the largest nearby building, building segment or structure. List each individual egress point on a separate line. Use the same Company Name or ID for the Egress Point in Table 7-C that was used in Table 7-A. See the line by line PTI instructions for additional information.

Table 7-C, Egress Point Additional Information (Add rows as necessary)			
Company ID or Name for the Egress Point	Building Height (ft)	Building Width (ft)	Building Length (ft)

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8. Request for Federally Enforceable Limits

As part of this permit application, do you wish to propose voluntary restrictions to limit emissions in order to avoid specific requirements listed below, (i.e., are you requesting federally enforceable limits to obtain synthetic minor status)?

- yes
 no
 not sure - please contact me if this affects me

If yes, why are you requesting federally enforceable limits? Check all that apply.

- a. to avoid being a major source (see OAC rule 3745-77-01)
 b. to avoid being a major MACT source (see OAC rule 3745-31-01)
 c. to avoid being a major modification (see OAC rule 3745-31-01)
 d. to avoid being a major stationary source (see OAC rule 3745-31-01)
 e. to avoid an air dispersion modeling requirement (see Engineering Guide # 69)
 f. to avoid another requirement. Describe: _____

If you checked a., b. or d., please attach a facility-wide potential to emit (PTE) analysis (for each pollutant) and synthetic minor strategy to this application. (See line by line instructions for definition of PTE.) If you checked c., please attach a net emission change analysis to this application.

9. If this air contaminant source utilizes any continuous emissions monitoring equipment for indicating or demonstrating compliance, complete the following table. This does not include continuous parametric monitoring systems.

Company ID for Egress Point	Type of Monitor	Applicable performance specification (40 CFR 60, Appendix B)	Pollutant(s) Monitored

10. Do you wish to permit this air contaminant source as a portable source, allowing relocation within the state in accordance with OAC rule 3745-31-03 or OAC rule 3745-31-05?

- yes - Note: notification requirements in rules cited above must be followed.
 no

11. The appropriate Emissions Activity Category (EAC) form(s) must be completed and attached for each air contaminant source. At least one complete EAC form must be submitted for each air contaminant source for the application to be considered complete. Refer to the list attached to the PTI instructions.

Section II - Specific Air Contaminant Source Information**REVISED JULY 2008**

NOTE: One copy of this section should be filled out for each air contaminant source covered by this PTI application. See the line by line PTI instructions for additional information.

- Company identification (name for air contaminant source for which you are applying): Coking - Main Stack (P901)
- List all equipment that are part of this air contaminant source: Coking emission control system
- Air Contaminant Source Installation or Modification Schedule (must be completed regardless of date of installation or modification):

When did/will you begin to install or modify the air contaminant source? (month/year) October 2008

When did/will you begin to operate the air contaminant source? (month/year) December 2009 **OR** after issuance of PTI

- Emissions Information: The following table requests information needed to determine the applicable requirements and the compliance status of this air contaminant source with those requirements. Suggestions for how to estimate emissions may be found in the instructions to the Emissions Activity Category (EAC) forms required with this application. If you need further assistance, contact your Ohio EPA permit representative.

- If total potential emissions of HAPs or any Air Toxic is greater than 1 ton/yr, fill in the table for that (those) pollutant(s). For all other pollutants, if "Emissions before controls (max), lb/hr" multiplied by 24 hours/day is greater than 10 lb/day, fill in the table for that pollutant.
- If you have no add-on control equipment, "Emissions before controls" will be the same as "Actual emissions"
- Annual emissions should be based on operating 8760 hr/yr unless you are requesting operating restrictions to limit emissions in line # 8 or have described inherent limitations below.
- If you use units other than lb/hr or ton/yr, specify the units used (e.g., gr/dscf, lb/ton charged, lb/MMBtu, ton/12-months).
- Requested Allowable (ton/yr) is often equivalent to Potential to Emit (PTE) as defined in OAC rule 3745-31-01 and OAC rule 3745-77-01.

Pollutant	Emissions before controls (max) (lb/hr)	Actual emissions (lb/hr)	Actual emissions (ton/year)	Requested Allowable (lb/hr)	Requested Allowable (ton/year)
Filterable Particulate emissions (PE) (formerly particulate matter, PM)		10.71	46.93	10.71	46.93
Total PM ₁₀ (PM < 10 microns in diameter)		23.57	103.24	23.57	103.24
Sulfur dioxide (SO ₂)	2491.67	249.17	1091.35	300.00	1091.35
Nitrogen oxides (NO _x)		104.17	456.25	104.17	456.25
Carbon monoxide (CO)		21.81	95.54	21.81	95.54
Organic compounds (OC)					
Volatile organic compounds (VOC)		4.67	20.47	4.67	20.47
Total HAPs			69.56		69.56
Highest single HAP: HCl	295.83	14.79	64.79	14.79	64.79
Air Toxics (see instructions): Lead (Pb)	0.57	0.029	0.125	0.029	0.125

- Note:
- Based on 2500 tons coal/day unless designated otherwise. Number provided is daily average.
 - Requested allowable is 3-hour maximum.

Provide your calculations as an attachment and explain how all process variables and emission factors were selected. Note the emissions factor(s) employed and document the origin. Example: AP-42, Table 4.4-3 (8/97); stack test, Method 5, 4/96; mass balance based on MSDS; etc.

5. **Does this air contaminant source employ emissions control equipment?**

Yes - fill out the applicable information below.

No - proceed to item # 6.

Note: Pollutant abbreviations used below: Particulates = PE; Organic compounds = OC; Sulfur dioxide = SO₂; Nitrogen oxides = NO_x; Carbon monoxide = CO

Cyclone/Multiclone

Manufacturer: _____ Year installed: _____

What do you call this control equipment: _____

Pollutant(s) controlled: PE OC SO₂ NO_x CO Other _____

Estimated capture efficiency (%): _____ Basis for efficiency: _____

Design control efficiency (%): _____ Basis for efficiency: _____

Type: Cyclone Multiclone Rotoclone Other _____

This is the only control equipment on this air contaminant source

If no, this control equipment is: Primary Secondary Parallel

List any other air contaminant sources that are also vented to this control equipment:

Fabric Filter/Baghouse

Manufacturer: _____ Year installed: _____

What do you call this control equipment: Baghouse

Pollutant(s) controlled: PE OC SO₂ NO_x CO Other Lead

Estimated capture efficiency (%): 99% (PE), 95% (Pb) Basis for efficiency: Engineering Estimate

Design control efficiency (%): NA Basis for efficiency: _____

Operating pressure drop range (inches of water): Minimum: 3 Maximum: 12

Pressure type: Negative pressure Positive pressure

Fabric cleaning mechanism: Reverse air Pulse jet Shaker Other _____

Lime injection or fabric coating agent used: Type: _____ Feed rate: _____

This is the only control equipment on this air contaminant source

If no, this control equipment is: Primary Secondary Parallel

List any other air contaminant sources that are also vented to this control equipment:

Wet Scrubber

Manufacturer: _____ Year installed: _____

What do you call this control equipment: _____

Pollutant(s) controlled: PE OC SO₂ NO_x CO Other _____

Estimated capture efficiency (%): _____ Basis for efficiency: _____

Design control efficiency (%): _____ Basis for efficiency: _____

Type: Spray chamber Packed bed Impingement Venturi Other _____

Operating pressure drop range (inches of water): Minimum: _____ Maximum: _____

pH range for scrubbing liquid: Minimum: _____ Maximum: _____

Scrubbing liquid flow rate (gal/min): _____

Is scrubber liquid recirculated? Yes No

Water supply pressure (psig): _____ NOTE: This item for spray chambers only.

This is the only control equipment on this air contaminant source

If no, this control equipment is: Primary Secondary Parallel

List any other air contaminant sources that are also vented to this control equipment:

Electrostatic Precipitator

Manufacturer: _____ Year installed: _____

What do you call this control equipment: _____
 Pollutant(s) controlled: PE OC SO₂ NO_x CO Other _____
 Estimated capture efficiency (%): _____ Basis for efficiency: _____
 Design control efficiency (%): _____ Basis for efficiency: _____
 Type: Plate-wire Flat-plate Tubular Wet Other _____
 Number of operating fields: _____

This is the only control equipment on this air contaminant source
 If no, this control equipment is: Primary Secondary Parallel
 List any other air contaminant sources that are also vented to this control equipment:

 Concentrator

Manufacturer: _____ Year installed: _____
 What do you call this control equipment: _____
 Pollutant(s) controlled: PE OC SO₂ NO_x CO Other _____
 Estimated capture efficiency (%): _____ Basis for efficiency: _____
 Design regeneration cycle time (minutes): _____
 Minimum desorption air stream temperature (°F): _____
 Rotational rate (revolutions/hour): _____

This is the only control equipment on this air contaminant source
 If no, this control equipment is: Primary Secondary Parallel
 List any other air contaminant sources that are also vented to this control equipment:

 Catalytic Incinerator

Manufacturer: _____ Year installed: _____
 What do you call this control equipment: _____
 Pollutant(s) controlled: PE OC SO₂ NO_x CO Other _____
 Estimated capture efficiency (%): _____ Basis for efficiency: _____
 Design control efficiency (%): _____ Basis for efficiency: _____
 Minimum inlet gas temperature (°F): _____
 Combustion chamber residence time (seconds): _____
 Minimum temperature difference (°F) across catalyst during air contaminant source operation: _____

This is the only control equipment on this air contaminant source
 If no, this control equipment is: Primary Secondary Parallel
 List any other air contaminant sources that are also vented to this control equipment:

 Thermal Incinerator/Thermal Oxidizer

Manufacturer: _____ Year installed: _____
 What do you call this control equipment: _____
 Pollutant(s) controlled: PE OC SO₂ NO_x CO Other _____
 Estimated capture efficiency (%): _____ Basis for efficiency: _____
 Design control efficiency (%): _____ Basis for efficiency: _____
 Minimum operating temperature (°F) and location: _____ (See line by line instructions.)
 Combustion chamber residence time (seconds): _____

This is the only control equipment on this air contaminant source
 If no, this control equipment is: Primary Secondary Parallel
 List any other air contaminant sources that are also vented to this control equipment:

 Flare

Manufacturer: _____ Year installed: _____
 What do you call this control equipment: _____
 Pollutant(s) controlled: PE OC SO₂ NO_x CO Other _____
 Estimated capture efficiency (%): _____ Basis for efficiency: _____
 Design control efficiency (%): _____ Basis for efficiency: _____
 Type: Enclosed Elevated (open)
 Ignition device: Electric arc Pilot flame

Flame presence sensor: Yes No

This is the only control equipment on this air contaminant source

If no, this control equipment is: Primary Secondary Parallel

List any other air contaminant sources that are also vented to this control equipment:

Condenser

Manufacturer: _____ Year installed: _____

What do you call this control equipment: _____

Pollutant(s) controlled: PE OC SO₂ NO_x CO Other _____

Estimated capture efficiency (%): _____ Basis for efficiency: _____

Design control efficiency (%): _____ Basis for efficiency: _____

Type: Indirect contact Direct contact

Maximum exhaust gas temperature (°F) during air contaminant source operation: _____

Coolant type: _____

Design coolant temperature (°F): Minimum _____ Maximum _____

Design coolant flow rate (gpm): _____

This is the only control equipment on this air contaminant source

If no, this control equipment is: Primary Secondary Parallel

List any other air contaminant sources that are also vented to this control equipment:

Carbon Absorber

Manufacturer: _____ Year installed: _____

What do you call this control equipment: _____

Pollutant(s) controlled: PE OC SO₂ NO_x CO Other _____

Estimated capture efficiency (%): _____ Basis for efficiency: _____

Design control efficiency (%): _____ Basis for efficiency: _____

Type: On-site regenerative Disposable

Maximum design outlet organic compound concentration (ppmv): _____

Carbon replacement frequency or regeneration cycle time (specify units): _____

Maximum temperature of the carbon bed, after regeneration (including any cooling cycle): _____

This is the only control equipment on this air contaminant source

If no, this control equipment is: Primary Secondary Parallel

List any other air contaminant sources that are also vented to this control equipment:

Dry Scrubber

Manufacturer: _____ Year installed: _____

What do you call this control equipment: Lime spray dryer

Pollutant(s) controlled: PE OC SO₂ NO_x CO Other _____

Estimated capture efficiency (%): 90% Basis for efficiency: Engineering Estimate

Design control efficiency (%): NA Basis for efficiency: _____

Reagent(s) used: Type: Lime Injection rate(s): _____

Operating pressure drop range (inches of water): Minimum: 5 Maximum: 10

This is the only control equipment on this air contaminant source

If no, this control equipment is: Primary Secondary Parallel

List any other air contaminant sources that are also vented to this control equipment:

Paint booth filter

Type: Paper Fiberglass Water curtain Other _____

Design control efficiency (%): _____ Basis for efficiency: _____

Other, describe _____

Manufacturer: _____ Year installed: _____

What do you call this control equipment: _____

Pollutant(s) controlled: PE OC SO₂ NO_x CO Other _____

Estimated capture efficiency (%): _____ Basis for efficiency: _____

Design control efficiency (%): _____ Basis for efficiency: _____

This is the only control equipment on this air contaminant source

If no, this control equipment is: Primary Secondary Parallel

List any other air contaminant sources that are also vented to this control equipment:

6. Attach a Process or Activity Flow Diagram to this application for each air contaminant source included in the application. The diagram should indicate their relationships to one another. See the line by line PTI instructions for additional information.

