**SECTION 6** 

**Coke Pushing** 

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 KOPPERS INDUSTRIES, INC. Organization Name or Registered Fictitious Name/Facility Name DEP Client ID # (if known) Type of Review Required and Fees: Source which is not subject to NSPS, NESHAPs, MACT, NSR, PSD: 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 General Information Form (GIF) X Processes Plan Approval Application Compliance Review Form or provide reference of most recently submitted compliance review form for facilities submitting on a periodic basis Jun-02 Copy and Proof of County and Municipal Notifications **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 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 Name (Print): OFFICIAL USE ONLY Unit ID Site ID Application No. APS ID AUTHID DEP Client ID# Reviewed By Date Assigned Date Received Date of 1st Technical Deficiency Date of 2nd Technical Deficiency Comments

				Section B -	Proc	esses Inforr	nation		
1. Source I	Information					<u> </u>			
_ <del> </del>	<del></del>	, raw materia	als, produ	ict, etc.). Attach ad	lditional	sheets as necess	arv.		
4				VENS INTO QU			-	A	
				APPLICATION					oc
				IN THE RACT					
Manufacturer	* 7			Model No.				Number of source	ces
NA				NA				1	
Source designat	tion	***************************************		Maximum capaci	ity		·····	Rated capacity	
				~ 541,000 TONS	•	YR		' '	
COKE PUSHI	NG			~ 402,000 TONS				NA	
Type of materia	l processed				***			·	
COKE									
Maximum opera	ating schedule		······						
Hours/Day		Days/Wee	k			Days/Year			Hours/Year
24		7				52			8760
Operational rest	rictions existing o	r requested, i	f any (e.s	g., bottlenecks or v	oluntary	•	mit PTE)		
	ity (specify units)								
Per hour		Per day				Per week			Per year
~ 12 TONS CO	KE/PUSH								~402,000 TONS COKE
Operat	ing schedule	·							,
Hours/Day		Days/Wee	k	••••		Days/Year			Hours/Year
24		7				52			8760
Seasonal variation	ons (Months)		From		····	to		***************************************	
If variations	exist, describe the	m.							
<u> </u>									
.)									
2. Fuel	NA								
Туре	Quantity		Annu	ally	Sulfu	r ·	% Asl	ı BTU	Content
	Hourly			•			(wt.)		
							` '	1	
Oil Number		GPH		10 3		% by wt		ì	Btu/Gal &
		@60 F		gal					Lbs/Gal @ 60F
03111	_			10.3					
Oil Number		GPH @60 F		10 3		% by wt			Btu/Gal &
<del></del>		@60 F		gal					Lbs/Gal @ 60F
Natural gas		SCFH		10 6		grains/100	_		BTU/SCF
J				SCF		SCF		-	210.001
Gas (other)		SCFH		10 6		grains/100			BTU/SCF
<del> </del>				SCF		SCF			
Coal		TPH		Tons		% by wt			BTU/lb
Other *	1								
	1								
								ĺ	
	<u> </u>								
)	<u> </u>								
*Note: Descri	he and furnish inf	ormation ser	arately fo	or other fuels in Ac	ddendum	_D			

3. Burner Data	NA	ction B - Proc	**************************************	******	*****	
Manufacturer		and Model No.				Number of burners
Description						
Rated Capacity			M	faximur	n Capac	rity
4. Process Storage Vess	els	NA	<u> </u>			
A. For Liquids:						
Name of material stored						
Tank I.D. No	Man	ıfacturer				Date Installed
Maximum Pressure			Capacity (g	gallons/	Meter <sup>3</sup> )	
Type of relief device (pressure set ve	nt/conservation	vent/emergency ven	t/open vent)			
Relief valve/vent set pressure (psig)	***************************************		Vapor pres	sure of	liquid at	t storage temperature (psia/kPa)
Type of Roof Describe:						
Total Throughput Per Year			Number of	fills pe	r day (fil	lls/day)
ĺ			Filling Rate Duration of			
B. For Solids:						
Type Silo	Storage Bin	Other, I	Describe	-	Name of	f Material Stored
Silo/Storage Bin I.D. No.	Manı	facturer				Date Installed
State whether the material will be sto	red in loose or b	ags 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 Confident	iality					
Do you request any information on the				ges marl	ked "con	Yes X No

i.

ii.

