SECTION 6

Coke Pushing

PA-65-00853A

2700-PM-AQ0007 REV 11/2002

Commonwealth of Pennsylvania
Department of Environmental Protection
Bureau of Air Quality

Submit in Triplicate

PROCESSES

Application for Plan Approval to Construct, Modify, or Reactivate an Air Contamination Source and/or Install an Air Cleaning Device

This application must be submitted with the General Information Form (GIF)

Before completing this form, read the instructions provided

Section A - Facility Name, Checklist and Certification

Organization Name or Registered Fictitious Name/Facility Name: **KOPPERS INDUSTRIES, INC.**

DEP Client ID # (if known):

Type of Review Required and Fees:

X	Source which is not subject to NSPS, NESHAPs, MACT, NSR, PSD:	$ 850
	Source requiring approval under NSPS or NESHAPs or both:	$
	Source requiring approval under NSR regulations:	$
	Source requiring the establishment of a MACT limitation:	$
	Source requiring approval under PSD	$

Applicant's Checklist

Check the following list to make sure that all the required documents are included

X	General Information Form (GIF)
X	Processes Plan Approval Application
X	**Compliance Review Form** or provide reference of most recently submitted compliance review form for facilities submitting on a periodic basis **Jun-02**
X	**Copy and Proof of County and Municipal Notifications**
X	**Permit Fees**
X	**Addendum A:** Source Applicable Requirements (only applicable to existing Title V facility)

Certification of Truth, Accuracy and Completeness by a Responsible Official

I, **RICHARD JAMES BURKHART**, certify under penalty of law in 18 Pa. C.S.A Section 4904, and 35 P.S. 4009(b)(2), that based on the information and belief formed after reasonable inquiry, the statements and information in this application are true, accurate and complete.

(Signature): Richard James Burkhart Date: 2-3-03

Name (Print): **RICHARD JAMES BURKHART** Title: **PLANT MANAGER**

OFFICIAL USE ONLY

Application No.	Unit ID	Site ID	
DEP Client ID #	APS ID	AUTH ID	
Date Received	Date Assigned	Reviewed By	
Date of 1st Technical Deficiency		Date of 2nd Technical Deficiency	
Comments			

Section B - Processes Information

1. Source Information

Source description (give type, use, raw materials, product, etc.). Attach additional sheets as necessary.

COKE PUSHING - PUSHING OF COKE FROM OVENS INTO QUENCH CAR. CONTROLLED BY A BAGHOUSE WITH A MOVEABLE HOOD. THIS APPLICATION WILL ADDRESS EMISSIONS OF NOX AND VOC SINCE THESE POLLUTANTS ARE ADDRESSED IN THE RACT PERMIT.

Manufacturer	Model No.	Number of sources
NA	**NA**	**1**

Source designation	Maximum capacity	Rated capacity
COKE PUSHING	**~ 541,000 TONS COAL/YR** **~ 402,000 TONS COKE/YR**	**NA**

Type of material processed

COKE

Maximum operating schedule

Hours/Day	Days/Week	Days/Year	Hours/Year
24	**7**	**52**	**8760**

Operational restrictions existing or requested, if any (e.g., bottlenecks or voluntary restrictions to limit PTE)

Capacity (specify units)

Per hour	Per day	Per week	Per year
~ 12 TONS COKE/PUSH			**~402,000 TONS COKE**

Operating schedule

Hours/Day	Days/Week	Days/Year	Hours/Year
24	**7**	**52**	**8760**

Seasonal variations (Months) From _____ to _____

If variations exist, describe them.

2. Fuel NA

Type	Quantity Hourly	Annually	Sulfur	% Ash (wt.)	BTU Content
Oil Number _____	GPH @60 F	10^3 gal	% by wt		Btu/Gal & Lbs/Gal @ 60F
Oil Number _____	GPH @60 F	10^3 gal	% by wt		Btu/Gal & Lbs/Gal @ 60F
Natural gas	SCFH	10^6 SCF	grains/100 SCF		BTU/SCF
Gas (other) _____	SCFH	10^6 SCF	grains/100 SCF		BTU/SCF
Coal	TPH	Tons	% by wt		BTU/lb
Other *					

*Note: Describe and furnish information separately for other fuels in Addendum-B

Section B - Processes Information (Continued)

3. Burner Data NA

Manufacturer	Type and Model No.	Number of burners

Description

Rated Capacity	Maximum Capacity

4. Process Storage Vessels NA

A. For Liquids:

Name of material stored

Tank I.D. No	Manufacturer	Date Installed

Maximum Pressure	Capacity (gallons/Meter^3)

Type of relief device (pressure set vent/conservation vent/emergency vent/open vent)

Relief valve/vent set pressure (psig)	Vapor pressure of liquid at storage temperature (psia/kPa)

Type of Roof Describe:

Total Throughput Per Year	Number of fills per day (fills/day) Filling Rate (gal/min) Duration of fill (hr/fill)

B. For Solids:

Type [ ] Silo [ ] Storage Bin [ ] Other, Describe	Name of Material Stored

Silo/Storage Bin I.D. No.	Manufacturer	Date Installed

State whether the material will be stored in loose or bags in silo	Capacity (tons)

Turnover per year in tons	Turnover per day in tons

Describe fugitive dust control system for loading and handling operation

Describe material handling system

5. Request for Confidentiality

Do you request any information on this application to be treated as "Confidential"? [ ] Yes [X] No

If yes, include justification for confidentiality. Place such information on separate pages marked **"confidential"**

Section B - Processes Information (Continued)

6. Miscellaneous information

Attach flow diagram of process giving all (gaseous, liquid, and solid) flow rates. Also, list all raw materials charged to process equipment, and the amounts charged (tons/hour, etc.) at rated capacity (give maximum, minimum, and average charges describing fully expected variations in production rates). Indicate (on diagram) all point where contaminants are controlled (location of water sprays, collection hoods, or other pickup points, etc.). Describe collection hoods' location design, air flow meter, and capture efficiency. Describe any restriction requested and how it will be monitored.