See Permit Application Text

7. Emissions egress point(s) information: PTIs which allow total emissions in excess of the thresholds listed below will be subject to an air quality modeling analysis. This analysis is to assure that the impact from the requested project will not exceed Ohio's Acceptable Incremental Impacts for criteria pollutants and/or Maximum Allowable Ground Level Concentrations (MAGLC) for air toxics. Permit requests that would have unacceptable impacts can not be approved as proposed. See the line by line PTI instructions for additional information.

Complete the tables below if the requested allowable annual emission rate for this PTI exceeds any of the following:

- Particulate Matter (PM10): 10 tons per year
- Sulfur Dioxide (SO2): 25 tons per year
- Nitrogen Oxides (NOx): 25 tons per year
- Carbon Monoxide (CO): 100 tons per year
- Air Toxic: 1 ton per year. An air toxic is any air pollutant for which the American Council of Governmental Industrial Hygienists (ACGIH) has established a Threshold Limit Value (TLV).

Complete Table 7-A below for each stack emissions egress point. An egress point is a point at which emissions from an air contaminant source are released into the ambient (outside) air. List each individual egress point on a separate line.

Table 7-A, Stack Egress Point Information						
Company Name or ID for the Egress Point (examples: Stack A; Boiler Stack; etc.)	Type Code*	Stack Egress Point Shape and Dimensions (in)(examples: round 10 inch ID; rectangular 14 X 16 inches; etc.)	Stack Egress Point Height from the Ground (ft)	Stack Temp. at Max. Capacity (F)	Stack Flow Rate at Max. Capacity (ACFM)	Minimum Distance to the Property Line (ft)
Main Stack	A	Round (13 ft.)	210	220	402,500	

*Type codes for stack egress points:

A. vertical stack (unobstructed): There are no obstructions to upward flow in or on the stack such as a rain

- cap.
- B. vertical stack (obstructed): There are obstructions to the upward flow, such as a rain cap, which prevents or inhibits the air flow in a vertical direction.
- C. non-vertical stack: The stack directs the air flow in a direction which is not directly upward.

Complete Table 7-B below for each fugitive emissions egress point. List each individual egress point on a separate line. Refer to the description of the fugitive egress point type codes below the table for use in completing the type code column of the table. For air contaminant sources like roadways and storage piles, only the first 5 columns need to be completed. For an air contaminant source with multiple fugitive emissions egress points, include only the primary egress points.

Table 7-B, Fugitive Egress Point Information					
Company ID for the Egress Point (examples; Garage Door B, Building C; Roof Monitor; etc.)	Type Code*	Egress Point Description (examples: garage door, 12 X 30 feet, west wall; outside gravel storage piles; etc.)	Fugitive Egress Point Height from the Ground (ft)	Minimum Distance to the Property Line (ft)	Exit Gas Temp. (F)

*Type codes for fugitive egress point:

- D. door or window
- E. other opening in the building without a duct
- F. no stack and no building enclosing the air contaminant source (e.g., roadways)

Complete Table 7-C below for each Stack Egress Point identified in Table 7-A above. In each case, use the dimensions of the largest nearby building, building segment or structure. List each individual egress point on a separate line. Use the same Company Name or ID for the Egress Point in Table 7-C that was used in Table 7-A. See the line by line PTI instructions for additional information.

Table 7-C, Egress Point Additional Information (Add rows as necessary)			
Company ID or Name for the Egress Point	Building Height (ft)	Building Width (ft)	Building Length (ft)

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8. Request for Federally Enforceable Limits

As part of this permit application, do you wish to propose voluntary restrictions to limit emissions in order to avoid specific requirements listed below, (i.e., are you requesting federally enforceable limits to obtain synthetic minor status)?

- yes
 no
 not sure - please contact me if this affects me

If yes, why are you requesting federally enforceable limits? Check all that apply.

- a. to avoid being a major source (see OAC rule 3745-77-01)
 b. to avoid being a major MACT source (see OAC rule 3745-31-01)
 c. to avoid being a major modification (see OAC rule 3745-31-01)
 d. to avoid being a major stationary source (see OAC rule 3745-31-01)
 e. to avoid an air dispersion modeling requirement (see Engineering Guide # 69)
 f. to avoid another requirement. Describe: _____

If you checked a., b. or d., please attach a facility-wide potential to emit (PTE) analysis (for each pollutant) and synthetic minor strategy to this application. (See line by line instructions for definition of PTE.) If you checked c., please attach a net emission change analysis to this application.

9. If this air contaminant source utilizes any continuous emissions monitoring equipment for indicating or demonstrating compliance, complete the following table. This does not include continuous parametric monitoring systems.

Company ID for Egress Point	Type of Monitor	Applicable performance specification (40 CFR 60, Appendix B)	Pollutant(s) Monitored

10. Do you wish to permit this air contaminant source as a portable source, allowing relocation within the state in accordance with OAC rule 3745-31-03 or OAC rule 3745-31-05?

- yes - Note: notification requirements in rules cited above must be followed.
 no

11. The appropriate Emissions Activity Category (EAC) form(s) must be completed and attached for each air contaminant source. At least one complete EAC form must be submitted for each air contaminant source for the application to be considered complete. Refer to the list attached to the PTI instructions.

Section II - Specific Air Contaminant Source Information

REVISED JULY 2008

NOTE: One copy of this section should be filled out for each air contaminant source covered by this PTI application. See the line by line PTI instructions for additional information.

- Company identification (name for air contaminant source for which you are applying): Coking - Waste Heat Stacks (P901)
- List all equipment that are part of this air contaminant source: Coking emission from Heat Recovery Steam Generator (HRSG) and Spray Dryer (SD) Maintenance

- Air Contaminant Source Installation or Modification Schedule (must be completed regardless of date of installation or modification):

When did/will you begin to install or modify the air contaminant source? (month/year) October 2008

When did/will you begin to operate the air contaminant source? (month/year) December 2009 **OR** after issuance of PTI

- Emissions Information: The following table requests information needed to determine the applicable requirements and the compliance status of this air contaminant source with those requirements. Suggestions for how to estimate emissions may be found in the instructions to the Emissions Activity Category (EAC) forms required with this application. If you need further assistance, contact your Ohio EPA permit representative.

- If total potential emissions of HAPs or any Air Toxic is greater than 1 ton/yr, fill in the table for that (those) pollutant(s). For all other pollutants, if "Emissions before controls (max), lb/hr" multiplied by 24 hours/day is greater than 10 lb/day, fill in the table for that pollutant.
- If you have no add-on control equipment, "Emissions before controls" will be the same as "Actual emissions"
- Annual emissions should be based on operating 8760 hr/yr unless you are requesting operating restrictions to limit emissions in line # 8 or have described inherent limitations below.
- If you use units other than lb/hr or ton/yr, specify the units used (e.g., gr/dscf, lb/ton charged, lb/MMBtu, ton/12-months).
- Requested Allowable (ton/yr) is often equivalent to Potential to Emit (PTE) as defined in OAC rule 3745-31-01 and OAC rule 3745-77-01.

Pollutant	Emissions before controls (max) (lb/hr)	Actual emissions (lb/hr)	Actual emissions (ton/year)	Requested Allowable (lb/hr)	Requested Allowable (ton/year)
Filterable Particulate emissions (PE) (formerly particulate matter, PM)		21.00	18.90	21.00	18.90
Total PM ₁₀ (PM < 10 microns in diameter)		35.57	32.01	35.57	32.01
Sulfur dioxide (SO ₂)		498.33	448.50	498.33	448.50
Nitrogen oxides (NO _x)		20.83	18.75	20.83	18.75
Carbon monoxide (CO)		4.36	3.93	4.36	3.93
Organic compounds (OC)					
Volatile organic compounds (VOC)		0.93	0.84	0.93	0.84
Total HAPs			54.31		54.31
Highest single HAP: HCl		59.17	53.25	59.17	53.25
Air Toxics (see instructions): Lead (Pb)		0.114	0.103	0.114	0.103

Note:

- Number is daily average.
 - Annual emissions based on use of 5 waste heat stacks for 15 days each.
- Ohio EPA, Division of Air Pollution Control
PTI P901 - Coking - Waste Heat Stacks

Provide your calculations as an attachment and explain how all process variables and emission factors were selected. Note the emissions factor(s) employed and document the origin. Example: AP-42, Table 4.4-3 (8/97); stack test, Method 5, 4/96; mass balance based on MSDS; etc.

5. **Does this air contaminant source employ emissions control equipment?**

Yes - fill out the applicable information below.

No - proceed to item # 6.

Note: Pollutant abbreviations used below: Particulates = PE; Organic compounds = OC; Sulfur dioxide = SO₂; Nitrogen oxides = NO_x; Carbon monoxide = CO

Cyclone/Multiclone

Manufacturer: _____ Year installed: _____

What do you call this control equipment: _____

Pollutant(s) controlled: PE OC SO₂ NO_x CO Other _____

Estimated capture efficiency (%): _____ Basis for efficiency: _____

Design control efficiency (%): _____ Basis for efficiency: _____

Type: Cyclone Multiclone Rotoclone Other _____

This is the only control equipment on this air contaminant source

If no, this control equipment is: Primary Secondary Parallel

List any other air contaminant sources that are also vented to this control equipment:

Fabric Filter/Baghouse

Manufacturer: _____ Year installed: _____

What do you call this control equipment: _____

Pollutant(s) controlled: PE OC SO₂ NO_x CO Other _____

Estimated capture efficiency (%): _____ Basis for efficiency: _____

Design control efficiency (%): _____ Basis for efficiency: _____

Operating pressure drop range (inches of water): Minimum: _____ Maximum: _____

Pressure type: Negative pressure Positive pressure

Fabric cleaning mechanism: Reverse air Pulse jet Shaker Other _____

Lime injection or fabric coating agent used: Type: _____ Feed rate: _____

This is the only control equipment on this air contaminant source

If no, this control equipment is: Primary Secondary Parallel

List any other air contaminant sources that are also vented to this control equipment:

Wet Scrubber

Manufacturer: _____ Year installed: _____

What do you call this control equipment: _____

Pollutant(s) controlled: PE OC SO₂ NO_x CO Other _____

Estimated capture efficiency (%): _____ Basis for efficiency: _____

Design control efficiency (%): _____ Basis for efficiency: _____

Type: Spray chamber Packed bed Impingement Venturi Other _____

Operating pressure drop range (inches of water): Minimum: _____ Maximum: _____

pH range for scrubbing liquid: Minimum: _____ Maximum: _____

Scrubbing liquid flow rate (gal/min): _____

Is scrubber liquid recirculated? Yes No

Water supply pressure (psig): _____ NOTE: This item for spray chambers only.

This is the only control equipment on this air contaminant source

If no, this control equipment is: Primary Secondary Parallel

List any other air contaminant sources that are also vented to this control equipment:

Electrostatic Precipitator

Manufacturer: _____ Year installed: _____

What do you call this control equipment: _____

Pollutant(s) controlled: PE OC SO₂ NO_x CO Other _____
 Estimated capture efficiency (%): _____ Basis for efficiency: _____
 Design control efficiency (%): _____ Basis for efficiency: _____
 Type: Plate-wire Flat-plate Tubular Wet Other _____
 Number of operating fields: _____

This is the only control equipment on this air contaminant source

If no, this control equipment is: Primary Secondary Parallel

List any other air contaminant sources that are also vented to this control equipment:

Concentrator

Manufacturer: _____ Year installed: _____

What do you call this control equipment: _____

Pollutant(s) controlled: PE OC SO₂ NO_x CO Other _____

Estimated capture efficiency (%): _____ Basis for efficiency: _____

Design regeneration cycle time (minutes): _____

Minimum desorption air stream temperature (°F): _____

Rotational rate (revolutions/hour): _____

This is the only control equipment on this air contaminant source

If no, this control equipment is: Primary Secondary Parallel

List any other air contaminant sources that are also vented to this control equipment:

Catalytic Incinerator

Manufacturer: _____ Year installed: _____

What do you call this control equipment: _____

Pollutant(s) controlled: PE OC SO₂ NO_x CO Other _____

Estimated capture efficiency (%): _____ Basis for efficiency: _____

Design control efficiency (%): _____ Basis for efficiency: _____

Minimum inlet gas temperature (°F): _____

Combustion chamber residence time (seconds): _____

Minimum temperature difference (°F) across catalyst during air contaminant source operation: _____

This is the only control equipment on this air contaminant source

If no, this control equipment is: Primary Secondary Parallel

List any other air contaminant sources that are also vented to this control equipment:

Thermal Incinerator/Thermal Oxidizer

Manufacturer: _____ Year installed: _____

What do you call this control equipment: _____

Pollutant(s) controlled: PE OC SO₂ NO_x CO Other _____

Estimated capture efficiency (%): _____ Basis for efficiency: _____

Design control efficiency (%): _____ Basis for efficiency: _____

Minimum operating temperature (°F) and location: _____ (See line by line instructions.)