# Section B - Processes Information (Continued) 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

Expected commencement date of construction/reconstruction/installation:

Expected completion date of construction/reconstruction/installation:

Anticipated date(s) of startup:

			· · · · · · · · · · · · · · · · · · ·		
	<u> </u>		Emissions Rate		Calculation/
Pollutant PM	specify units	pounds/hour	hours/year	tons/year	Estimation Method
[ 141					
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)	ļ				
<b>)</b>					
*These emissions must be ca maximum limits or restricted Attach calculations.	lculated based on the requested hours of operation and/or res	ed operating schedule and/ stricted throughput. Describ	for process rate. e.g., operating so be how the emission values were	hedule for determined.	
· · · · · · · · · · · · · · · · · · ·					
2. Gas Cooling	NA				
2. Gas Cooling  Water quenching		NO Water inj	ection rate	GPM	
Water quenching	YES 1	NO Water inj			$7_{\text{NO}}$
	YES 1	NO Water inj	Air dilution CFM	GPM YES	NO
Water quenching  Radiation and convection c	YES 1	NO Water inj	Air dilution		NO NO
Water quenching  Radiation and convection of YES	YES 1		Air dilution CFM	YES	
Water quenching  Radiation and convection of YES  Forced draft	YES 1		Air dilution CFM	YES YES	
Water quenching  Radiation and convection of YES  Forced draft  Other	YES 1	NO NO	Air dilution CFM  If YES, CFM  Water cooled duct work	YES YES	
Water quenching  Radiation and convection of YES  Forced draft  Other  Inlet volume	YES 1	NO NO	Air dilution CFM  If YES, CFM  Water cooled duct work  Outlet volume	YES YES	
Water quenching  Radiation and convection of YES  Forced draft  Other  Inlet volume  @   F	YES 1	NO NO	Air dilution CFM  If YES, CFM  Water cooled duct work  Outlet volume	YES YES	
Water quenching  Radiation and convection of YES  Forced draft  Other  Inlet volume  @   F	YES 1	NO NO	Air dilution CFM  If YES, CFM  Water cooled duct work  Outlet volume	YES YES	

Fabric Collector THI	Section C - Air Cleanin ERE IS A BAGHOUSE, BUT I		AC AND
/	X EMISSIONS. REFER TO T		OC AND
Equipment Specifications			
Manufacturer		Model No.	Pressurized design Suction Design
Number of compartments	Number of filters per con	npartment Is bag	house insulated? YES NO
Can each compartment be isolated for repa	irs and/or filter replacement?	YES	NO
Are temperature controls provided? (De	scribe in detail)	YES	NO
Dew point at maximum moisture	° 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 Filter dimensions Lengt		CFM/ sq. ft.	
Effective area per filter		Maximum operating temperature	• F
Effective air to cloth ratio	Minimum	Maximum	
Drawing of fabric filter.  A sketch of the fabric filter showi	ing all access doors, catwalks, ladders an	d exhaust ductwork.	
Location of each temperature indi	icator should be attached.		
Operation and Cleaning			
Volume of gasses handledACFM @	° F	Pressure drop across collector (in.  Describe the equipment used to m	
Type of filter cleaning  Manual cleaning  Mechanical shakers	Bag collapse Sonic cleaning	Rever	se air jets
Pneumatic shakers	Reverse air flow		
Describe the equipment provided if dry, oil	-free air is required for collector operation	on.	
Cleaning initiated by Timer Freque  Expected pressure drop in the control of the	ency if timer activated	Other: (specify	
Does air cleaning device employ hopper he			
Describe the warning/ alarm system that pro	otects against operation when the units is	not meeting design requirements.	
Emissions Data			
Pollutant	Inlet	Outlet	Removal efficiency (%)

Section D - Additional Inf	ormation
ill the construction, modification, etc. of the sources covered by this application increase emissions for	rom 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 a	pplicable 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?  (If Yes, which Subpart?)	YES X NO
d. National Emissions Standards for Hazardons Air Pollutants (NESHAPS), 40 CFR 61?  (If Yes, which subpart?)	YES X NO
e. Maximum Achievable Control Technology (MACT), CAAA 112/40 CFR Part 63?  (If Yes, which subpart?) PROPOSED SUBPART CCCCC	X YES NO
COKE OVENS: PUSHING, QUENCHING AND BA	TTERY STACKS
Provide a demonstration that the emissions from any new sources will be the minimum attainable through	gh 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 f	acility is an existing major facility
(for PSD purposes).	
NO NEW INSTALLATIONS OR MODIFICATIONS TO EXISTING SOURC	ES IN LAST 5 YEARS.
and the same of th	