1. **RAW MATERIAL - HOT COKE FROM OVENS**
2. **CAPACITY - APPROXIMATELY 12 TONS COKE/PUSH**
3. **MOVEABLE BAGHOUSE HOOD TO CAPTURE EMISSIONS FROM PUSHING AT AN ASSUMED 85% CAPTURE EFFICIENCY**

Describe fully the facilities provided to monitor and to record processes' operating conditions which may affect the emission of air contaminants. Show that they are reasonable and adequate.

NONE FOR EMISSIONS OF NOX AND VOC

Describe any proposed modifications to an existing source.

AS DESCRIBED IN THE COVER LETTER, KII IS RENEWING THE RACT PERMIT, WHICH EXPIRES ON MARCH 20, 2003. THE RACT PERMIT IMPOSES BOTH HOURLY AND ANNUAL EMISSION LIMITATIONS FOR STACK EMISSIONS. KII WISHES TO REVISE THESE LIMITATIONS BASED ON A STATISTICAL ANALYSIS USING STACK TESTING DATA FROM 1996 TO PRESENT. REFER TO ATTACHMENT 1 WHICH CONTAINS THE STATISTICAL ANALYSIS REPORT.

IN ADDITION, THE CURRENT RACT PERMIT ONLY ADDRESS VOC AND NOX EMISSIONS FROM THE BAGHOUSE STACK. KII WISHES TO INCLUDE FUGITIVE EMISSIONS OF VOC AND NOX IN THE RACT PERMIT .

Identify and describe all fugitive emissions points, all relief and emergency valves, and any bypass stacks.

BAGHOUSE HAS AN ESTIMATED CAPTURE EFFICIENCY OF 85%.

Describe how emissions will be minimized especially during startup, shut down, process upsets, and/or disruptions.

NA

Anticipated milestones: **NA**

i. Expected commencement date of construction/reconstruction/installation: _____

ii. Expected completion date of construction/reconstruction/installation: _____

iii. Anticipated date(s) of startup: _____

Section C - Air Cleaning Device

1. Precontrol Emissions *

Pollutant	Maximum Emissions Rate				Calculation/ Estimation Method
	specify units	pounds/hour	hours/year	tons/year	
PM					
PM10					
SOx					
CO					
NOx - stack		**14.2**	**8760**	**25.5**	**STACK TEST/STATISTICAL ANALYSIS**
NOx - fugitive		**2.51**	**8760**	**4.5**	**85% CAPTURE**
VOC - Stack		**2.3**	**8760**	**4.5**	**STACK TEST/STATISTICAL ANALYSIS**
VOC - Fugitive		**0.41**	**8760**	**0.79**	**85% CAPTURE**
Other: (e.g.HAPs)					

*These emissions must be calculated based on the requested operating schedule and/or process rate. e.g., operating schedule for maximum limits or restricted hours of operation and/or restricted throughput. Describe how the emission values were determined. Attach calculations.

2. Gas Cooling

NA

Water quenching ☐ YES ☐ NO Water injection rate _____ GPM

Radiation and convection cooling ☐ YES ☐ NO

Air dilution ☐ YES ☐ NO If YES, _____ CFM

Forced draft ☐ YES ☐ NO

Water cooled duct work ☐ YES ☐ NO

Other _____

Inlet volume _____ ACFM @ _____ ^{0}F _____ % Moisture

Outlet volume _____ ACFM @ _____ ^{0}F _____ % Moisture

Describe the system in detail.

Section C - Air Cleaning Device (Continued)

Fabric Collector THERE IS A BAGHOUSE, BUT IT DOES NOT CONTROL VOC AND NOX EMISSIONS. REFER TO TITLE V FOR DATA

Equipment Specifications

Manufacturer	Model No.	☐ Pressurized design ☐ Suction Design
Number of compartments	Number of filters per compartment	Is bag house insulated? ☐ YES ☐ NO

Can each compartment be isolated for repairs and/or filter replacement? ☐ YES ☐ NO

Are temperature controls provided? (Describe in detail) ☐ YES ☐ NO

Dew point at maximum moisture _____ ^{0} F	Design inlet volume _____ SCFM

Type of fabric

Material	_____	☐	Felted	☐	Membrane
Weight	_____ oz / sq. yd.	☐	Woven	☐	Others: list _____
Thickness	_____ in.	☐	Felted - woven		

Fabric permeability (clean) @ 1/2" water -ΔP _____ CFM/ sq. ft.

Filter dimensions Length _____ Diameter/Width _____

Effective area per filter _____	Maximum operating temperature _____ ^{0} F

Effective air to cloth ratio Minimum _____ Maximum _____

Drawing of fabric filter.

A sketch of the fabric filter showing all access doors, catwalks, ladders and exhaust ductwork.

Location of each temperature indicator should be attached.

Operation and Cleaning

Volume of gasses handled _____ ACFM @ _____ ^{0} F	Pressure drop across collector (in. of water). _____ Describe the equipment used to monitor the pressure drop.

Type of filter cleaning

☐ Manual cleaning	☐ Bag collapse	☐ Reverse air jets
☐ Mechanical shakers	☐ Sonic cleaning	☐ Other: _____
☐ Pneumatic shakers	☐ Reverse air flow	

Describe the equipment provided if dry, oil-free air is required for collector operation.