Combustion chamber residence time (seconds): _____

This is the only control equipment on this air contaminant source

If no, this control equipment is: Primary Secondary Parallel

List any other air contaminant sources that are also vented to this control equipment:

Flare

Manufacturer: _____ Year installed: _____

What do you call this control equipment: _____

Pollutant(s) controlled: PE OC SO₂ NO_x CO Other _____

Estimated capture efficiency (%): _____ Basis for efficiency: _____

Design control efficiency (%): _____ Basis for efficiency: _____

Type: Enclosed Elevated (open)

Ignition device: Electric arc Pilot flame

Flame presence sensor: Yes No

This is the only control equipment on this air contaminant source

If no, this control equipment is: Primary Secondary Parallel
 List any other air contaminant sources that are also vented to this control equipment:

 Condenser

Manufacturer: _____ Year installed: _____

What do you call this control equipment: _____

Pollutant(s) controlled: PE OC SO₂ NO_x CO Other _____

Estimated capture efficiency (%): _____ Basis for efficiency: _____

Design control efficiency (%): _____ Basis for efficiency: _____

Type: Indirect contact Direct contact

Maximum exhaust gas temperature (°F) during air contaminant source operation: _____

Coolant type: _____

Design coolant temperature (°F): Minimum _____ Maximum _____

Design coolant flow rate (gpm): _____

This is the only control equipment on this air contaminant source

If no, this control equipment is: Primary Secondary Parallel

List any other air contaminant sources that are also vented to this control equipment:

 Carbon Absorber

Manufacturer: _____ Year installed: _____

What do you call this control equipment: _____

Pollutant(s) controlled: PE OC SO₂ NO_x CO Other _____

Estimated capture efficiency (%): _____ Basis for efficiency: _____

Design control efficiency (%): _____ Basis for efficiency: _____

Type: On-site regenerative Disposable

Maximum design outlet organic compound concentration (ppmv): _____

Carbon replacement frequency or regeneration cycle time (specify units): _____

Maximum temperature of the carbon bed, after regeneration (including any cooling cycle): _____

This is the only control equipment on this air contaminant source

If no, this control equipment is: Primary Secondary Parallel

List any other air contaminant sources that are also vented to this control equipment:

 Dry Scrubber

Manufacturer: _____ Year installed: _____

What do you call this control equipment: _____

Pollutant(s) controlled: PE OC SO₂ NO_x CO Other _____

Estimated capture efficiency (%): _____ Basis for efficiency: _____

Design control efficiency (%): _____ Basis for efficiency: _____

Reagent(s) used: Type: _____ Injection rate(s): _____

Operating pressure drop range (inches of water): Minimum: _____ Maximum: _____

This is the only control equipment on this air contaminant source

If no, this control equipment is: Primary Secondary Parallel

List any other air contaminant sources that are also vented to this control equipment:

 Paint booth filter

Type: Paper Fiberglass Water curtain Other _____

Design control efficiency (%): _____ Basis for efficiency: _____

 Other, describe Common Tunnel autogenous afterburner

Manufacturer: Custom Year installed: _____

What do you call this control equipment: _____

Pollutant(s) controlled: PE OC SO₂ NO_x CO Other _____

Estimated capture efficiency (%): 98% Basis for efficiency: Engineering estimate

Design control efficiency (%): _____ Basis for efficiency: _____

This is the only control equipment on this air contaminant source

If no, this control equipment is: Primary Secondary Parallel

List any other air contaminant sources that are also vented to this control equipment:

6. Attach a Process or Activity Flow Diagram to this application for each air contaminant source included in the application. The diagram should indicate their relationships to one another. See the line by line PTI instructions for additional information.

See Permit Application Text

7. Emissions egress point(s) information: PTIs which allow total emissions in excess of the thresholds listed below will be subject to an air quality modeling analysis. This analysis is to assure that the impact from the requested project will not exceed Ohio=s Acceptable Incremental Impacts for criteria pollutants and/or Maximum Allowable Ground Level Concentrations (MAGLC) for air toxics. Permit requests that would have unacceptable impacts can not be approved as proposed. See the line by line PTI instructions for additional information.

Complete the tables below if the requested allowable annual emission rate for this PTI exceeds any of the following:

- Particulate Matter (PM10): 10 tons per year
- Sulfur Dioxide (SO2): 25 tons per year
- Nitrogen Oxides (NOx): 25 tons per year
- Carbon Monoxide (CO): 100 tons per year
- Air Toxic: 1 ton per year. An air toxic is any air pollutant for which the American Council of Governmental Industrial Hygienists (ACGIH) has established a Threshold Limit Value (TLV).

Complete Table 7-A below for each stack emissions egress point. An egress point is a point at which emissions from an air contaminant source are released into the ambient (outside) air. List each individual egress point on a separate line.

Table 7-A, Stack Egress Point Information						
Company Name or ID for the Egress Point (examples: Stack A; Boiler Stack; etc.)	Type Code*	Stack Egress Point Shape and Dimensions (in)(examples: round 10 inch ID; rectangular 14 X 16 inches; etc.)	Stack Egress Point Height from the Ground (ft)	Stack Temp. at Max. Capacity (F)	Stack Flow Rate at Max. Capacity (ACFM)	Minimum Distance to the Property Line (ft)
Waste Heat Stacks (same for all 5 stacks)	A	Round (9 ft.)	90	1900	263,000	

*Type codes for stack egress points:

- A. vertical stack (unobstructed): There are no obstructions to upward flow in or on the stack such as a rain cap.
- B. vertical stack (obstructed): There are obstructions to the upward flow, such as a rain cap, which prevents or inhibits the air flow in a vertical direction.
- C. non-vertical stack: The stack directs the air flow in a direction which is not directly upward.

As part of this permit application, do you wish to propose voluntary restrictions to limit emissions in order to avoid specific requirements listed below, (i.e., are you requesting federally enforceable limits to obtain synthetic minor status)?

- yes
- no
- not sure - please contact me if this affects me

If yes, why are you requesting federally enforceable limits? Check all that apply.

- a. to avoid being a major source (see OAC rule 3745-77-01)
- b. to avoid being a major MACT source (see OAC rule 3745-31-01)
- c. to avoid being a major modification (see OAC rule 3745-31-01)
- d. to avoid being a major stationary source (see OAC rule 3745-31-01)
- e. to avoid an air dispersion modeling requirement (see Engineering Guide # 69)
- f. to avoid another requirement. Describe: _____

If you checked a., b. or d., please attach a facility-wide potential to emit (PTE) analysis (for each pollutant) and synthetic minor strategy to this application. (See line by line instructions for definition of PTE.) If you checked c., please attach a net emission change analysis to this application.

9. If this air contaminant source utilizes any continuous emissions monitoring equipment for indicating or demonstrating compliance, complete the following table. This does not include continuous parametric monitoring systems.

Company ID for Egress Point	Type of Monitor	Applicable performance specification (40 CFR 60, Appendix B)	Pollutant(s) Monitored

10. Do you wish to permit this air contaminant source as a portable source, allowing relocation within the state in accordance with OAC rule 3745-31-03 or OAC rule 3745-31-05?

- yes - Note: notification requirements in rules cited above must be followed.
- no

11. The appropriate Emissions Activity Category (EAC) form(s) must be completed and attached for each air contaminant source. At least one complete EAC form must be submitted for each air contaminant source for the application to be considered complete. Refer to the list attached to the PTI instructions.

Section II - Specific Air Contaminant Source Information

REVISED JULY 2008

NOTE: One copy of this section should be filled out for each air contaminant source covered by this PTI application. See the line by line PTI instructions for additional information.

1. Company identification (name for air contaminant source for which you are applying): Coking - Waste Heat Stacks (P901)
2. List all equipment that are part of this air contaminant source: Coking emission from Heat Recovery Steam Generator (HRSG) and Spray Dryer (SD) Maintenance

3. Air Contaminant Source Installation or Modification Schedule (must be completed regardless of date of installation or modification):

When did/will you begin to install or modify the air contaminant source? (month/year) October 2008

When did/will you begin to operate the air contaminant source? (month/year) December 2009 **OR** after issuance of PTI

4. Emissions Information: The following table requests information needed to determine the applicable requirements and the compliance status of this air contaminant source with those requirements. Suggestions for how to estimate emissions may be found in the instructions to the Emissions Activity Category (EAC) forms required with this application. If you need further assistance, contact your Ohio EPA permit representative.

- If total potential emissions of HAPs or any Air Toxic is greater than 1 ton/yr, fill in the table for that (those) pollutant(s). For all other pollutants, if "Emissions before controls (max), lb/hr" multiplied by 24 hours/day is greater than 10 lb/day, fill in the table for that pollutant.
- If you have no add-on control equipment, "Emissions before controls" will be the same as "Actual emissions"
- Annual emissions should be based on operating 8760 hr/yr unless you are requesting operating restrictions to limit emissions in line # 8 or have described inherent limitations below.
- If you use units other than lb/hr or ton/yr, specify the units used (e.g., gr/dscf, lb/ton charged, lb/MMBtu, ton/12-months).
- Requested Allowable (ton/yr) is often equivalent to Potential to Emit (PTE) as defined in OAC rule 3745-31-01 and OAC rule 3745-77-01.

Pollutant	Emissions before controls (max) (lb/hr)	Actual emissions (lb/hr)	Actual emissions (ton/year)	Requested Allowable (lb/hr)	Requested Allowable (ton/year)
Filterable Particulate emissions (PE) (formerly particulate matter, PM)		21.00	18.90	21.00	18.90
Total PM ₁₀ (PM < 10 microns in diameter)		35.57	32.01	35.57	32.01
Sulfur dioxide (SO ₂)		498.33	448.50	498.33	448.50
Nitrogen oxides (NO _x)		20.83	18.75	20.83	18.75
Carbon monoxide (CO)		4.36	3.93	4.36	3.93
Organic compounds (OC)					
Volatile organic compounds (VOC)		0.93	0.84	0.93	0.84
Total HAPs			54.31		54.31
Highest single HAP: HCl		59.17	53.25	59.17	53.25
Air Toxics (see instructions): Lead (Pb)		0.114	0.103	0.114	0.103

Note:

1. Number is daily average.
2. Annual emissions based on use of 5 waste heat stacks for 15 days each.

Provide your calculations as an attachment and explain how all process variables and emission factors were selected. Note the emissions factor(s) employed and document the origin. Example: AP-42, Table 4.4-3 (8/97); stack test, Method 5, 4/96; mass balance based on MSDS; etc.

5. **Does this air contaminant source employ emissions control equipment?**

Yes - fill out the applicable information below.

No - proceed to item # 6.

Note: Pollutant abbreviations used below: Particulates = PE; Organic compounds = OC; Sulfur dioxide = SO₂; Nitrogen oxides = NO_x; Carbon monoxide = CO

Cyclone/Multiclone

Manufacturer: _____ Year installed: _____

What do you call this control equipment: _____

Pollutant(s) controlled: PE OC SO₂ NO_x CO Other _____

Estimated capture efficiency (%): _____ Basis for efficiency: _____

Design control efficiency (%): _____ Basis for efficiency: _____

Type: Cyclone Multiclone Rotoclone Other _____

This is the only control equipment on this air contaminant source

If no, this control equipment is: Primary Secondary Parallel

List any other air contaminant sources that are also vented to this control equipment:

Fabric Filter/Baghouse

Manufacturer: _____ Year installed: _____

What do you call this control equipment: _____

Pollutant(s) controlled: PE OC SO₂ NO_x CO Other _____

Estimated capture efficiency (%): _____ Basis for efficiency: _____

Design control efficiency (%): _____ Basis for efficiency: _____

Operating pressure drop range (inches of water): Minimum: _____ Maximum: _____

Pressure type: Negative pressure Positive pressure

Fabric cleaning mechanism: Reverse air Pulse jet Shaker Other _____

Lime injection or fabric coating agent used: Type: _____ Feed rate: _____

This is the only control equipment on this air contaminant source

If no, this control equipment is: Primary Secondary Parallel

List any other air contaminant sources that are also vented to this control equipment:

Wet Scrubber

Manufacturer: _____ Year installed: _____

What do you call this control equipment: _____

Pollutant(s) controlled: PE OC SO₂ NO_x CO Other _____

Estimated capture efficiency (%): _____ Basis for efficiency: _____

Design control efficiency (%): _____ Basis for efficiency: _____

Type: Spray chamber Packed bed Impingement Venturi Other _____

Operating pressure drop range (inches of water): Minimum: _____ Maximum: _____

pH range for scrubbing liquid: Minimum: _____ Maximum: _____

Scrubbing liquid flow rate (gal/min): _____

Is scrubber liquid recirculated? Yes No

Water supply pressure (psig): _____ NOTE: This item for spray chambers only.

This is the only control equipment on this air contaminant source

If no, this control equipment is: Primary Secondary Parallel

List any other air contaminant sources that are also vented to this control equipment:

Electrostatic Precipitator

Manufacturer: _____ Year installed: _____

What do you call this control equipment: _____

Pollutant(s) controlled: PE OC SO₂ NO_x CO Other _____
 Estimated capture efficiency (%): _____ Basis for efficiency: _____
 Design control efficiency (%): _____ Basis for efficiency: _____
 Type: Plate-wire Flat-plate Tubular Wet Other _____
 Number of operating fields: _____

This is the only control equipment on this air contaminant source

If no, this control equipment is: Primary Secondary Parallel

List any other air contaminant sources that are also vented to this control equipment:

Concentrator

Manufacturer: _____ Year installed: _____

What do you call this control equipment: _____

Pollutant(s) controlled: PE OC SO₂ NO_x CO Other _____

Estimated capture efficiency (%): _____ Basis for efficiency: _____

Design regeneration cycle time (minutes): _____

Minimum desorption air stream temperature (°F): _____

Rotational rate (revolutions/hour): _____

This is the only control equipment on this air contaminant source

If no, this control equipment is: Primary Secondary Parallel

List any other air contaminant sources that are also vented to this control equipment:

Catalytic Incinerator

Manufacturer: _____ Year installed: _____

What do you call this control equipment: _____

Pollutant(s) controlled: PE OC SO₂ NO_x CO Other _____

Estimated capture efficiency (%): _____ Basis for efficiency: _____

Design control efficiency (%): _____ Basis for efficiency: _____

Minimum inlet gas temperature (°F): _____

Combustion chamber residence time (seconds): _____

Minimum temperature difference (°F) across catalyst during air contaminant source operation: _____

This is the only control equipment on this air contaminant source

If no, this control equipment is: Primary Secondary Parallel

List any other air contaminant sources that are also vented to this control equipment:

Thermal Incinerator/Thermal Oxidizer

Manufacturer: _____ Year installed: _____

What do you call this control equipment: _____

Pollutant(s) controlled: PE OC SO₂ NO_x CO Other _____

Estimated capture efficiency (%): _____ Basis for efficiency: _____

Design control efficiency (%): _____ Basis for efficiency: _____

Minimum operating temperature (°F) and location: _____ (See line by line instructions.)