#### Section D - Additional Information (Continued)

andicate 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

				VC	)Cs	N	Ох
Permit Number (if Applicable)	Date Issued	Indicate Yes or No if emission increases and decreases were	Source I.D. or Name	Emission increases in	Creditable emission	Emission increases in	Creditable emission
Applicable)		used previously for		potential to emit	decreases in actual	potential to emit	decreases in actual
		netting			emissions		emissions
				(tpy)	(фу)	(tpy)	(tpy)
	<del></del>						
	· · · ·						
		-					

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

- b. Provide a demonstration that the lowest acheivable emission rate (LAER) control techniques will be employed (if applicable)
- Provide an analysis of alternalte sites, sizes, production processes and environmental control techniques demonstrating that
  the benefits of the proposed source outweighs the environmental 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 sollution emergencies, air quality modeling, etc.

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

1. Estimated Atn	nospheric E	missions*					
			Maximum E	missions Rate		C	alculation/
Pollutant	specify uni	ts	pounds/hour	hours/year	tons/yea		timation Method
PM							
PM10							
SOx				.,,			
00							
NOx - Stack			14.2	8760	25.5	TES	STACK T/STATISTICAL ANALYSIS
NOx - Fugitive			2.51	8760	4.5	8	5% CAPTURE
VOC - Stack			2.3	8760	4.5	TES	STACK T/STATISTICAL ANALYSIS
VOC - Fugitive			0.41	8760	0.79	8	5% CAPTURE
Other: (e.g.HAPs)							
These emissions must be ca	lculated based on	the requested	operating schedule an	d/or process rate, E.g., oper	rating schedule for		
maximum limits or restricted			-		_		
Attach calculations.	·						
2. Stack and Exh	nauster						
Stack Designation/ Number BAGHOUSE STA	CK						
Stack height above grade (ft.)	)	68 Stack	diameter (ft.) or Outle	et duct area (ft²).	Weather cap		
Grade elevation (ft.)		762	6			YES	X NO
Distance of discharge to near	est property line (	ft.). Locate on	topographic map.		•		
Does stack height meet Good	d Engineering Pra	ctice (GEP)?					
f modeling (estimating) of ar	mbient air quality	impacts is nee	eded, attach a site plan	with buildings and their di	mensions and		
ther obstructions					1		
Location of stack	l.		Latitude	;		Longitude	
Latitude/Longitu Point of Origin		Degrees	Minutes	Seconds	Degrees	Minutes	Seconds
I Ollit OI Ollgii		Degrees	Williams	Sconds	Degrees	Milliance	DOUNG
tack exhaust~1162	00 SCFM	Temperature	<del>~95</del> F	Moisture ~2	_%		
~1162	the location of sar	npling ports v	vith respect to exhaust	fan, breeching etc. Give all	necessary dimension		
tack exhaust  ~1162  andicate on an attached sheet  WO (2) 90 DEGREE OPP  DISTURBANCE AND 10 F	the location of sar	npling ports v	rith respect to exhaust	fan, breeching etc. Give all	necessary dimension		

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

ember and list all attachments submitted with t	his application below:	- Attachments		
REFER TO TABLE OF CONT	ENTS IN FRONT (	OF ENTIRE APPLICATI	ON	
			·	
	÷			

### 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.
<u> </u>		
3		
	William I was a second of the	

Section 1: Applicable Requirement	ent			
Federal Tax Id: <b>25-1588399</b>	Firm N	ame:	Koppers Indust	ries, Inc.
Plant Code:	_ Plant N	ame:	Monessen Cok	re Plant
Applicable Requirement for:	(please che	ck only one box	below)	
The entire site				
A group of sources, Group II	D		<u> </u>	
X A single source, Unit ID:			Coke Pushing	- · · · · · · · · · · · · · · · · · · ·
Alternative Scenario, Scenar	io Name:			
Citation #:		65-000-853		_
This plan approval (Condition 6 &	7) imposes	the following N	Ox & VOC emis	sion limitations for
stack emissions from this unit:		7.8 lb/hr	4.8 tpy	
VOC		7.8 lb/hr 1.1 lb/hr	4.6 tpy 0.6 tpy	
KII wishes to revise these limits as	follows:	111 10, 111	oro tpy	
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 statistical approach to derive limits if a next reading is taken at a 99% range expected to contain the mean assume an 85% capture efficiency.	s. The hour confidence realue of th	ly limits are the interval. The a	upper bound of unual limits are (	the range expected the upper bound of
Compliance Method based upon:		Applicable Requ	rirement X	Gap Filling Requiremen
Method of Compliance Type: (C	heck all that	applies and com	plete all appropri	ate sections below)
Monitoring X	Testing		X	Reporting
Record Keeping	Workpr	actice Standard		
Section 2: Monitoring				
1. Monitoring device type (stack test	, CEM, etc):			
2. Monitoring device locations:				
3. Describe all parameters being more each parameter?	nitored along	g with the freque	ncy and duration	of monitoring
4. How will data be reported?				