Cleaning initiated by

☐ Timer Frequency if timer activated

☐ Expected pressure drop range _____ in of water ☐ Other: (specify) _____

Does air cleaning device employ hopper heaters, hopper vibrators, or hopper level detectors? If yes, describe.

Describe the warning/ alarm system that protects against operation when the units is not meeting design requirements.

Emissions Data

Pollutant	Inlet	Outlet	Removal efficiency (%)

Section D - Additional Information

ill the construction, modification, etc. of the sources covered by this application increase emissions from other sources at the facility? If so, describe and quantify.

NO

If this project is subject to any one of the following, attach a demonstration to show compliance with applicable standards.

a. Prevention of Significant Deterioration Permit (PSD), 40 CFR 52? [ ] YES [X] NO

b. New Source Review (NSR), 25 PA Code Section 127, Subchapter E? [ ] YES [X] NO

c. New Source Performance Standards, 40 CFR 60? [ ] YES [X] NO
(If Yes, which Subpart?) _____

d. National Emissions Standards for Hazardous Air Pollutants (NESHAPS), 40 CFR 61? [ ] YES [X] NO
(If Yes, which subpart?) _____

e. Maximum Achievable Control Technology (MACT), CAAA 112/40 CFR Part 63? [X] YES [ ] NO
(If Yes, which subpart?) **PROPOSED SUBPART CCCCC**
COKE OVENS: PUSHING, QUENCHING AND BATTERY STACKS

Provide a demonstration that the emissions from any new sources will be the minimum attainable through the use of best available technology (BAT).

NA - NOT A NEW SOURCE

Provide emission increases and decreases within the last 5 years for applicable PSD pollutant(s) if the facility is an existing major facility (for PSD purposes).

NO NEW INSTALLATIONS OR MODIFICATIONS TO EXISTING SOURCES IN LAST 5 YEARS.

Section D - Additional Information (Continued)

Indicate emissions increases and decreases in tons per year (TPY) for volatile organic compounds (VOCs) and nitrogen oxides (NOx) for NSR applicability since January 1, 1991 or other applicable dates (see other applicable dates in instructions). The emissions increases include all emissions including stack, fugitive, material transfer, other emission generating activities, quantifiable emissions from excepted source(s), etc. **NA**

				VOCs		NOx	
Permit Number (if Applicable)	Date Issued	Indicate *Yes* or *No* if emission increases and decreases were used previously for netting	Source I.D. or Name	Emission increases in potential to emit (tpy)	Creditable emission decreases in actual emissions (tpy)	Emission increases in potential to emit (tpy)	Creditable emission decreases in actual emissions (tpy)

If the source is subject to 25 Pa Code Section 127 Subchapter E, New Source Review requirements.

a. Identify Emission Reduction Credits (ERCs) for emission offsets or demonstrate suitable ERCs for emission offsets.

b. Provide a demonstration that the lowest acheivable emission rate (LAER) control techniques will be employed (if applicable)

c. Provide an analysis of alternalte sites, sizes, production processes and environmental control techniques demonstrating that the benefits of the proposed source outweighs the enviromental and social costs (if applicable)

Attach calculations and any additional information necessary to thoroughly evaluate compliance with all the applicable requirements of Article II of the Rules and Regulations of the Department of Environmental Protection and those requirements promulgated by the Administrator of the United States Environmental Protection Agency pursuant to the provisions of the Clean Air Act. The Department may ask for additional information to evaluate the application such as a stand-by plan, a plan for air pollution emergencies, air quality modeling, etc.

Section F - Flue and Air Contaminant Emission

1. Estimated Atmospheric Emissions*

Pollutant	Maximum Emissions Rate				Calculation/ Estimation Method
	specify units	pounds/hour	hours/year	tons/year	
PM					
PM10					
SOx					
CO					
NOx - Stack		14.2	8760	25.5	STACK TEST/STATISTICAL ANALYSIS
NOx - Fugitive		2.51	8760	4.5	85% CAPTURE
VOC - Stack		2.3	8760	4.5	STACK TEST/STATISTICAL ANALYSIS
VOC - Fugitive		0.41	8760	0.79	85% CAPTURE
Other: (e.g.HAPs)					

*These emissions must be calculated based on the requested operating schedule and/or process rate. E.g., operating schedule for maximum limits or restricted hours of operation and/or restricted throughput. Describe how the emission values were determined. Attach calculations.

2. Stack and Exhauster

Stack Designation/ Number

BAGHOUSE STACK

Stack height above grade (ft.)	68	Stack diameter (ft.) or Outlet duct area (ft^2).	Weather cap		
Grade elevation (ft.)	762	6	[ ] YES	[X] NO	

Distance of discharge to nearest property line (ft.). Locate on topographic map.

NA

Does stack height meet Good Engineering Practice (GEP)?

NA

If modeling (estimating) of ambient air quality impacts is needed, attach a site plan with buildings and their dimensions and other obstructions

Location of stack** Latitude/Longitude Point of Origin	Latitude			Longitude		
	Degrees	Minutes	Seconds	Degrees	Minutes	Seconds

Stack exhaust

~116200 SCFM Temperature ~95 F Moisture ~2 %

Indicate on an attached sheet the location of sampling ports with respect to exhaust fan, breeching etc. Give all necessary dimensions.

TWO (2) 90 DEGREE OPPOSED SAMPLING PORTS. TEST PORTS LOCATED 47 FEET DOWNSTREAM NEAREST DISTURBANCE AND 10 FEET UPSTREAM NEAREST DISTURBANCE.

Exhauster (attach fan curves) _____ in of water _____ HP@ _____ RPM

** If the data and collection method codes differ from those provided on the General Information Form-Authorization Application, provide the additional detail required by that form on a separate form.