Combustion chamber residence time (seconds): _____

This is the only control equipment on this air contaminant source

If no, this control equipment is: Primary Secondary Parallel

List any other air contaminant sources that are also vented to this control equipment:

Flare

Manufacturer: _____ Year installed: _____

What do you call this control equipment: _____

Pollutant(s) controlled: PE OC SO₂ NO_x CO Other _____

Estimated capture efficiency (%): _____ Basis for efficiency: _____

Design control efficiency (%): _____ Basis for efficiency: _____

Type: Enclosed Elevated (open)

Ignition device: Electric arc Pilot flame

Flame presence sensor: Yes No

This is the only control equipment on this air contaminant source

If no, this control equipment is: Primary Secondary Parallel
 List any other air contaminant sources that are also vented to this control equipment:

 Condenser

Manufacturer: _____ Year installed: _____

What do you call this control equipment: _____

Pollutant(s) controlled: PE OC SO₂ NO_x CO Other _____

Estimated capture efficiency (%): _____ Basis for efficiency: _____

Design control efficiency (%): _____ Basis for efficiency: _____

Type: Indirect contact Direct contact

Maximum exhaust gas temperature (°F) during air contaminant source operation: _____

Coolant type: _____

Design coolant temperature (°F): Minimum _____ Maximum _____

Design coolant flow rate (gpm): _____

This is the only control equipment on this air contaminant source

If no, this control equipment is: Primary Secondary Parallel

List any other air contaminant sources that are also vented to this control equipment:

 Carbon Absorber

Manufacturer: _____ Year installed: _____

What do you call this control equipment: _____

Pollutant(s) controlled: PE OC SO₂ NO_x CO Other _____

Estimated capture efficiency (%): _____ Basis for efficiency: _____

Design control efficiency (%): _____ Basis for efficiency: _____

Type: On-site regenerative Disposable

Maximum design outlet organic compound concentration (ppmv): _____

Carbon replacement frequency or regeneration cycle time (specify units): _____

Maximum temperature of the carbon bed, after regeneration (including any cooling cycle): _____

This is the only control equipment on this air contaminant source

If no, this control equipment is: Primary Secondary Parallel

List any other air contaminant sources that are also vented to this control equipment:

 Dry Scrubber

Manufacturer: _____ Year installed: _____

What do you call this control equipment: _____

Pollutant(s) controlled: PE OC SO₂ NO_x CO Other _____

Estimated capture efficiency (%): _____ Basis for efficiency: _____

Design control efficiency (%): _____ Basis for efficiency: _____

Reagent(s) used: Type: _____ Injection rate(s): _____

Operating pressure drop range (inches of water): Minimum: _____ Maximum: _____

This is the only control equipment on this air contaminant source

If no, this control equipment is: Primary Secondary Parallel

List any other air contaminant sources that are also vented to this control equipment:

 Paint booth filter

Type: Paper Fiberglass Water curtain Other _____

Design control efficiency (%): _____ Basis for efficiency: _____

 Other, describe Common Tunnel autogenous afterburner

Manufacturer: Custom Year installed: _____

What do you call this control equipment: _____

Pollutant(s) controlled: PE OC SO₂ NO_x CO Other _____

Estimated capture efficiency (%): 98% Basis for efficiency: Engineering estimate

Design control efficiency (%): _____ Basis for efficiency: _____

This is the only control equipment on this air contaminant source

If no, this control equipment is: Primary Secondary Parallel

List any other air contaminant sources that are also vented to this control equipment:

6. Attach a Process or Activity Flow Diagram to this application for each air contaminant source included in the application. The diagram should indicate their relationships to one another. See the line by line PTI instructions for additional information.

See Permit Application Text

7. Emissions egress point(s) information: PTIs which allow total emissions in excess of the thresholds listed below will be subject to an air quality modeling analysis. This analysis is to assure that the impact from the requested project will not exceed Ohio=s Acceptable Incremental Impacts for criteria pollutants and/or Maximum Allowable Ground Level Concentrations (MAGLC) for air toxics. Permit requests that would have unacceptable impacts can not be approved as proposed. See the line by line PTI instructions for additional information.

Complete the tables below if the requested allowable annual emission rate for this PTI exceeds any of the following:

- Particulate Matter (PM10): 10 tons per year
- Sulfur Dioxide (SO2): 25 tons per year
- Nitrogen Oxides (NOx): 25 tons per year
- Carbon Monoxide (CO): 100 tons per year
- Air Toxic: 1 ton per year. An air toxic is any air pollutant for which the American Council of Governmental Industrial Hygienists (ACGIH) has established a Threshold Limit Value (TLV).

Complete Table 7-A below for each stack emissions egress point. An egress point is a point at which emissions from an air contaminant source are released into the ambient (outside) air. List each individual egress point on a separate line.

Table 7-A, Stack Egress Point Information						
Company Name or ID for the Egress Point (examples: Stack A; Boiler Stack; etc.)	Type Code*	Stack Egress Point Shape and Dimensions (in)(examples: round 10 inch ID; rectangular 14 X 16 inches; etc.)	Stack Egress Point Height from the Ground (ft)	Stack Temp. at Max. Capacity (F)	Stack Flow Rate at Max. Capacity (ACFM)	Minimum Distance to the Property Line (ft)
Waste Heat Stacks (same for all 5 stacks)	A	Round (9 ft.)	90	1900	263,000	

*Type codes for stack egress points:

- A. vertical stack (unobstructed): There are no obstructions to upward flow in or on the stack such as a rain cap.
- B. vertical stack (obstructed): There are obstructions to the upward flow, such as a rain cap, which prevents or inhibits the air flow in a vertical direction.
- C. non-vertical stack: The stack directs the air flow in a direction which is not directly upward.

As part of this permit application, do you wish to propose voluntary restrictions to limit emissions in order to avoid specific requirements listed below, (i.e., are you requesting federally enforceable limits to obtain synthetic minor status)?

- yes
- no
- not sure - please contact me if this affects me

If yes, why are you requesting federally enforceable limits? Check all that apply.

- a. to avoid being a major source (see OAC rule 3745-77-01)
- b. to avoid being a major MACT source (see OAC rule 3745-31-01)
- c. to avoid being a major modification (see OAC rule 3745-31-01)
- d. to avoid being a major stationary source (see OAC rule 3745-31-01)
- e. to avoid an air dispersion modeling requirement (see Engineering Guide # 69)
- f. to avoid another requirement. Describe: _____

If you checked a., b. or d., please attach a facility-wide potential to emit (PTE) analysis (for each pollutant) and synthetic minor strategy to this application. (See line by line instructions for definition of PTE.) If you checked c., please attach a net emission change analysis to this application.

9. If this air contaminant source utilizes any continuous emissions monitoring equipment for indicating or demonstrating compliance, complete the following table. This does not include continuous parametric monitoring systems.

Company ID for Egress Point	Type of Monitor	Applicable performance specification (40 CFR 60, Appendix B)	Pollutant(s) Monitored

10. Do you wish to permit this air contaminant source as a portable source, allowing relocation within the state in accordance with OAC rule 3745-31-03 or OAC rule 3745-31-05?

- yes - Note: notification requirements in rules cited above must be followed.
- no

11. The appropriate Emissions Activity Category (EAC) form(s) must be completed and attached for each air contaminant source. At least one complete EAC form must be submitted for each air contaminant source for the application to be considered complete. Refer to the list attached to the PTI instructions.

Section II - Specific Air Contaminant Source Information

REVISED JULY 2008

NOTE: One copy of this section should be filled out for each air contaminant source covered by this PTI application. See the line by line PTI instructions for additional information.

1. Company identification (name for air contaminant source for which you are applying): Pushing (P901)
2. List all equipment that are part of this air contaminant source: Pushing control system
3. Air Contaminant Source Installation or Modification Schedule (must be completed regardless of date of installation or modification):

When did/will you begin to install or modify the air contaminant source? (month/year) October 2008

When did/will you begin to operate the air contaminant source? (month/year) December 2009 **OR** after issuance of PTI

4. Emissions Information: The following table requests information needed to determine the applicable requirements and the compliance status of this air contaminant source with those requirements. Suggestions for how to estimate emissions may be found in the instructions to the Emissions Activity Category (EAC) forms required with this application. If you need further assistance, contact your Ohio EPA permit representative.

- If total potential emissions of HAPs or any Air Toxic is greater than 1 ton/yr, fill in the table for that (those) pollutant(s). For all other pollutants, if "Emissions before controls (max), lb/hr" multiplied by 24 hours/day is greater than 10 lb/day, fill in the table for that pollutant.
- If you have no add-on control equipment, "Emissions before controls" will be the same as "Actual emissions"
- Annual emissions should be based on operating 8760 hr/yr unless you are requesting operating restrictions to limit emissions in line # 8 or have described inherent limitations below.
- If you use units other than lb/hr or ton/yr, specify the units used (e.g., gr/dscf, lb/ton charged, lb/MMBtu, ton/12-months).
- Requested Allowable (ton/yr) is often equivalent to Potential to Emit (PTE) as defined in OAC rule 3745-31-01 and OAC rule 3745-77-01.

Pollutant	Emissions before controls (max) (lb/hr)	Actual emissions (lb/hr)	Actual emissions (ton/year)	Requested Allowable (lb/hr)	Requested Allowable (ton/year)
Filterable Particulate emissions (PE) (formerly particulate matter, PM)		14.34	13.09	14.34	13.09
Total PM ₁₀ (PM < 10 microns in diameter)		28.69	26.18	28.69	26.18
Sulfur dioxide (SO ₂)		49.00	44.71	49.00	44.71
Nitrogen oxides (NO _x)		9.50	8.67	9.50	8.67
Carbon monoxide (CO)		31.50	28.74	31.50	28.74
Organic compounds (OC)					
Volatile organic compounds (VOC)		10.00	9.13	10.00	9.13
Total HAPs					
Highest single HAP:					
Air Toxics (see instructions):					

Note:
1. Based on 10 pushes/hr. Number is maximum hourly.

Section II - Specific Air Contaminant Source Information

REVISED JULY 2008

Provide your calculations as an attachment and explain how all process variables and emission factors were selected. Note the emissions factor(s) employed and document the origin. Example: AP-42, Table 4.4-3 (8/97); stack test, Method 5, 4/96; mass balance based on MSDS; etc.

5. Does this air contaminant source employ emissions control equipment?

Yes - fill out the applicable information below.

No - proceed to item # 6.

Note: Pollutant abbreviations used below: Particulates = PE; Organic compounds = OC; Sulfur dioxide = SO₂; Nitrogen oxides = NO_x; Carbon monoxide = CO

Cyclone/Multiclone

Manufacturer: _____ Year installed: _____

What do you call this control equipment: Flat car pushing, mobile hood with multicyclone

Pollutant(s) controlled: PE OC SO₂ NO_x CO Other _____

Estimated capture efficiency (%): 95+ % Basis for efficiency: Engineering Estimate

Design control efficiency (%): 96% Basis for efficiency: Engineering Estimate

Type: Cyclone Multiclone Rotoclone Other _____

This is the only control equipment on this air contaminant source

If no, this control equipment is: Primary Secondary Parallel

List any other air contaminant sources that are also vented to this control equipment:

Fabric Filter/Baghouse

Manufacturer: _____ Year installed: _____

What do you call this control equipment: _____

Pollutant(s) controlled: PE OC SO₂ NO_x CO Other _____

Estimated capture efficiency (%): _____ Basis for efficiency: _____

Design control efficiency (%): _____ Basis for efficiency: _____

Operating pressure drop range (inches of water): Minimum: _____ Maximum: _____

Pressure type: Negative pressure Positive pressure

Fabric cleaning mechanism: Reverse air Pulse jet Shaker Other _____

Lime injection or fabric coating agent used: Type: _____ Feed rate: _____

This is the only control equipment on this air contaminant source

If no, this control equipment is: Primary Secondary Parallel

List any other air contaminant sources that are also vented to this control equipment:

Wet Scrubber

Manufacturer: _____ Year installed: _____

What do you call this control equipment: _____

Pollutant(s) controlled: PE OC SO₂ NO_x CO Other _____

Estimated capture efficiency (%): _____ Basis for efficiency: _____

Design control efficiency (%): _____ Basis for efficiency: _____

Type: Spray chamber Packed bed Impingement Venturi Other _____

Operating pressure drop range (inches of water): Minimum: _____ Maximum: _____

pH range for scrubbing liquid: Minimum: _____ Maximum: _____

Scrubbing liquid flow rate (gal/min): _____

Is scrubber liquid recirculated? Yes No

Water supply pressure (psig): _____ NOTE: This item for spray chambers only.