# Addendum 1: Method of Compliance Worksheet

Section 3: Testing	
For demonstration of hourly emission	s:
Reference Test Method Description:	NOx - USEPA Method 7E
	VOC - USEPA Method 18 and 25A
2. Reference Test Method Citation:	See above
accordance with 25 PA 139 and the PADI protocol at 60 days in advance. Condition	s unit. Condition 9 requires all testing to be performed in EP Source Testing Manual. Condition 10 requires a pre-test in 11 requires notification to PADEP two weeks in advance es two copies of stack test results to be submitted within 60
Section 4: Record Keeping	
Describe what parameters will be recorded and t	the frequency of recording:
Section 5: Reporting	
1. Describe what is to be reported and the frequency	ency of reporting:
Annual emission statements, in accordance wi	
demonstrate compliance with the annual emis	
emission factor using all testing data to calcul	ate annual emissions.
	×
2. Reporting start-date:	
Section 5: Work Practice Standard	
Describe any work practice standards:	

uirement for: re site of sources, Group I source, Unit ID: ve Scenario, Scenar	rio Name: 65-305	Coke Pushing
re site of sources, Group I source, Unit ID: ve Scenario, Scenar thod based upon:	rio Name: 65-305	Coke Pushing
of sources, Group I source, Unit ID: ve Scenario, Scenar thod based upon:	rio Name: 65-305	-048
source, Unit ID: ve Scenario, Scenar thod based upon:	rio Name: 65-305	-048
ve Scenario, Scenar	65-305	-048
thod based upon:	65-305	-048
thod based upon:	·	
thod based upon:	·	ble Requirement X Gap Filling Require
ng X Keeping	Testing	and complete all appropriate sections below)  Reporting
evice type (stack tes	st, CEM, etc):	
evice locations:		
κ • • • • • • • • • • • • • • • • • • •	Keeping  pnitoring  evice type (stack testerics)	Keeping Workpractice Stonitoring  evice type (stack test, CEM, etc):  evice locations:  parameters being monitored along with the ter?

	or demonstration of hourly emiss	
I. Referer	ace Test Method Description:	NOx - USEPA Method 7E
2 Deferer	nce Test Method Citation:	VOC - USEPA Method 18 and 25A
Condi accord protoc perfor	tion 15 requires annual testing o lance with 25 PA 139 and the PA col at 60 days in advance. Condi	See above  f this unit. Condition 16 requires all testing to be performed ADEP Source Testing Manual. Condition 17 requires a pre-tion 18 requires notification to PADEP two weeks in advance two copies of stack test results to be submitted within 60
Section 4:	Record Keeping	
Describe w	what parameters will be recorded as	nd the frequency of recording:
•••		
Section 5:	Reporting	
1. Describe	e what is to be reported and the fre	equency of reporting:
2. Reportir	ng start-date:	
Section 5:	Work Practice Standard	
Describe an	ny work practice standards:	
	y war-Francis Statistics.	

Federal Tax Id:	25-1588399	Firm Name:	Koppers Indust	ries, Inc.
Plant Code:		Plant Name:	Monessen Cok	e Plant
Applicable Require	ement for:	(please check only or	e box below)	
The entire si	ite			
A group of s	sources, Group II			
X A single sou	rce, Unit ID:		Coke Pushing	
Alternative S	Scenario, Scenari	o Name:		
Citation #:				
		231A127.71	-127.73	
Compliance Metho	d based upon:	Applicable	e Requirement X	Gap Filling Require
Method of Compliar	nce Type: (Cl	heck all that applies an	d complete all appropri	ate sections below)
Monitoring		Testing		Reporting
		777 1 C.	doud	
Record Keep	ping X	Workpractice Star	dard	
Record Keep		Workpractice Star	dard	
Section 2: Monito	oring	CEM 242)		
Section 2: Monito  1. Monitoring device	oring e type (stack test,	, CEM, etc):		
Section 2: Monito  1. Monitoring devic  2. Monitoring devic	e type (stack test,	, CEM, etc):		
Section 2: Monito  1. Monitoring devic  2. Monitoring devic	e type (stack test,	, CEM, etc):		
Section 2: Monitoring device 1. Monitoring device 2. Monitoring device 3. Describe all parameters	e type (stack test,	, CEM, etc):		