Section G - Attachments

Number and list all attachments submitted with this application below:

REFER TO TABLE OF CONTENTS IN FRONT OF ENTIRE APPLICATION

Pennsylvania Department of Environmental Protection
Bureau Of Air Quality

Addendum A: Source Applicable Requirements

Describe and cite all applicable requirements pertaining to this source.
Note: A Method of Compliance Worksheet (Addendum 1) must be completed for each requirement listed.

ONLY APPLICABLE REQUIREMENTS PERTAINING TO NOX AND VOC EMISSIONS WILL BE ADDRESSED. ALL OTHER APPLICABLE REQUIREMENTS ARE CONTAINED IN THE TITLE V PERMIT APPLICATION.

Citation Number	Citation Limitation	Limitation Used
Plan Approval 65-000-853	RACT Permit	NA
Plan Approval 65-305-048	Annual Stack Test For NOx and VOC	NA
25 PA 129.91-129.95	RACT Proposal	NA
40 CFR Part 63, Subpart CCCCC	MACT Standard	NA
Coke Ovens: Pushing, Quenching and Battery Stacks - Proposed. Not further discussed in this application.		

Pennsylvania Department of Environmental Protection
Bureau Of Air Quality

Addendum 1: Method of Compliance Worksheet

Section 1: Applicable Requirement

Federal Tax Id: **25-1588399** Firm Name: **Koppers Industries, Inc.**

Plant Code: _____ Plant Name: **Monessen Coke Plant**

Applicable Requirement for: **(please check only one box below)**

☐ The entire site

☐ A group of sources, Group ID _____

☒ A single source, Unit ID: **Coke Pushing**

☐ Alternative Scenario, Scenario Name: _____

Citation #: **65-000-853**

This plan approval (Condition 6 & 7) imposes the following NOx & VOC emission limitations for stack emissions from this unit:

NOx	**7.8 lb/hr**	**4.8 tpy**
VOC	**1.1 lb/hr**	**0.6 tpy**

KII wishes to revise these limits as follows:

NOx - stack	**14.2 lb/hr**	**25.5 tpy**
NOx - fugitive	**2.51 lb/hr**	**4.50 tpy**
VOC - stack	**2.3 lb/hr**	**4.50 tpy**
VOC - fugitive	**0.41 lb/hr**	**0.79 tpy**

These proposed limits were derived using testing data from 1996 to present and using a statistical approach to derive limits. The hourly limits are the upper bound of the range expected if a next reading is taken at a 99% confidence interval. The annual limits are the upper bound of range expected to contain the mean value of the infinite parent population. Fugitive emissions assume an 85% capture efficiency.

Compliance Method based upon: ☐ Applicable Requirement ☒ Gap Filling Requirement

Method of Compliance Type: (Check all that applies and complete all appropriate sections below)

☐ Monitoring ☒ Testing ☒ Reporting

☐ Record Keeping ☐ Workpractice Standard

Section 2: Monitoring

1. Monitoring device type (stack test, CEM, etc): _____
2. Monitoring device locations: _____
3. Describe all parameters being monitored along with the frequency and duration of monitoring each parameter?

   _____

4. How will data be reported? _____

   _____

Addendum 1: Method of Compliance Worksheet

Section 3: Testing

For demonstration of hourly emissions:

1. Reference Test Method Description: **NOx - USEPA Method 7E**
   VOC - USEPA Method 18 and 25A
2. Reference Test Method Citation: **See above**

Condition 8 requires annual testing of this unit. Condition 9 requires all testing to be performed in accordance with 25 PA 139 and the PADEP Source Testing Manual. Condition 10 requires a pre-test protocol at 60 days in advance. Condition 11 requires notification to PADEP two weeks in advance of performance test. Condition 12 requires two copies of stack test results to be submitted within 60 days of completion of the test.

Section 4: Record Keeping

Describe what parameters will be recorded and the frequency of recording:

Section 5: Reporting

1. Describe what is to be reported and the frequency of reporting:

Annual emission statements, in accordance with 25 PA 135.21, will be submitted to demonstrate compliance with the annual emission limitations. KII will develop an average emission factor using all testing data to calculate annual emissions.

2. Reporting start-date:

Section 5: Work Practice Standard

Describe any work practice standards:

Pennsylvania Department of Environmental Protection
Bureau Of Air Quality

Addendum 1: Method of Compliance Worksheet

Section 1: Applicable Requirement

Federal Tax Id: **25-1588399** Firm Name: **Koppers Industries, Inc.**

Plant Code: _____ Plant Name: **Monessen Coke Plant**

Applicable Requirement for: **(please check only one box below)**

☐ The entire site

☐ A group of sources, Group ID _____

☒ A single source, Unit ID: **Coke Pushing**

☐ Alternative Scenario, Scenario Name: _____

Citation #: **65-305-048**

Compliance Method based upon: ☐ Applicable Requirement ☒ Gap Filling Requirement

Method of Compliance Type: (Check all that applies and complete all appropriate sections below)

☐ Monitoring ☒ Testing ☐ Reporting

☐ Record Keeping ☐ Workpractice Standard

Section 2: Monitoring

1. Monitoring device type (stack test, CEM, etc): _____
2. Monitoring device locations: _____
3. Describe all parameters being monitored along with the frequency and duration of monitoring each parameter?