This is the only control equipment on this air contaminant source

If no, this control equipment is: Primary Secondary Parallel

List any other air contaminant sources that are also vented to this control equipment:

Electrostatic Precipitator

Manufacturer: _____ Year installed: _____

What do you call this control equipment: _____

Pollutant(s) controlled: PE OC SO₂ NO_x CO Other _____

Estimated capture efficiency (%): _____ Basis for efficiency: _____
 Design control efficiency (%): _____ Basis for efficiency: _____
 Type: Plate-wire Flat-plate Tubular Wet Other _____
 Number of operating fields: _____

This is the only control equipment on this air contaminant source
 If no, this control equipment is: Primary Secondary Parallel
 List any other air contaminant sources that are also vented to this control equipment:

 Concentrator

Manufacturer: _____ Year installed: _____
 What do you call this control equipment: _____
 Pollutant(s) controlled: PE OC SO₂ NO_x CO Other _____
 Estimated capture efficiency (%): _____ Basis for efficiency: _____
 Design regeneration cycle time (minutes): _____
 Minimum desorption air stream temperature (°F): _____
 Rotational rate (revolutions/hour): _____

This is the only control equipment on this air contaminant source
 If no, this control equipment is: Primary Secondary Parallel
 List any other air contaminant sources that are also vented to this control equipment:

 Catalytic Incinerator

Manufacturer: _____ Year installed: _____
 What do you call this control equipment: _____
 Pollutant(s) controlled: PE OC SO₂ NO_x CO Other _____
 Estimated capture efficiency (%): _____ Basis for efficiency: _____
 Design control efficiency (%): _____ Basis for efficiency: _____
 Minimum inlet gas temperature (°F): _____
 Combustion chamber residence time (seconds): _____
 Minimum temperature difference (°F) across catalyst during air contaminant source operation: _____

This is the only control equipment on this air contaminant source
 If no, this control equipment is: Primary Secondary Parallel
 List any other air contaminant sources that are also vented to this control equipment:

 Thermal Incinerator/Thermal Oxidizer

Manufacturer: _____ Year installed: _____
 What do you call this control equipment: _____
 Pollutant(s) controlled: PE OC SO₂ NO_x CO Other _____
 Estimated capture efficiency (%): _____ Basis for efficiency: _____
 Design control efficiency (%): _____ Basis for efficiency: _____
 Minimum operating temperature (°F) and location: _____ (See line by line instructions.)
 Combustion chamber residence time (seconds): _____

This is the only control equipment on this air contaminant source
 If no, this control equipment is: Primary Secondary Parallel
 List any other air contaminant sources that are also vented to this control equipment:

 Flare

Manufacturer: _____ Year installed: _____
 What do you call this control equipment: _____
 Pollutant(s) controlled: PE OC SO₂ NO_x CO Other _____
 Estimated capture efficiency (%): _____ Basis for efficiency: _____
 Design control efficiency (%): _____ Basis for efficiency: _____
 Type: Enclosed Elevated (open)

Ignition device: Electric arc Pilot flame
 Flame presence sensor: Yes No
 This is the only control equipment on this air contaminant source

If no, this control equipment is: Primary Secondary Parallel
 List any other air contaminant sources that are also vented to this control equipment:

 Condenser

Manufacturer: _____ Year installed: _____

What do you call this control equipment: _____

Pollutant(s) controlled: PE OC SO₂ NO_x CO Other _____

Estimated capture efficiency (%): _____ Basis for efficiency: _____

Design control efficiency (%): _____ Basis for efficiency: _____

Type: Indirect contact Direct contact

Maximum exhaust gas temperature (°F) during air contaminant source operation: _____

Coolant type: _____

Design coolant temperature (°F): Minimum _____ Maximum _____

Design coolant flow rate (gpm): _____

This is the only control equipment on this air contaminant source

If no, this control equipment is: Primary Secondary Parallel

List any other air contaminant sources that are also vented to this control equipment:

 Carbon Absorber

Manufacturer: _____ Year installed: _____

What do you call this control equipment: _____

Pollutant(s) controlled: PE OC SO₂ NO_x CO Other _____

Estimated capture efficiency (%): _____ Basis for efficiency: _____

Design control efficiency (%): _____ Basis for efficiency: _____

Type: On-site regenerative Disposable

Maximum design outlet organic compound concentration (ppmv): _____

Carbon replacement frequency or regeneration cycle time (specify units): _____

Maximum temperature of the carbon bed, after regeneration (including any cooling cycle): _____

This is the only control equipment on this air contaminant source

If no, this control equipment is: Primary Secondary Parallel

List any other air contaminant sources that are also vented to this control equipment:

 Dry Scrubber

Manufacturer: _____ Year installed: _____

What do you call this control equipment: _____

Pollutant(s) controlled: PE OC SO₂ NO_x CO Other _____

Estimated capture efficiency (%): _____ Basis for efficiency: _____

Design control efficiency (%): _____ Basis for efficiency: _____

Reagent(s) used: Type: _____ Injection rate(s): _____

Operating pressure drop range (inches of water): Minimum: _____ Maximum: _____

This is the only control equipment on this air contaminant source

If no, this control equipment is: Primary Secondary Parallel

List any other air contaminant sources that are also vented to this control equipment:

 Paint booth filter

Type: Paper Fiberglass Water curtain Other _____

Design control efficiency (%): _____ Basis for efficiency: _____

 Other, describe Flat car pushing

Manufacturer: _____ Year installed: _____

What do you call this control equipment: _____

Pollutant(s) controlled: PE OC SO₂ NO_x CO Other _____

Estimated capture efficiency (%): _____ Basis for efficiency: _____

Design control efficiency (%): 96% Basis for efficiency: Engineering Estimate

This is the only control equipment on this air contaminant source
 If no, this control equipment is: Primary Secondary Parallel
 List any other air contaminant sources that are also vented to this control equipment:

6. Attach a Process or Activity Flow Diagram to this application for each air contaminant source included in the application. The diagram should indicate their relationships to one another. See the line by line PTI instructions for additional information.

See Permit Application Text

7. Emissions egress point(s) information: PTIs which allow total emissions in excess of the thresholds listed below will be subject to an air quality modeling analysis. This analysis is to assure that the impact from the requested project will not exceed Ohio=s Acceptable Incremental Impacts for criteria pollutants and/or Maximum Allowable Ground Level Concentrations (MAGLC) for air toxics. Permit requests that would have unacceptable impacts can not be approved as proposed. See the line by line PTI instructions for additional information.

Complete the tables below if the requested allowable annual emission rate for this PTI exceeds any of the following:

- Particulate Matter (PM10): 10 tons per year
- Sulfur Dioxide (SO2): 25 tons per year
- Nitrogen Oxides (NOx): 25 tons per year
- Carbon Monoxide (CO): 100 tons per year
- Air Toxic: 1 ton per year. An air toxic is any air pollutant for which the American Council of Governmental Industrial Hygienists (ACGIH) has established a Threshold Limit Value (TLV).

Complete Table 7-A below for each stack emissions egress point. An egress point is a point at which emissions from an air contaminant source are released into the ambient (outside) air. List each individual egress point on a separate line.

Table 7-A, Stack Egress Point Information						
Company Name or ID for the Egress Point (examples: Stack A; Boiler Stack; etc.)	Type Code*	Stack Egress Point Shape and Dimensions (in)(examples: round 10 inch ID; rectangular 14 X 16 inches; etc.)	Stack Egress Point Height from the Ground (ft)	Stack Temp. at Max. Capacity (F)	Stack Flow Rate at Max. Capacity (ACFM)	Minimum Distance to the Property Line (ft)
Pushing	A	Round (5 ft.)	20	400	82,000	

*Type codes for stack egress points:

- A. vertical stack (unobstructed): There are no obstructions to upward flow in or on the stack such as a rain cap.

- B. vertical stack (obstructed): There are obstructions to the upward flow, such as a rain cap, which prevents or inhibits the air flow in a vertical direction.
- C. non-vertical stack: The stack directs the air flow in a direction which is not directly upward.

Complete Table 7-B below for each fugitive emissions egress point. List each individual egress point on a separate line. Refer to the description of the fugitive egress point type codes below the table for use in completing the type code column of the table. For air contaminant sources like roadways and storage piles, only the first 5 columns need to be completed. For an air contaminant source with multiple fugitive emissions egress points, include only the primary egress points.

Table 7-B, Fugitive Egress Point Information					
Company ID for the Egress Point (examples; Garage Door B, Building C; Roof Monitor; etc.)	Type Code*	Egress Point Description (examples: garage door, 12 X 30 feet, west wall; outside gravel storage piles; etc.)	Fugitive Egress Point Height from the Ground (ft)	Minimum Distance to the Property Line (ft)	Exit Gas Temp. (F)

*Type codes for fugitive egress point:

- D. door or window
- E. other opening in the building without a duct
- F. no stack and no building enclosing the air contaminant source (e.g., roadways)

Complete Table 7-C below for each Stack Egress Point identified in Table 7-A above. In each case, use the dimensions of the largest nearby building, building segment or structure. List each individual egress point on a separate line. Use the same Company Name or ID for the Egress Point in Table 7-C that was used in Table 7-A. See the line by line PTI instructions for additional information.

Table 7-C, Egress Point Additional Information (Add rows as necessary)			
Company ID or Name for the Egress Point	Building Height (ft)	Building Width (ft)	Building Length (ft)

--	--	--	--

8. Request for Federally Enforceable Limits

As part of this permit application, do you wish to propose voluntary restrictions to limit emissions in order to avoid specific requirements listed below, (i.e., are you requesting federally enforceable limits to obtain synthetic minor status)?

- yes
 no
 not sure - please contact me if this affects me

If yes, why are you requesting federally enforceable limits? Check all that apply.

- a. to avoid being a major source (see OAC rule 3745-77-01)
 b. to avoid being a major MACT source (see OAC rule 3745-31-01)
 c. to avoid being a major modification (see OAC rule 3745-31-01)
 d. to avoid being a major stationary source (see OAC rule 3745-31-01)
 e. to avoid an air dispersion modeling requirement (see Engineering Guide # 69)
 f. to avoid another requirement. Describe: _____

If you checked a., b. or d., please attach a facility-wide potential to emit (PTE) analysis (for each pollutant) and synthetic minor strategy to this application. (See line by line instructions for definition of PTE.) If you checked c., please attach a net emission change analysis to this application.

9. If this air contaminant source utilizes any continuous emissions monitoring equipment for indicating or demonstrating compliance, complete the following table. This does not include continuous parametric monitoring systems.

Company ID for Egress Point	Type of Monitor	Applicable performance specification (40 CFR 60, Appendix B)	Pollutant(s) Monitored

10. Do you wish to permit this air contaminant source as a portable source, allowing relocation within the state in accordance with OAC rule 3745-31-03 or OAC rule 3745-31-05?

- yes - Note: notification requirements in rules cited above must be followed.
 no

11. The appropriate Emissions Activity Category (EAC) form(s) must be completed and attached for each air contaminant source. At least one complete EAC form must be submitted for each air contaminant source for the application to be considered complete. Refer to the list attached to the PTI instructions.

EMISSIONS ACTIVITY CATEGORY FORM COKE MANUFACTURING

This form is to be completed for each coke manufacturing operation. State/Federal regulations which may apply to coke manufacturing are listed in the instructions. Note that there may be other regulations which apply to this emissions unit which are not included in this list.

Note: This emissions activity category (EAC) form does not include roadways and parking areas, storage piles, and material handling operations which may also be associated with a coke manufacturing facility. Therefore, additional EAC forms for those emissions units may need to be submitted.

1. Reason this form is being submitted (Check one)

- New Permit Renewal or Modification of Air Permit Number(s) (e.g. F001) P901, F003 and F004

2. Maximum Operating Schedule: 24 hours per day; 365 days per year

If the schedule is less than 24 hours/day or 365 days/year, what limits the schedule to less than maximum? See instructions for examples. _____

3. Identification of fugitive dust emissions units:

<u>Check Those Emissions Units Present</u>	<u>Fugitive Dust Emissions Units</u>	<u>How many?</u>
<input checked="" type="checkbox"/>	Coal crushing (F002)	<u>1</u>
<input checked="" type="checkbox"/>	Charging (P901)	<u>1</u>
<input checked="" type="checkbox"/>	Coking (P901)	<u>1</u>
<input checked="" type="checkbox"/>	Pushing (P901)	<u>1</u>
<input checked="" type="checkbox"/>	Coke grinding and screening (F004)	<u>1</u>
<input checked="" type="checkbox"/>	Other (describe): <u>Address on other EAC Forms</u>	_____ _____

4. General coke-oven battery data:

a. Battery number	<u>A</u>	<u>B</u>	<u>C</u>	_____
b. No. of ovens per battery	<u>40</u>	<u>20</u>	<u>40</u>	_____
c. Battery manufacturer	<u>Custom</u>	<u>Custom</u>	<u>Custom</u>	_____
d. Type of battery	<u>Heat Recovery</u>	<u>Heat Recovery</u>	<u>Heat Recovery</u>	_____
e. Oven height (meters)	_____	_____	_____	_____
f. Maximum oven temp. (°F)	_____	_____	_____	_____

5. Coal pulverizing and screening process data:

a. Manufacturer of pulverizing and screening equipment

b. Make or model number _____

c. Maximum capacity of pulverizing and screening equipment _____ pounds coal/hour

d. Maximum hourly production rate for the pulverizing and screening equipment
 _____ tons coal/hour

e. Maximum annual production for the pulverizing and screening equipment

f. _____ tons coal/year

6. Charging process data:

	<u>A</u>	<u>B</u>	<u>C</u>	_____
a. Battery number				
b. Type of charging equipment	<u>Heat Recovery</u>	<u>Heat Recovery</u>	<u>Heat Recovery</u>	_____
c. No. of charging ports per oven	<u>NA</u>	<u>NA</u>	<u>NA</u>	_____
d. No. of gas collector mains	<u>NA</u>	<u>NA</u>	<u>NA</u>	_____
e. Maximum capacity of charging equipment (tons coal/charge)	<u>50</u>	<u>50</u>	<u>50</u>	_____
f. Maximum no. of charges per battery per hour	<u>10</u>	<u>10</u>	<u>10</u>	_____
g. Maximum no. of charges per battery per day	<u>20</u>	<u>10</u>	<u>20</u>	_____
h. Maximum no. of charges per battery per year	<u>7,300</u>	<u>3,650</u>	<u>7,300</u>	_____
i. Average charging cycle time per oven (minutes)*	<u>5</u>	<u>5</u>	<u>5</u>	_____
j. Average quantity of coal per charge (tons/charge)	<u>50</u>	<u>50</u>	<u>50</u>	_____
k. Maximum quantity of coal charged per battery per hour (tons/hour)	<u>500</u>	<u>500</u>	<u>500</u>	_____
l. Maximum quantity of coal charged per battery per year (tons/year)	<u>365,000</u>	<u>182,500</u>	<u>365,000</u>	_____
m. Is coal preheating used prior to charging? (yes/no) If yes, what type of control device?	<u>NO</u>	<u>NO</u>	<u>NO</u>	_____ _____ _____
n. Operating steam vacuum in collection main (inches water)	<u>NA</u>	<u>NA</u>	<u>NA</u>	_____

*The charging cycle time begins when the coal from the charging system starts to enter the oven and ends when the last charge port lid is replaced.