# 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** 

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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

Editor (The Roselland - 12 Town	Section A - Facility Name, Che	cklist and Certification	n is is					
Organization Name	e or Registered Fictitious Name/Facility Name	KOPPERS INDUS	TRIES,	INC.				
DEP Client ID # (if known)								
Type of Review Re	quired and Fees:							
X	Source which is not subject to NSPS, NESHAPs, MA	ACT, NSR, PSD:	\$	850				
	Source requiring approval under NSPS or NESHAPs	or both:	\$		1			
	Source requiring approval under NSR regulations:		\$ <u></u>					
	Source requiring the establishment of a MACT limits	ation:	\$ _					
	Source requiring approval under PSD		\$_					
	Applicant's Ch	ecklist						
	Check the following list to make sure that all t	the required documents a	re includ	ded	<u></u>			
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 ba		1-02		1			
X	Copy and Proof of County and Municipal Notifica	itions						
X	Permit Fees							
X	Addendum A: Source Applicable Requirements (onl	y applicable to existing Ti	tle V faci	ility)				
	Certification of Truth, Accuracy and Com	pleteness by a Respon	sible O	fficial				
that based or	HARD JAMES BURKHART , certify under penalt at the information and belief formed after reasonable in cation are true, accurate and complete.  RICHARD JAMES BURKHART	Date: PLANT MA	information	on	)09(b)(2),			
	OFFICIAL USE	ONEY			The second secon			
Application I DEP Client I Date Receive Date of 1st T Comments	D# APS ID  od Date Assigned	Site ID AUTH Review Date of 2nd Technical Defi	ID wed By					
Comments		THE PARTY OF THE P		Maria de Caración	100 100 100 100 100 100 100 100 100 100			

1. Source I	nformation			Section	B - Proce	sses Info	rmation				
<u> </u>	on (give type, use,	raw materia	ls product e	etc.) Attach ac	ditional sheets	as necessar	37				
	ISTING AND SU					as necessar	у.				
		, , , , , , , , , , , , , , , , , , , ,	11,20,101	Linu Ditol	.00 0001						
								•			
Manufacturer		W-1-1-	М	odel No.		******	1	Number of so	ources		
NA			N.A	<b>\</b>				2			
Source designati	ion		Ma	aximum capac	ity			Rated capaci	ty		
				DG: 7,270.8 M			İ	1	•		
COKE FLARII	NG		N/	TURAL GA	S 1.314 MMC	F/YR					
Type of material	processed		*****			···-	······································	······································			
COG, NATURA	AL GAS										
Maximum opera	ting schedule			7 W							
Hours/Day		Days/Weel	k		Day	s/Year			Hours/Year		
24		7				52			8760		
Operational restr	rictions existing or	requested, if	f any (e.g., b	ottlenecks or v	oluntary restric	tions to lim	it PTE)				
Capaci	ty (specify units)										
Per hour		Per day			Per	week			Per year	•	
COG: 833,000 S	SCFH								COG: 7,270.8	B MMCF/YR	
NATURAL GA	S: 150 SCFH								NATURAL G	GAS 1.314 MMCF/YR	
Operati	ng schedule										
Hours/Day		Days/Week	k		Day	s/Year			Hours/Year		
24		7				52			8760		
) 7 Fuel		·/									
2. Fuel	1. 6	···			1		T				
Туре	Quantity Hourly		Annually		Sulfur		% Ash (wt.)	B	TU Content		
Oil Number		GPH		10 3	% by	y wt			¥1 /	Btu/Gal &	
		@60 F		gal					LDS/C	Gal @ 60F	
Oil Number		GPH		10 3	% by	/ wt				Btu/Gal &	
	•	@60 F		gal					Lbs/C	Gal @ 60F	
Natural gas	150	SCFH	1.	314 10 ° SCF	NEG grain SCF		NEG		1000	BTU/SCF	
Gas (other)	<del> </del>	SCFH	·· · · · · · · · · · · · · · · · · · ·	10 °	arri	ns/100	<del> </del>			BTU/SCF	
our (omer)		50111		SCF	SCF					B10/3CF	
<del></del>											
Coal		TPH		Tons	% by	v wt				BTU/lb	
		1									
Other *	[		<u> </u>								
COG	922 000 0		7 270 0 3	(MCEAD	45 000 11	00 000	2747	_		norr Leger	
Ju	833,000 Se	LLU	1,2/U.8 N	IMCF/YR	45 GR/1	UU SCF	NE		550	BTU/SCF	
*Note: Describ	e and furnish info	rmation sepa	arately for ot	her fuels in Ac	ddendum-B						