_____

_____

4. How will data be reported? _____

_____

Addendum 1: Method of Compliance Worksheet

Section 3: Testing

For demonstration of hourly emissions:

1. Reference Test Method Description: **NOx - USEPA Method 7E**
   VOC - USEPA Method 18 and 25A
2. Reference Test Method Citation: **See above**

Condition 15 requires annual testing of this unit. Condition 16 requires all testing to be performed in accordance with 25 PA 139 and the PADEP Source Testing Manual. Condition 17 requires a pre-test protocol at 60 days in advance. Condition 18 requires notification to PADEP two weeks in advance of performance test. Condition 20 requires two copies of stack test results to be submitted within 60 days of completion of the test.

Section 4: Record Keeping

Describe what parameters will be recorded and the frequency of recording:

Section 5: Reporting

1. Describe what is to be reported and the frequency of reporting:

2. Reporting start-date:

Section 5: Work Practice Standard

Describe any work practice standards:

Pennsylvania Department of Environmental Protection
Bureau Of Air Quality

Addendum 1: Method of Compliance Worksheet

Section 1: Applicable Requirement

Federal Tax Id: **25-1588399** Firm Name: **Koppers Industries, Inc.**

Plant Code: _____ Plant Name: **Monessen Coke Plant**

Applicable Requirement for: **(please check only one box below)**

☐ The entire site

☐ A group of sources, Group ID _____

☒ A single source, Unit ID: **Coke Pushing**

☐ Alternative Scenario, Scenario Name: _____

Citation #: **25 PA 129.91-129.95**

Compliance Method based upon: ☐ Applicable Requirement ☒ Gap Filling Requirement

Method of Compliance Type: (Check all that applies and complete all appropriate sections below)

☐ Monitoring ☐ Testing ☐ Reporting

☐ Record Keeping ☒ Workpractice Standard

Section 2: Monitoring

1. Monitoring device type (stack test, CEM, etc): _____
2. Monitoring device locations: _____
3. Describe all parameters being monitored along with the frequency and duration of monitoring each parameter?

_____

_____

4. How will data be reported? _____

_____

Addendum 1: Method of Compliance Worksheet

Section 3: Testing

For demonstration of hourly emissions:

1. Reference Test Method Description: _____

2. Reference Test Method Citation: _____

Section 4: Record Keeping

Describe what parameters will be recorded and the frequency of recording:

Section 5: Reporting

1. Describe what is to be reported and the frequency of reporting:

2. Reporting start-date: _____

Section 5: Work Practice Standard

Describe any work practice standards:

RACT proposal submitted to PADEP June 1994, in accordance with this rule.

SECTION 7

Flares

PA-65-00853A

2700-PM-AQ0007 REV 11/2002

Commonwealth of Pennsylvania
Department of Environmental Protection
Bureau of Air Quality

Submit in Triplicate

PROCESSES
Application for Plan Approval to Construct, Modify, or Reactivate an Air Contamination Source and/or Install an Air Cleaning Device
This application must be submitted with the General Information Form (GIF)
Before completing this form, read the instructions provided

Section A - Facility Name, Checklist and Certification

Organization Name or Registered Fictitious Name/Facility Name: **KOPPERS INDUSTRIES, INC.**

DEP Client ID # (if known):

Type of Review Required and Fees:

X	Source which is not subject to NSPS, NESHAPs, MACT, NSR, PSD:	$ 850
	Source requiring approval under NSPS or NESHAPs or both:	$
	Source requiring approval under NSR regulations:	$
	Source requiring the establishment of a MACT limitation:	$
	Source requiring approval under PSD	$

Applicant's Checklist

Check the following list to make sure that all the required documents are included

X	General Information Form (GIF)
X	Processes Plan Approval Application
X	**Compliance Review Form** or provide reference of most recently submitted compliance review form for facilities submitting on a periodic basis **Jun-02**
X	**Copy and Proof of County and Municipal Notifications**
X	**Permit Fees**
X	**Addendum A:** Source Applicable Requirements (only applicable to existing Title V facility)

Certification of Truth, Accuracy and Completeness by a Responsible Official

I, **RICHARD JAMES BURKHART**, certify under penalty of law in 18 Pa. C.S.A Section 4904, and 35 P.S. 4009(b)(2), that based on the information and belief formed after reasonable inquiry, the statements and information in this application are true, accurate and complete.

(Signature): Richard James Burkhart Date: 2-3-03

Name (Print): **RICHARD JAMES BURKHART** Title: **PLANT MANAGER**

OFFICIAL USE ONLY

Application No.		Unit ID		Site ID	
DEP Client ID #		APS ID		AUTH ID	
Date Received		Date Assigned		Reviewed By	
Date of 1st Technical Deficiency			Date of 2nd Technical Deficiency		
Comments					

Flares

Section B - Processes Information

1. Source Information

Source description (give type, use, raw materials, product, etc.). Attach additional sheets as necessary.

2 FLARES (EXISTING AND SUPPLEMENTAL) TO FLARE EXCESS COG.

Manufacturer	Model No.	Number of sources
NA	**NA**	**2**
Source designation	Maximum capacity	Rated capacity
COKE FLARING	**COG: 7,270.8 MMCF/YR** **NATURAL GAS 1.314 MMCF/YR**	

Type of material processed

COG, NATURAL GAS

Maximum operating schedule

Hours/Day	Days/Week	Days/Year	Hours/Year
24	**7**	**52**	**8760**

Operational restrictions existing or requested, if any (e.g., bottlenecks or voluntary restrictions to limit PTE)

Capacity (specify units)

Per hour	Per day	Per week	Per year
COG: 833,000 SCFH **NATURAL GAS: 150 SCFH**			**COG: 7,270.8 MMCF/YR** **NATURAL GAS 1.314 MMCF/YR**

Operating schedule

Hours/Day	Days/Week	Days/Year	Hours/Year
24	**7**	**52**	**8760**

Seasonal variations (Months) From _____ to _____

If variations exist, describe them.