7. Coking (doors, offtake piping and lids) process data:

a.	Battery number	<u>A</u>	<u>B</u>	<u>C</u>	_____
b.	No. of doors per battery	<u>80</u>	<u>40</u>	<u>80</u>	_____
c.	No. of offtake pipes per battery	<u>NA</u>	<u>NA</u>	<u>NA</u>	_____
d.	No. of jumper pipes connecting two ovens per battery	<u>NA</u>	<u>NA</u>	<u>NA</u>	_____
e.	No. of charging hole lids per oven per battery	<u>NA</u>	<u>NA</u>	<u>NA</u>	_____
f.	Average coking time per battery (hours)	<u>48</u>	<u>48</u>	<u>48</u>	_____

8. Pushing process data:

a.	Battery number	<u>A</u>	<u>B</u>	<u>C</u>	_____
b.	Maximum no. of pushes per battery per hour	<u>10</u>	<u>10</u>	<u>10</u>	_____
c.	Maximum no. of pushes per battery per day	<u>20</u>	<u>10</u>	<u>20</u>	_____
d.	Maximum no. of pushes per battery per year	<u>7,300</u>	<u>3,650</u>	<u>7,300</u>	_____
e.	Average pushing cycle time per oven (minutes)*	<u>5</u>	<u>5</u>	<u>5</u>	_____
f.	Average quantity of coke produced per push per oven (tons)	<u>35.9</u>	<u>35.9</u>	<u>35.9</u>	_____
g.	Maximum quantity of coke produced per battery per hour (tons/hour)	_____	_____	_____	_____
h.	Maximum quantity of coke produced per battery per year (tons/year)	_____	_____	_____	_____
i.	Percentage by weight of each type of coke produced:	_____	_____	_____	_____
	Green coke	<u>0%</u>	<u>0%</u>	<u>0%</u>	_____
	Moderately green	<u>0%</u>	<u>0%</u>	<u>0%</u>	_____
	Clean coke	<u>100%</u>	<u>100%</u>	<u>100%</u>	_____

*The pushing cycle time commences with the moving of the coke mass from an oven and concludes when the quench car enters the quench tower.

9. Coke grinding and screening process data:

a.	Manufacturer of grinding and screening equipment	<u>NA</u>
----	--	-----------

- b. Make or model number _____ NA _____
- c. Maximum capacity of grinding and screening equipment _____ tons coke/hour
- d. Maximum hourly production rate for the grinding and screening equipment 500 tons coke/hour
- e. Maximum annual production for the grinding and screening equipment 654,449 tons coke/year

10. Control methods to be used for fugitive dust emissions from coke manufacturing:

(List the methods to be used to control fugitive dust emissions from each of the specific activities shown below. Use the control method codes listed below, (A) through (R), to identify them.)

Control Method Codes

<u>Fugitive Dust Emissions Units</u>	<u>Coke-Oven Battery Number</u>		
	<u>A</u>	<u>B</u>	<u>C</u>
Coal crushing (F003)	<u>C</u>	<u>C</u>	<u>C</u>
Charging (P901)	<u>H</u>	<u>H</u>	<u>H</u>
Coking (P901)	<u>L</u>	<u>L</u>	<u>L</u>
Pushing (P901)	<u>Other</u>	<u>Other</u>	<u>Other</u>
Coke grinding and screening (F004)	<u>Q</u>	<u>Q</u>	<u>Q</u>
Other (describe): _____ _____	_____ _____	_____ _____	_____ _____

The various control methods and their respective code letters are given in the following sections. Please complete the requested information for any control method(s) cited above.

Coal Crushing

(A) Watering:

Year installed _____
 Source of water _____
 Method of application _____
 Frequency of application _____
 Application rate _____ gallons sprayed/ton processed
 Application points _____
 Estimated control efficiency _____ %

(B) Wet suppression (chemical):

Year installed _____
 Source of chemical(s) _____
 Type of chemical(s) used _____

 Method of application _____
 Frequency of application _____
 Dilution _____ gallons chemical/1,000 gallons water
 Application rate _____ gallons sprayed/ton processed

Application points _____

Estimated control efficiency _____ %

(C) Enclosure:

Year installed _____

Describe enclosure

Estimated enclosure capture efficiency 99 %

(D) Enclosure, vent to fabric filter:

Describe enclosure

Estimated enclosure capture efficiency _____ %

(E) Other (describe):

Year installed _____

Charging

(F) Charging on-the-main/staged charging:

Year implemented _____

Describe (or attach) the staged charging operating procedure:

Estimated control efficiency (assuming the uncontrolled emission rate is that occurring with conventional charging) _____ %

(G) Closed pipeline charging:

Year installed _____

Describe the pipeline charging system

(K) Shed, fabric filter:

Describe enclosure

_____ Es
_____ Es
Estimated shed capture efficiency _____ %

(L) Other (describe):

Lime spray dryer for SO₂ control, followed by a baghouse for PM, PM₁₀, and Lead

Year installed _____

Pushing

(M) Capture to wet scrubber:

Type of capture system

- shed, wet scrubber
- enclosed hot coke car, wet scrubber
- hood, mobile wet scrubber
- hood, stationary wet scrubber
- other (describe) _____

Is fugitive dust from the hot coke car captured and controlled during car movement to the quench tower? yes no

Describe capture system (shed, enclosure, hood)

Estimated capture efficiency (include fugitive dust emissions occurring during hot coke car movement to quench tower) _____ %

(N) Capture to baghouse:

Type of capture system

- hood ducted to baghouse
- other (describe) _____

Is fugitive dust from the hot coke car captured and controlled during car movement to the quench tower? yes no

Describe capture system (shed, enclosure, hood)

Estimated capture efficiency (include fugitive dust emissions occurring during hot coke car movement to quench tower) _____ %

(O) Shed, wet electrostatic precipitator: _____

Describe shed capture system

Estimated shed capture efficiency (include fugitive dust emissions occurring during hot coke car movement to quench tower) _____ %

*Other: Flat car push, mobile hood, multicyclone.

Coke Grinding and Screening

(P) Enclosure:

Year installed _____

Describe enclosure:

Estimated enclosure capture efficiency _____ %

(Q) Enclosure, vent to fabric filter:

Describe enclosure:

Close capture hood

Estimated enclosure capture efficiency 95 %

(R) Other (describe):

Year installed: _____

Section II - Specific Air Contaminant Source Information

REVISED JULY 2008

NOTE: One copy of this section should be filled out for each air contaminant source covered by this PTI application. See the line by line PTI instructions for additional information.

1. Company identification (name for air contaminant source for which you are applying): FGD (Flue Gas Desulfurization) Dust Silo (Z001)

2. List all equipment that are part of this air contaminant source: FGD dust silo exhaust to baghouse

3. Air Contaminant Source Installation or Modification Schedule (must be completed regardless of date of installation or modification):

When did/will you begin to install or modify the air contaminant source? (month/year) October 2008

When did/will you begin to operate the air contaminant source? (month/year) December 2009 **OR** after issuance of PTI

4. Emissions Information: The following table requests information needed to determine the applicable requirements and the compliance status of this air contaminant source with those requirements. Suggestions for how to estimate emissions may be found in the instructions to the Emissions Activity Category (EAC) forms required with this application. If you need further assistance, contact your Ohio EPA permit representative.

- If total potential emissions of HAPs or any Air Toxic is greater than 1 ton/yr, fill in the table for that (those) pollutant(s). For all other pollutants, if "Emissions before controls (max), lb/hr" multiplied by 24 hours/day is greater than 10 lb/day, fill in the table for that pollutant.
- If you have no add-on control equipment, "Emissions before controls" will be the same as "Actual emissions"
- Annual emissions should be based on operating 8760 hr/yr unless you are requesting operating restrictions to limit emissions in line # 8 or have described inherent limitations below.
- If you use units other than lb/hr or ton/yr, specify the units used (e.g., gr/dscf, lb/ton charged, lb/MMBtu, ton/12-months).
- Requested Allowable (ton/yr) is often equivalent to Potential to Emit (PTE) as defined in OAC rule 3745-31-01 and OAC rule 3745-77-01.

Pollutant	Emissions before controls (max) (lb/hr)	Actual emissions (lb/hr)	Actual emissions (ton/year)	Requested Allowable (lb/hr)	Requested Allowable (ton/year)
Particulate emissions (PE) (formerly particulate matter, PM)	Negligible (<10 lbs/day and 1 tons/year)				
PM ₁₀ (PM < 10 microns in diameter)					
Sulfur dioxide (SO ₂)					
Nitrogen oxides (NO _x)					
Carbon monoxide (CO)					
Organic compounds (OC)					
Volatile organic compounds (VOC)					
Total HAPs					
Highest single HAP:					
Air Toxics (see instructions):					

Section II - Specific Air Contaminant Source Information

REVISED JULY 2008

Provide your calculations as an attachment and explain how all process variables and emission factors were selected. Note the emissions factor(s) employed and document the origin. Example: AP-42, Table 4.4-3 (8/97); stack test, Method 5, 4/96; mass balance based on MSDS; etc.

5. Does this air contaminant source employ emissions control equipment?

Yes - fill out the applicable information below.

No - proceed to item # 6.

Note: Pollutant abbreviations used below: Particulates = PE; Organic compounds = OC; Sulfur dioxide = SO₂; Nitrogen oxides = NO_x; Carbon monoxide = CO

Cyclone/Multiclone

Manufacturer: _____ Year installed: _____

What do you call this control equipment: _____

Pollutant(s) controlled: PE OC SO₂ NO_x CO Other _____

Estimated capture efficiency (%): _____ Basis for efficiency: _____

Design control efficiency (%): _____ Basis for efficiency: _____

Type: Cyclone Multiclone Rotoclone Other _____

This is the only control equipment on this air contaminant source

If no, this control equipment is: Primary Secondary Parallel

List any other air contaminant sources that are also vented to this control equipment:

Fabric Filter/Baghouse

Manufacturer: _____ Year installed: _____

What do you call this control equipment: Bin Vent Filter

Pollutant(s) controlled: PE OC SO₂ NO_x CO Other _____

Estimated capture efficiency (%): 99% Basis for efficiency: Engineering Estimate

Design control efficiency (%): NA Basis for efficiency: _____

Operating pressure drop range (inches of water): Minimum: _____ Maximum: _____

Pressure type: Negative pressure Positive pressure

Fabric cleaning mechanism: Reverse air Pulse jet Shaker Other _____

Lime injection or fabric coating agent used: Type: _____ Feed rate: _____

This is the only control equipment on this air contaminant source

If no, this control equipment is: Primary Secondary Parallel

List any other air contaminant sources that are also vented to this control equipment:

Wet Scrubber

Manufacturer: _____ Year installed: _____

What do you call this control equipment: _____

Pollutant(s) controlled: PE OC SO₂ NO_x CO Other _____

Estimated capture efficiency (%): _____ Basis for efficiency: _____

Design control efficiency (%): _____ Basis for efficiency: _____

Type: Spray chamber Packed bed Impingement Venturi Other _____

Operating pressure drop range (inches of water): Minimum: _____ Maximum: _____

pH range for scrubbing liquid: Minimum: _____ Maximum: _____

Scrubbing liquid flow rate (gal/min): _____

Is scrubber liquid recirculated? Yes No

Water supply pressure (psig): _____ NOTE: This item for spray chambers only.

This is the only control equipment on this air contaminant source

If no, this control equipment is: Primary Secondary Parallel

List any other air contaminant sources that are also vented to this control equipment:

Electrostatic Precipitator

Manufacturer: _____ Year installed: _____

What do you call this control equipment: _____

Pollutant(s) controlled: PE OC SO₂ NO_x CO Other _____

Estimated capture efficiency (%): _____ Basis for efficiency: _____
 Design control efficiency (%): _____ Basis for efficiency: _____
 Type: Plate-wire Flat-plate Tubular Wet Other _____
 Number of operating fields: _____

This is the only control equipment on this air contaminant source
 If no, this control equipment is: Primary Secondary Parallel
 List any other air contaminant sources that are also vented to this control equipment:

 Concentrator

Manufacturer: _____ Year installed: _____
 What do you call this control equipment: _____
 Pollutant(s) controlled: PE OC SO₂ NO_x CO Other _____
 Estimated capture efficiency (%): _____ Basis for efficiency: _____
 Design regeneration cycle time (minutes): _____
 Minimum desorption air stream temperature (°F): _____
 Rotational rate (revolutions/hour): _____

This is the only control equipment on this air contaminant source
 If no, this control equipment is: Primary Secondary Parallel
 List any other air contaminant sources that are also vented to this control equipment:

 Catalytic Incinerator

Manufacturer: _____ Year installed: _____
 What do you call this control equipment: _____
 Pollutant(s) controlled: PE OC SO₂ NO_x CO Other _____
 Estimated capture efficiency (%): _____ Basis for efficiency: _____
 Design control efficiency (%): _____ Basis for efficiency: _____
 Minimum inlet gas temperature (°F): _____
 Combustion chamber residence time (seconds): _____
 Minimum temperature difference (°F) across catalyst during air contaminant source operation: _____

This is the only control equipment on this air contaminant source
 If no, this control equipment is: Primary Secondary Parallel
 List any other air contaminant sources that are also vented to this control equipment:

 Thermal Incinerator/Thermal Oxidizer

Manufacturer: _____ Year installed: _____
 What do you call this control equipment: _____
 Pollutant(s) controlled: PE OC SO₂ NO_x CO Other _____
 Estimated capture efficiency (%): _____ Basis for efficiency: _____
 Design control efficiency (%): _____ Basis for efficiency: _____
 Minimum operating temperature (°F) and location: _____ (See line by line instructions.)
 Combustion chamber residence time (seconds): _____

This is the only control equipment on this air contaminant source
 If no, this control equipment is: Primary Secondary Parallel
 List any other air contaminant sources that are also vented to this control equipment:

 Flare

Manufacturer: _____ Year installed: _____
 What do you call this control equipment: _____
 Pollutant(s) controlled: PE OC SO₂ NO_x CO Other _____
 Estimated capture efficiency (%): _____ Basis for efficiency: _____
 Design control efficiency (%): _____ Basis for efficiency: _____

Type: Enclosed Elevated (open)
 Ignition device: Electric arc Pilot flame
 Flame presence sensor: Yes No
 This is the only control equipment on this air contaminant source

If no, this control equipment is: Primary Secondary Parallel

List any other air contaminant sources that are also vented to this control equipment:

Condenser

Manufacturer: _____ Year installed: _____

What do you call this control equipment: _____

Pollutant(s) controlled: PE OC SO₂ NO_x CO Other _____

Estimated capture efficiency (%): _____ Basis for efficiency: _____

Design control efficiency (%): _____ Basis for efficiency: _____

Type: Indirect contact Direct contact

Maximum exhaust gas temperature (°F) during air contaminant source operation: _____

Coolant type: _____

Design coolant temperature (°F): Minimum _____ Maximum _____

Design coolant flow rate (gpm): _____

This is the only control equipment on this air contaminant source

If no, this control equipment is: Primary Secondary Parallel

List any other air contaminant sources that are also vented to this control equipment:

Carbon Absorber

Manufacturer: _____ Year installed: _____

What do you call this control equipment: _____

Pollutant(s) controlled: PE OC SO₂ NO_x CO Other _____

Estimated capture efficiency (%): _____ Basis for efficiency: _____

Design control efficiency (%): _____ Basis for efficiency: _____

Type: On-site regenerative Disposable

Maximum design outlet organic compound concentration (ppmv): _____

Carbon replacement frequency or regeneration cycle time (specify units): _____

Maximum temperature of the carbon bed, after regeneration (including any cooling cycle): _____

This is the only control equipment on this air contaminant source

If no, this control equipment is: Primary Secondary Parallel

List any other air contaminant sources that are also vented to this control equipment:

Dry Scrubber

Manufacturer: _____ Year installed: _____

What do you call this control equipment: _____

Pollutant(s) controlled: PE OC SO₂ NO_x CO Other _____

Estimated capture efficiency (%): _____ Basis for efficiency: _____

Design control efficiency (%): _____ Basis for efficiency: _____

Reagent(s) used: Type: _____ Injection rate(s): _____

Operating pressure drop range (inches of water): Minimum: _____ Maximum: _____

This is the only control equipment on this air contaminant source

If no, this control equipment is: Primary Secondary Parallel

List any other air contaminant sources that are also vented to this control equipment:

Paint booth filter

Type: Paper Fiberglass Water curtain Other _____

Design control efficiency (%): _____ Basis for efficiency: _____

Other, describe _____

Manufacturer: _____ Year installed: _____

What do you call this control equipment: _____

Pollutant(s) controlled: PE OC SO₂ NO_x CO Other _____

Estimated capture efficiency (%): _____ Basis for efficiency: _____

Design control efficiency (%): _____ Basis for efficiency: _____

This is the only control equipment on this air contaminant source

If no, this control equipment is: Primary Secondary Parallel

List any other air contaminant sources that are also vented to this control equipment:

6. Attach a Process or Activity Flow Diagram to this application for each air contaminant source included in the application. The diagram should indicate their relationships to one another. See the line by line PTI instructions for additional information.

See Permit Application Text

7. Emissions egress point(s) information: PTIs which allow total emissions in excess of the thresholds listed below will be subject to an air quality modeling analysis. This analysis is to assure that the impact from the requested project will not exceed Ohio=s Acceptable Incremental Impacts for criteria pollutants and/or Maximum Allowable Ground Level Concentrations (MAGLC) for air toxics. Permit requests that would have unacceptable impacts can not be approved as proposed. See the line by line PTI instructions for additional information.

Complete the tables below if the requested allowable annual emission rate for this PTI exceeds any of the following:

- Particulate Matter (PM10): 10 tons per year
- Sulfur Dioxide (SO2): 25 tons per year
- Nitrogen Oxides (NOx): 25 tons per year
- Carbon Monoxide (CO): 100 tons per year
- Air Toxic: 1 ton per year. An air toxic is any air pollutant for which the American Council of Governmental Industrial Hygienists (ACGIH) has established a Threshold Limit Value (TLV).

Complete Table 7-A below for each stack emissions egress point. An egress point is a point at which emissions from an air contaminant source are released into the ambient (outside) air. List each individual egress point on a separate line.

Table 7-A, Stack Egress Point Information						
Company Name or ID for the Egress Point (examples: Stack A; Boiler Stack; etc.)	Type Code*	Stack Egress Point Shape and Dimensions (in)(examples: round 10 inch ID; rectangular 14 X 16 inches; etc.)	Stack Egress Point Height from the Ground (ft)	Stack Temp. at Max. Capacity (F)	Stack Flow Rate at Max. Capacity (ACFM)	Minimum Distance to the Property Line (ft)
FGD Dust Silo	A					

*Type codes for stack egress points:

- A. vertical stack (unobstructed): There are no obstructions to upward flow in or on the stack such as a rain cap.
- B. vertical stack (obstructed): There are obstructions to the upward flow, such as a rain cap, which prevents

- or inhibits the air flow in a vertical direction.
- C. non-vertical stack: The stack directs the air flow in a direction which is not directly upward.

Complete Table 7-B below for each fugitive emissions egress point. List each individual egress point on a separate line. Refer to the description of the fugitive egress point type codes below the table for use in completing the type code column of the table. For air contaminant sources like roadways and storage piles, only the first 5 columns need to be completed. For an air contaminant source with multiple fugitive emissions egress points, include only the primary egress points.

Table 7-B, Fugitive Egress Point Information					
Company ID for the Egress Point (examples; Garage Door B, Building C; Roof Monitor; etc.)	Type Code*	Egress Point Description (examples: garage door, 12 X 30 feet, west wall; outside gravel storage piles; etc.)	Fugitive Egress Point Height from the Ground (ft)	Minimum Distance to the Property Line (ft)	Exit Gas Temp. (F)

*Type codes for fugitive egress point:

- D. door or window
- E. other opening in the building without a duct
- F. no stack and no building enclosing the air contaminant source (e.g., roadways)

Complete Table 7-C below for each Stack Egress Point identified in Table 7-A above. In each case, use the dimensions of the largest nearby building, building segment or structure. List each individual egress point on a separate line. Use the same Company Name or ID for the Egress Point in Table 7-C that was used in Table 7-A. See the line by line PTI instructions for additional information.

Table 7-C, Egress Point Additional Information (Add rows as necessary)			
Company ID or Name for the Egress Point	Building Height (ft)	Building Width (ft)	Building Length (ft)

8. Request for Federally Enforceable Limits

As part of this permit application, do you wish to propose voluntary restrictions to limit emissions in order to avoid specific requirements listed below, (i.e., are you requesting federally enforceable limits to obtain synthetic minor status)?

- yes
- no
- not sure - please contact me if this affects me

If yes, why are you requesting federally enforceable limits? Check all that apply.

- a. to avoid being a major source (see OAC rule 3745-77-01)
- b. to avoid being a major MACT source (see OAC rule 3745-31-01)
- c. to avoid being a major modification (see OAC rule 3745-31-01)
- d. to avoid being a major stationary source (see OAC rule 3745-31-01)
- e. to avoid an air dispersion modeling requirement (see Engineering Guide # 69)
- f. to avoid another requirement. Describe: _____

If you checked a., b. or d., please attach a facility-wide potential to emit (PTE) analysis (for each pollutant) and synthetic minor strategy to this application. (See line by line instructions for definition of PTE.) If you checked c., please attach a net emission change analysis to this application.

9. If this air contaminant source utilizes any continuous emissions monitoring equipment for indicating or demonstrating compliance, complete the following table. This does not include continuous parametric monitoring systems.

Company ID for Egress Point	Type of Monitor	Applicable performance specification (40 CFR 60, Appendix B)	Pollutant(s) Monitored

10. Do you wish to permit this air contaminant source as a portable source, allowing relocation within the state in accordance with OAC rule 3745-31-03 or OAC rule 3745-31-05?

- yes - Note: notification requirements in rules cited above must be followed.
- no

11. The appropriate Emissions Activity Category (EAC) form(s) must be completed and attached for each air contaminant source. At least one complete EAC form must be submitted for each air contaminant source for the application to be considered complete. Refer to the list attached to the PTI instructions.

EMISSIONS ACTIVITY CATEGORY FORM GENERAL PROCESS OPERATION

This form is to be completed for each process operation when there is no specific emissions activity category (EAC) form applicable. If there is more than one end product for this process, copy and complete this form for each additional product (see instructions). Several State/Federal regulations which may apply to process operations are listed in the instructions. Note that there may be other regulations which apply to this emissions unit which are not included in this list.

1. Reason this form is being submitted (Check one)

New Permit Renewal or Modification of Air Permit Number(s) (e.g. P001) Z001

2. Maximum Operating Schedule: 24 hours per day ; 365 days per year

If the schedule is less than 24 hours/day or 365 days/year, what limits the schedule to less than maximum? See instructions for examples. _____

3. End product of this process: Flue Gas Desulfurization dust

4. Hourly production rates (indicate appropriate units). Please see the instructions for clarification of "Maximum" and "Average" for new versus existing operations:

Hourly	Rate	Units (e.g., widgets)
Average production	NA	NA
Maximum production	6,300	Lbs/hr

5. Annual production rates (indicate appropriate units) Please see the instructions for clarification of "Maximum" and "Actual" for new versus existing operations:

Annual	Rate	Units (e.g., widgets)
Actual production	NA	NA
Maximum production	NA	NA

Section II - Specific Air Contaminant Source Information

REVISED JULY 2008

NOTE: One copy of this section should be filled out for each air contaminant source covered by this PTI application. See the line by line PTI instructions for additional information.

1. Company identification (name for air contaminant source for which you are applying): Lime Silo (Z002)
2. List all equipment that are part of this air contaminant source: Lime silo exhaust to baghouse
3. Air Contaminant Source Installation or Modification Schedule (must be completed regardless of date of installation or modification):

When did/will you begin to install or modify the air contaminant source? (month/year) October 2008

When did/will you begin to operate the air contaminant source? (month/year) December 2009 **OR** after issuance of PTI

4. Emissions Information: The following table requests information needed to determine the applicable requirements and the compliance status of this air contaminant source with those requirements. Suggestions for how to estimate emissions may be found in the instructions to the Emissions Activity Category (EAC) forms required with this application. If you need further assistance, contact your Ohio EPA permit representative.

- If total potential emissions of HAPs or any Air Toxic is greater than 1 ton/yr, fill in the table for that (those) pollutant(s). For all other pollutants, if "Emissions before controls (max), lb/hr" multiplied by 24 hours/day is greater than 10 lb/day, fill in the table for that pollutant.
- If you have no add-on control equipment, "Emissions before controls" will be the same as "Actual emissions"
- Annual emissions should be based on operating 8760 hr/yr unless you are requesting operating restrictions to limit emissions in line # 8 or have described inherent limitations below.
- If you use units other than lb/hr or ton/yr, specify the units used (e.g., gr/dscf, lb/ton charged, lb/MMBtu, ton/12-months).
- Requested Allowable (ton/yr) is often equivalent to Potential to Emit (PTE) as defined in OAC rule 3745-31-01 and OAC rule 3745-77-01.