2. Fuel

Type	Quantity Hourly	Annually	Sulfur	% Ash (wt.)	BTU Content
Oil Number _____	GPH @60 F	10^3 gal	% by wt		Btu/Gal & Lbs/Gal @ 60F
Oil Number _____	GPH @60 F	10^3 gal	% by wt		Btu/Gal & Lbs/Gal @ 60F
Natural gas	**150** SCFH	**1.314** 10^6 SCF	**NEG** grains/100 SCF	**NEG**	**1000** BTU/SCF
Gas (other) _____	SCFH	10^6 SCF	grains/100 SCF		BTU/SCF
Coal	TPH	Tons	% by wt		BTU/lb
Other * **COG**	**833,000 SCFH**	**7,270.8 MMCF/YR**	**45 GR/100 SCF**	**NEG**	**550** BTU/SCF

*Note: Describe and furnish information separately for other fuels in Addendum-B

Section B - Processes Information (Continued)

3. Burner Data NA

Manufacturer	Type and Model No.	Number of burners

Description

Rated Capacity	Maximum Capacity

4. Process Storage Vessels NA

A. For Liquids:

Name of material stored

Tank I.D. No	Manufacturer	Date Installed

Maximum Pressure	Capacity (gallons/Meter^3)

Type of relief device (pressure set vent/conservation vent/emergency vent/open vent)

Relief valve/vent set pressure (psig)	Vapor pressure of liquid at storage temperature (psia/kPa)

Type of Roof Describe:

Total Throughput Per Year	Number of fills per day (fills/day) Filling Rate (gal/min) Duration of fill (hr/fill)

B. For Solids:

Type [ ] Silo [ ] Storage Bin [ ] Other, Describe	Name of Material Stored

Silo/Storage Bin I.D. No.	Manufacturer	Date Installed

State whether the material will be stored in loose or bags in silo	Capacity (tons)

Turnover per year in tons	Turnover per day in tons

Describe fugitive dust control system for loading and handling operation

Describe material handling system

5. Request for Confidentiality

Do you request any information on this application to be treated as "Confidential"? [ ] Yes [X] No

If yes, include justification for confidentiality. Place such information on separate pages marked **"confidential"**

Section B - Processes Information (Continued)

6. Miscellaneous information

Attach flow diagram of process giving all (gaseous, liquid, and solid) flow rates. Also, list all raw materials charged to process equipment, and the amounts charged (tons/hour, etc.) at rated capacity (give maximum, minimum, and average charges describing fully expected variations in production rates). Indicate (on diagram) all point where contaminants are controlled (location of water sprays, collection hoods, or other pickup points, etc.). Describe collection hoods' location design, air flow meter, and capture efficiency. Describe any restriction requested and how it will be monitored.

1. **RAW MATERIAL - COG AND NATURAL GAS**
2. **CAPACITY - SEE PAGE 2**

Describe fully the facilities provided to monitor and to record processes' operating conditions which may affect the emission of air contaminants. Show that they are reasonable and adequate.

NA

Describe any proposed modifications to an existing source.

AS DESCRIBED IN THE COVER LETTER, KII IS RENEWING THE RACT PERMIT, WHICH EXPIRES ON MARCH 20, 2003. THE RACT PERMIT IMPOSES ANNUAL EMISSION LIMITATIONS FOR FOR NOX AND VOC. KII WISHES TO REVISE THESE LIMITATIONS BASED ON A FLARING AT THE UNITS MAXIMUM CAPACITY.

Identify and describe all fugitive emissions points, all relief and emergency valves, and any bypass stacks.

NA

Describe how emissions will be minimized especially during startup, shut down, process upsets, and/or disruptions.

NA

Anticipated milestones: **NA**

i. Expected commencement date of construction/reconstruction/installation: _____

ii. Expected completion date of construction/reconstruction/installation: _____

iii. Anticipated date(s) of startup: _____

Section C - Air Cleaning Device

1. Precontrol Emissions *

Pollutant	Maximum Emissions Rate				Calculation/ Estimation Method
	specify units	pounds/hour	hours/year	tons/year	
PM					
PM10					
SOx					
CO					
NOx		**31.169**	**8760**	**136.03**	**AP-42**
VOC		**27.19**	**8760**	**118.663**	**MASS FRACTION OF VOC IN COG/AP-42**
Other: (e.g.HAPs)					

*These emissions must be calculated based on the requested operating schedule and/or process rate. e.g., operating schedule for maximum limits or restricted hours of operation and/or restricted throughput. Describe how the emission values were determined. Attach calculations.

2. Gas Cooling NA

Water quenching ☐ YES ☐ NO Water injection rate _____ GPM

Radiation and convection cooling ☐ YES ☐ NO

Air dilution ☐ YES ☐ NO If YES, _____ CFM

Forced draft ☐ YES ☐ NO

Water cooled duct work ☐ YES ☐ NO

Other _____

Inlet volume _____ ACFM @ _____ ^{0}F _____ % Moisture

Outlet volume _____ ACFM @ _____ ^{0}F _____ % Moisture

Describe the system in detail.

Section D - Additional Information

ill the construction, modification, etc. of the sources covered by this application increase emissions from other sources at the facility?
If so, describe and quantify.

NO

If this project is subject to any one of the following, attach a demonstration to show compliance with applicable standards.

a. Prevention of Significant Deterioration Permit (PSD), 40 CFR 52? [ ] YES [X] NO

b. New Source Review (NSR), 25 PA Code Section 127, Subchapter E? [ ] YES [X] NO

c. New Source Performance Standards, 40 CFR 60? [ ] YES [X] NO
(If Yes, which Subpart?) _____

d. National Emissions Standards for Hazardous Air Pollutants (NESHAPS), 40 CFR 61? [ ] YES [X] NO
(If Yes, which subpart?) _____

e. Maximum Achievable Control Technology (MACT), CAAA 112/40 CFR Part 63? [ ] YES [X] NO
(If Yes, which subpart?) _____

Provide a demonstration that the emissions from any new sources will be the minimum attainable through the use of best available technology (BAT).