Pollutant	Emissions before controls (max) (lb/hr)	Actual emissions (lb/hr)	Actual emissions (ton/year)	Requested Allowable (lb/hr)	Requested Allowable (ton/year)
Particulate emissions (PE) (formerly particulate matter, PM)	Negligible (<10 lbs/day and 1 tons/year)				
PM ₁₀ (PM < 10 microns in diameter)					
Sulfur dioxide (SO ₂)					
Nitrogen oxides (NO _x)					
Carbon monoxide (CO)					
Organic compounds (OC)					
Volatile organic compounds (VOC)					
Total HAPs					
Highest single HAP:					
Air Toxics (see instructions):					

Provide your calculations as an attachment and explain how all process variables and emission factors were selected. Note the emissions factor(s) employed and document the origin. Example: AP-42, Table 4.4-3 (8/97); stack test, Method 5, 4/96; mass balance based on MSDS; etc.

5. Does this air contaminant source employ emissions control equipment?

Yes - fill out the applicable information below.

No - proceed to item # 6.

Note: Pollutant abbreviations used below: Particulates = PE; Organic compounds = OC; Sulfur dioxide = SO₂; Nitrogen oxides = NO_x; Carbon monoxide = CO

Cyclone/Multiclone

Manufacturer: _____ Year installed: _____

What do you call this control equipment: _____

Pollutant(s) controlled: PE OC SO₂ NO_x CO Other _____

Estimated capture efficiency (%): _____ Basis for efficiency: _____

Design control efficiency (%): _____ Basis for efficiency: _____

Type: Cyclone Multiclone Rotoclone Other _____

This is the only control equipment on this air contaminant source

If no, this control equipment is: Primary Secondary Parallel

List any other air contaminant sources that are also vented to this control equipment:

Fabric Filter/Baghouse

Manufacturer: _____ Year installed: _____

What do you call this control equipment: Bin Vent Filter

Pollutant(s) controlled: PE OC SO₂ NO_x CO Other _____

Estimated capture efficiency (%): 99% Basis for efficiency: Engineering Estimate

Design control efficiency (%): NA Basis for efficiency: _____

Operating pressure drop range (inches of water): Minimum: _____ Maximum: _____

Pressure type: Negative pressure Positive pressure

Fabric cleaning mechanism: Reverse air Pulse jet Shaker Other _____

Lime injection or fabric coating agent used: Type: _____ Feed rate: _____

This is the only control equipment on this air contaminant source

If no, this control equipment is: Primary Secondary Parallel

List any other air contaminant sources that are also vented to this control equipment:

Wet Scrubber

Manufacturer: _____ Year installed: _____

What do you call this control equipment: _____

Pollutant(s) controlled: PE OC SO₂ NO_x CO Other _____

Estimated capture efficiency (%): _____ Basis for efficiency: _____

Design control efficiency (%): _____ Basis for efficiency: _____

Type: Spray chamber Packed bed Impingement Venturi Other _____

Operating pressure drop range (inches of water): Minimum: _____ Maximum: _____

pH range for scrubbing liquid: Minimum: _____ Maximum: _____

Scrubbing liquid flow rate (gal/min): _____

Is scrubber liquid recirculated? Yes No

Water supply pressure (psig): _____ NOTE: This item for spray chambers only.

This is the only control equipment on this air contaminant source

If no, this control equipment is: Primary Secondary Parallel

List any other air contaminant sources that are also vented to this control equipment:

Electrostatic Precipitator

Manufacturer: _____ Year installed: _____

What do you call this control equipment: _____

Pollutant(s) controlled: PE OC SO₂ NO_x CO Other _____

Estimated capture efficiency (%): _____ Basis for efficiency: _____

Design control efficiency (%): _____ Basis for efficiency: _____

Type: Plate-wire Flat-plate Tubular Wet Other _____
 Number of operating fields: _____

This is the only control equipment on this air contaminant source
 If no, this control equipment is: Primary Secondary Parallel
 List any other air contaminant sources that are also vented to this control equipment:

Concentrator

Manufacturer: _____ Year installed: _____

What do you call this control equipment: _____

Pollutant(s) controlled: PE OC SO₂ NO_x CO Other _____

Estimated capture efficiency (%): _____ Basis for efficiency: _____

Design regeneration cycle time (minutes): _____

Minimum desorption air stream temperature (°F): _____

Rotational rate (revolutions/hour): _____

This is the only control equipment on this air contaminant source
 If no, this control equipment is: Primary Secondary Parallel
 List any other air contaminant sources that are also vented to this control equipment:

Catalytic Incinerator

Manufacturer: _____ Year installed: _____

What do you call this control equipment: _____

Pollutant(s) controlled: PE OC SO₂ NO_x CO Other _____

Estimated capture efficiency (%): _____ Basis for efficiency: _____

Design control efficiency (%): _____ Basis for efficiency: _____

Minimum inlet gas temperature (°F): _____

Combustion chamber residence time (seconds): _____

Minimum temperature difference (°F) across catalyst during air contaminant source operation: _____

This is the only control equipment on this air contaminant source
 If no, this control equipment is: Primary Secondary Parallel
 List any other air contaminant sources that are also vented to this control equipment:

Thermal Incinerator/Thermal Oxidizer

Manufacturer: _____ Year installed: _____

What do you call this control equipment: _____

Pollutant(s) controlled: PE OC SO₂ NO_x CO Other _____

Estimated capture efficiency (%): _____ Basis for efficiency: _____

Design control efficiency (%): _____ Basis for efficiency: _____

Minimum operating temperature (°F) and location: _____ (See line by line instructions.)

Combustion chamber residence time (seconds): _____

This is the only control equipment on this air contaminant source
 If no, this control equipment is: Primary Secondary Parallel
 List any other air contaminant sources that are also vented to this control equipment:

Flare

Manufacturer: _____ Year installed: _____

What do you call this control equipment: _____

Pollutant(s) controlled: PE OC SO₂ NO_x CO Other _____

Estimated capture efficiency (%): _____ Basis for efficiency: _____

Design control efficiency (%): _____ Basis for efficiency: _____

Type: Enclosed Elevated (open)

Ignition device: Electric arc Pilot flame

Flame presence sensor: Yes No

This is the only control equipment on this air contaminant source
 If no, this control equipment is: Primary Secondary Parallel
 List any other air contaminant sources that are also vented to this control equipment:

Condenser

Manufacturer: _____ Year installed: _____

What do you call this control equipment: _____

Pollutant(s) controlled: PE OC SO₂ NO_x CO Other _____

Estimated capture efficiency (%): _____ Basis for efficiency: _____

Design control efficiency (%): _____ Basis for efficiency: _____

Type: Indirect contact Direct contact

Maximum exhaust gas temperature (°F) during air contaminant source operation: _____

Coolant type: _____

Design coolant temperature (°F): Minimum _____ Maximum _____

Design coolant flow rate (gpm): _____

 This is the only control equipment on this air contaminant sourceIf no, this control equipment is: Primary Secondary ParallelList any other air contaminant sources that are also vented to this control equipment:
_____ **Carbon Absorber**

Manufacturer: _____ Year installed: _____

What do you call this control equipment: _____

Pollutant(s) controlled: PE OC SO₂ NO_x CO Other _____

Estimated capture efficiency (%): _____ Basis for efficiency: _____

Design control efficiency (%): _____ Basis for efficiency: _____

Type: On-site regenerative Disposable

Maximum design outlet organic compound concentration (ppmv): _____

Carbon replacement frequency or regeneration cycle time (specify units): _____

Maximum temperature of the carbon bed, after regeneration (including any cooling cycle): _____

 This is the only control equipment on this air contaminant sourceIf no, this control equipment is: Primary Secondary ParallelList any other air contaminant sources that are also vented to this control equipment:
_____ **Dry Scrubber**

Manufacturer: _____ Year installed: _____

What do you call this control equipment: _____

Pollutant(s) controlled: PE OC SO₂ NO_x CO Other _____

Estimated capture efficiency (%): _____ Basis for efficiency: _____

Design control efficiency (%): _____ Basis for efficiency: _____

Reagent(s) used: Type: _____ Injection rate(s): _____

Operating pressure drop range (inches of water): Minimum: _____ Maximum: _____

 This is the only control equipment on this air contaminant sourceIf no, this control equipment is: Primary Secondary ParallelList any other air contaminant sources that are also vented to this control equipment:
_____ **Paint booth filter**Type: Paper Fiberglass Water curtain Other _____

Design control efficiency (%): _____ Basis for efficiency: _____

 Other, describe _____

Manufacturer: _____ Year installed: _____

What do you call this control equipment: _____

Pollutant(s) controlled: PE OC SO₂ NO_x CO Other _____

Estimated capture efficiency (%): _____ Basis for efficiency: _____

Design control efficiency (%): _____ Basis for efficiency: _____

 This is the only control equipment on this air contaminant sourceIf no, this control equipment is: Primary Secondary ParallelList any other air contaminant sources that are also vented to this control equipment:

6. Attach a Process or Activity Flow Diagram to this application for each air contaminant source included in the application. The diagram should indicate their relationships to one another. See the line by line PTI instructions for additional information.

See Permit Application Text

7. Emissions egress point(s) information: PTIs which allow total emissions in excess of the thresholds listed below will be subject to an air quality modeling analysis. This analysis is to assure that the impact from the requested project will not exceed Ohio's Acceptable Incremental Impacts for criteria pollutants and/or Maximum Allowable Ground Level Concentrations (MAGLC) for air toxics. Permit requests that would have unacceptable impacts can not be approved as proposed. See the line by line PTI instructions for additional information.

Complete the tables below if the requested allowable annual emission rate for this PTI exceeds any of the following:

- Particulate Matter (PM10): 10 tons per year
- Sulfur Dioxide (SO2): 25 tons per year
- Nitrogen Oxides (NOx): 25 tons per year
- Carbon Monoxide (CO): 100 tons per year
- Air Toxic: 1 ton per year. An air toxic is any air pollutant for which the American Council of Governmental Industrial Hygienists (ACGIH) has established a Threshold Limit Value (TLV).

Complete Table 7-A below for each stack emissions egress point. An egress point is a point at which emissions from an air contaminant source are released into the ambient (outside) air. List each individual egress point on a separate line.

Table 7-A, Stack Egress Point Information						
Company Name or ID for the Egress Point (examples: Stack A; Boiler Stack; etc.)	Type Code*	Stack Egress Point Shape and Dimensions (in)(examples: round 10 inch ID; rectangular 14 X 16 inches; etc.)	Stack Egress Point Height from the Ground (ft)	Stack Temp. at Max. Capacity (F)	Stack Flow Rate at Max. Capacity (ACFM)	Minimum Distance to the Property Line (ft)
Lime Silo	A					

*Type codes for stack egress points:

- A. vertical stack (unobstructed): There are no obstructions to upward flow in or on the stack such as a rain cap.
- B. vertical stack (obstructed): There are obstructions to the upward flow, such as a rain cap, which prevents or inhibits the air flow in a vertical direction.
- C. non-vertical stack: The stack directs the air flow in a direction which is not directly upward.

8. Request for Federally Enforceable Limits

As part of this permit application, do you wish to propose voluntary restrictions to limit emissions in order to avoid specific requirements listed below, (i.e., are you requesting federally enforceable limits to obtain synthetic minor status)?

- yes
- no
- not sure - please contact me if this affects me

If yes, why are you requesting federally enforceable limits? Check all that apply.

- a. to avoid being a major source (see OAC rule 3745-77-01)
- b. to avoid being a major MACT source (see OAC rule 3745-31-01)
- c. to avoid being a major modification (see OAC rule 3745-31-01)
- d. to avoid being a major stationary source (see OAC rule 3745-31-01)
- e. to avoid an air dispersion modeling requirement (see Engineering Guide # 69)
- f. to avoid another requirement. Describe: _____

If you checked a., b. or d., please attach a facility-wide potential to emit (PTE) analysis (for each pollutant) and synthetic minor strategy to this application. (See line by line instructions for definition of PTE.) If you checked c., please attach a net emission change analysis to this application.

9. If this air contaminant source utilizes any continuous emissions monitoring equipment for indicating or demonstrating compliance, complete the following table. This does not include continuous parametric monitoring systems.

Company ID for Egress Point	Type of Monitor	Applicable performance specification (40 CFR 60, Appendix B)	Pollutant(s) Monitored

10. Do you wish to permit this air contaminant source as a portable source, allowing relocation within the state in accordance with OAC rule 3745-31-03 or OAC rule 3745-31-05?

- yes - Note: notification requirements in rules cited above must be followed.
- no

11. The appropriate Emissions Activity Category (EAC) form(s) must be completed and attached for each air contaminant source. At least one complete EAC form must be submitted for each air contaminant source for the application to be considered complete. Refer to the list attached to the PTI instructions.

EMISSIONS ACTIVITY CATEGORY FORM GENERAL PROCESS OPERATION

This form is to be completed for each process operation when there is no specific emissions activity category (EAC) form applicable. If there is more than one end product for this process, copy and complete this form for each additional product (see instructions). Several State/Federal regulations which may apply to process operations are listed in the instructions. Note that there may be other regulations which apply to this emissions unit which are not included in this list.

1. Reason this form is being submitted (Check one)

New Permit Renewal or Modification of Air Permit Number(s) (e.g. P001) Z002

2. Maximum Operating Schedule: 24 hours per day ; 365 days per year

If the schedule is less than 24 hours/day or 365 days/year, what limits the schedule to less than maximum? See instructions for examples. _____

3. End product of this process: Lime Slurry

4. Hourly production rates (indicate appropriate units). Please see the instructions for clarification of "Maximum" and "Average" for new versus existing operations:

Hourly	Rate	Units (e.g., widgets)
Average production	NA	NA
Maximum production	2,800	Lbs lime/hr

5. Annual production rates (indicate appropriate units) Please see the instructions for clarification of "Maximum" and "Actual" for new versus existing operations:

Annual	Rate	Units (e.g., widgets)
Actual production	NA	NA
Maximum production	NA	NA