NA - NOT A NEW SOURCE

Provide emission increases and decreases within the last 5 years for applicable PSD pollutant(s) if the facility is an existing major facility (for PSD purposes).

NO NEW INSTALLATIONS OR MODIFICATIONS TO EXISTING SOURCES IN LAST 5 YEARS.

Section D - Additional Information (Continued)

Indicate emissions increases and decreases in tons per year (TPY) for volatile organic compounds (VOCs) and nitrogen oxides (NOx) for NSR applicability since January 1, 1991 or other applicable dates (see other applicable dates in instructions). The emissions increases include all emissions including stack, fugitive, material transfer, other emission generating activities, quantifiable emissions from excepted source(s), etc. **NA**

				VOCs		NOx	
Permit Number (if Applicable)	Date Issued	Indicate *Yes* or *No* if emission increases and decreases were used previously for netting	Source I.D. or Name	Emission increases in potential to emit (tpy)	Creditable emission decreases in actual emissions (tpy)	Emission increases in potential to emit (tpy)	Creditable emission decreases in actual emissions (tpy)

If the source is subject to 25 Pa Code Section 127 Subchapter E, New Source Review requirements.

a. Identify Emission Reduction Credits (ERCs) for emission offsets or demonstrate suitable ERCs for emission offsets.

b. Provide a demonstration that the lowest acheivable emission rate (LAER) control techniques will be employed (if applicable)

c. Provide an analysis of alternalte sites, sizes, production processes and environmental control techniques demonstrating that the benefits of the proposed source outweighs the enviromental and social costs (if applicable)

Attach calculations and any additional information necessary to thoroughly evaluate compliance with all the applicable requirements of Article II of the Rules and Regulations of the Department of Environmental Protection and those requirements promulgated by the Administrator of the United States Environmental Protection Agency pursuant to the provisions of the Clean Air Act. The Department may ask for additional information to evaluate the application such as a stand-by plan, a plan for air pollution emergencies, air quality modeling, etc.

Section F - Flue and Air Contaminant Emission

1. Estimated Atmospheric Emissions*

Pollutant	Maximum Emissions Rate				Calculation/ Estimation Method
	specify units	pounds/hour	hours/year	tons/year	
PM					
PM10					
SOx					
CO					
NOx		31.169	8760	136.03	AP-42
VOC		27.19	8760	118.663	MASS FRACTION OF VOC IN COG/AP-42
Other: (e.g.HAPs)					

*These emissions must be calculated based on the requested operating schedule and/or process rate. E.g., operating schedule for maximum limits or restricted hours of operation and/or restricted throughput. Describe how the emission values were determined. Attach calculations.

2. Stack and Exhauster

Stack Designation/ Number

EXISTING FLARE STACK "A"

SUPPLEMENTAL FLARE STACK "B"

Stack height above grade (ft.)		Stack diameter (ft.) or Outlet duct area (ft^2).		Weather cap	
	"A" 221	"A"	0.79		
	"B" 221	"B"	0.79	[ ] YES	[X] NO
Grade elevation (ft.)	763				

Distance of discharge to nearest property line (ft.). Locate on topographic map.

NA

Does stack height meet Good Engineering Practice (GEP)?

NA

If modeling (estimating) of ambient air quality impacts is needed, attach a site plan with buildings and their dimensions and other obstructions

Location of stack** Latitude/Longitude Point of Origin	Latitude			Longitude		
	Degrees	Minutes	Seconds	Degrees	Minutes	Seconds

Stack exhaust

"A"	~5,500	ACFM	Temperature	3,660 F	Moisture	4 %
"B"	~14,000	ACFM	Temperature	3,660 F	Moisture	4 %

Indicate on an attached sheet the location of sampling ports with respect to exhaust fan, breeching etc. Give all necessary dimensions.

TWO (2) 90 DEGREE OPPOSED SAMPLING PORTS. TEST PORTS LOCATED 47 FEET DOWNSTREAM NEAREST DISTURBANCE AND 10 FEET UPSTREAM NEAREST DISTURBANCE.

Exhauster (attach fan curves) _____ in of water _____ HP@ _____ RPM

** If the data and collection method codes differ from those provided on the General Information Form-Authorization Application, provide the additional detail required by that form on a separate form.

Section G - Attachments

Number and list all attachments submitted with this application below:

REFER TO TABLE OF CONTENTS IN FRONT OF ENTIRE APPLICATION

Pennsylvania Department of Environmental Protection
Bureau Of Air Quality

Addendum A: Source Applicable Requirements

Describe and cite all applicable requirements pertaining to this source.
Note: A Method of Compliance Worksheet (Addendum 1) must be completed for each requirement listed.

ONLY APPLICABLE REQUIREMENTS PERTAINING TO NOX AND VOC EMISSIONS WILL BE ADDRESSED. ALL OTHER APPLICABLE REQUIREMENTS ARE CONTAINED IN THE TITLE V PERMIT APPLICATION.

Citation Number	Citation Limitation	Limitation Used
Plan Approval 65-000-853	RACT Permit	NA
Plan Approval 65-305-048	Flare Requirements	NA
25 PA 129.91-129.95	RACT Proposal	NA

Pennsylvania Department of Environmental Protection
Bureau Of Air Quality

Addendum 1: Method of Compliance Worksheet

Section 1: Applicable Requirement

Federal Tax Id: **25-1588399** Firm Name: **Koppers Industries, Inc.**

Plant Code: _____ Plant Name: **Monessen Coke Plant**

Applicable Requirement for: **(please check only one box below)**

- [ ] The entire site
- [ ] A group of sources, Group ID _____
- [X] A single source, Unit ID: **Flares (2)**
- [ ] Alternative Scenario, Scenario Name: _____

Citation #: **65-000-853**

This plan approval (Condition 6 & 7) imposes the following NOx & VOC emission limitations for stack emissions from this unit:

NOx	**31.7 tpy**
VOC	**27.6 tpy**

KII wishes to revise these limits as follows:

NOx	**136 tpy**
VOC	**119 tpy**

NOx emissions are based on AP-42 emission factors and a higher heating value of COG at 550 BTU/SCF. VOC emissions are based on AP-42 emission factors (natural gas) a mass fraction of VOC in COG of 12%.

Compliance Method based upon: [ ] Applicable Requirement [X] Gap Filling Requirement

Method of Compliance Type: (Check all that applies and complete all appropriate sections below)

- [ ] Monitoring
- [ ] Testing
- [X] Reporting
- [ ] Record Keeping
- [ ] Workpractice Standard

Section 2: Monitoring

1. Monitoring device type (stack test, CEM, etc): _____
2. Monitoring device locations: _____
3. Describe all parameters being monitored along with the frequency and duration of monitoring each parameter?

   _____
4. How will data be reported? _____

   _____

Addendum 1: Method of Compliance Worksheet

Section 3: Testing

For demonstration of hourly emissions:

1. Reference Test Method Description:

2. Reference Test Method Citation:

Section 4: Record Keeping

Describe what parameters will be recorded and the frequency of recording:

Section 5: Reporting

1. Describe what is to be reported and the frequency of reporting:

Annual emission statements, in accordance with 25 PA 135.21, will be submitted to demonstrate compliance with the annual emission limitations using the same emission factors used to calculate potential emissions in this application.

2. Reporting start-date:

Section 5: Work Practice Standard

Describe any work practice standards:

Pennsylvania Department of Environmental Protection
Bureau Of Air Quality

Addendum 1: Method of Compliance Worksheet

Section 1: Applicable Requirement

Federal Tax Id: **25-1588399** Firm Name: **Koppers Industries, Inc.**

Plant Code: _____ Plant Name: **Monessen Coke Plant**

Applicable Requirement for: **(please check only one box below)**

- [ ] The entire site
- [ ] A group of sources, Group ID _____
- [X] A single source, Unit ID: **Flares (2)**
- [ ] Alternative Scenario, Scenario Name: _____

Citation #: **65-305-048**

Compliance Method based upon: [ ] Applicable Requirement [X] Gap Filling Requirement

Method of Compliance Type: (Check all that applies and complete all appropriate sections below)

- [ ] Monitoring
- [ ] Testing
- [ ] Reporting
- [ ] Record Keeping
- [X] Workpractice Standard

Section 2: Monitoring

1. Monitoring device type (stack test, CEM, etc): _____
2. Monitoring device locations: _____
3. Describe all parameters being monitored along with the frequency and duration of monitoring each parameter?

_____

_____

4. How will data be reported? _____

_____

Addendum 1: Method of Compliance Worksheet

Section 3: Testing

For demonstration of hourly emissions:

1. Reference Test Method Description:

2. Reference Test Method Citation:

Section 4: Record Keeping

Describe what parameters will be recorded and the frequency of recording:

Section 5: Reporting

1. Describe what is to be reported and the frequency of reporting:

2. Reporting start-date:

Section 5: Work Practice Standard

Describe any work practice standards:

Condition 7 of the permit requiers the flare system to be designed to meet the EPA flare specifications in 40 CFR 60.18 (in compliance). Condition 8 requires the flare pilot to be monitored using a thermocouple or equivalent to detect presence of a flame (in compliance).

Pennsylvania Department of Environmental Protection
Bureau Of Air Quality

Addendum 1: Method of Compliance Worksheet

Section 1: Applicable Requirement

Federal Tax Id: **25-1588399** Firm Name: **Koppers Industries, Inc.**

Plant Code: _____ Plant Name: **Monessen Coke Plant**

Applicable Requirement for: **(please check only one box below)**

- [ ] The entire site
- [ ] A group of sources, Group ID _____
- [X] A single source, Unit ID: **Flares (2)**
- [ ] Alternative Scenario, Scenario Name: _____

Citation #: **25 PA 129.91-129.95**

Compliance Method based upon: [ ] Applicable Requirement [X] Gap Filling Requirement

Method of Compliance Type: (Check all that applies and complete all appropriate sections below)

- [ ] Monitoring
- [ ] Testing
- [ ] Reporting
- [ ] Record Keeping
- [X] Workpractice Standard

Section 2: Monitoring

1. Monitoring device type (stack test, CEM, etc): _____
2. Monitoring device locations: _____
3. Describe all parameters being monitored along with the frequency and duration of monitoring each parameter?

   _____

   _____

4. How will data be reported? _____

   _____

Addendum 1: Method of Compliance Worksheet

Section 3: Testing

For demonstration of hourly emissions:

1. Reference Test Method Description:

2. Reference Test Method Citation:

Section 4: Record Keeping

Describe what parameters will be recorded and the frequency of recording:

Section 5: Reporting

1. Describe what is to be reported and the frequency of reporting:

2. Reporting start-date:

Section 5: Work Practice Standard

Describe any work practice standards:

RACT proposal submitted to PADEP June 1994, in accordance with this rule.