'3. Burner Data	NA						
, Manufacturer	Туре а	Type and Model No.			Number of burners		
Description	I				I	<del></del>	
Rated Capacity			Maxim	ım Capac	sity		
4. Process Storage Vess	els	NA		<del></del>			
A. For Liquids:							
Name of material stored							
Tank I.D. No	Manut	acturer			Date Installed		
Maximum Pressure	L	Ci	apacity (gallons	s/Meter <sup>3</sup> )			
Type of relief device (pressure set ve	ent/conservation v	ent/emergency vent/op	en vent)				
Relief valve/vent set pressure (psig)		V	apor pressure o	f liquid at	t storage temperature (psia/kPa)		
Type of Roof Describe:	· · · · · · · · · · · · · · · · · · ·						
Yotal Throughput Per Year		31.		1 (61	11-/1		
otal Imoughput Fel Teal			ımber of fills p lling Rate (gal/i		ns/day)		
		3	uration of fill (1				
B. For Solids:							
Type Silo	Storage Bin	Other, Desc	ribe	Name of	f Material Stored		
Silo/Storage Bin I.D. No.	Manuf	acturer		<b>!</b>	Date Installed		
State whether the material will be sto	ored in loose or ba	gs in silo			Capacity (tons)		
Turnover per year in tons		<del></del>		Turnover per day in tons			
Describe fugitive dust control system	1 for loading and h	andling operation					
·							
Describe material handling system							
5. Request for Confident	iality	<del>****</del>					
	idile y						
Do you request any information on the		se treated as "Confiden	tio179		Yes	X No	

	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 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:

1. Precontrol Emis	sions *		Cleaning Device		
	T	Maximum	n Emissions Rate		Calculation/
Pollutant	specify units	pounds/hour	hours/year	tons/year	Estimation Method
PM				•	
PM10		· · · · · · · · · · · · · · · · · · ·			
SOx					
СО					
NOx		21.170	27.0	107.00	10.40
NOX		31.169	8760	136.03	AP-42
VOC		27.19	8760	118.663	MASS FRACTION O VOC IN COG/AP-42
Other:		······································			
(e.g.HAPs)					
ttach calculations.		stricted throughput. Desc	ribe how the emission values were	e determined.	
2. Gas Cooling	NA				
Water quenching	YES	NO Water	injection rate	GPM	
Radiation and convection convection convection	ooling		Air dilution	YES	NO
YES	NO		If YES, CFM		
Forced draft	YES	NO	Water cooled duct work	YES	NO
Other					
Inlet volume		ACFM	Outlet volume	ACFM	
@°F	% Moisture		@ ° F	% Moisture	
Describe the system in deta	ail.				
****					

Section D - Additional Info	rmation
ill the construction, modification, etc. of the sources covered by this application increase emissions fro lf so, describe and quantify.	om other sources at the facility?
NO	
If this project is subject to any one of the following, attach a demonstration to show compliance with app	plicable 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?  (If Yes, which Subpart?)	YES X NO
d. National Emissions Standards for Hazardous Air Pollutants (NESHAPS), 40 CFR 61?  (If Yes, which subpart?)	YES X NO
e. Maximum Achievable Control Technology (MACT), CAAA 112/40 CFR Part 63?  (If Yes, which subpart?)	YES X NO
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 fac (for PSD purposes).	cility is an existing major facility
NO NEW INSTALLATIONS OR MODIFICATIONS TO EXISTING SOURCE	S 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	Date	Indicate Yes or No	Source I.D. or Name	Emission	Creditable	Emission	Creditable
Number (if	Issued	if emission increases		increases in	emission	increases in	emission
Applicable)	•	and decreases were		potential to	decreases	potential to	decreases
		used previously for		emit	in actual	emit	in actual
		netting			emissions		emissions
				(tpy)	(tpy)	(tpy)	(tpy)
				-			
				-			
							ï
			<del></del>				
				j			
1			****				
							<u> </u>

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)
- Provide an analysis of alternalte sites, sizes, production processes and environmental control techniques demonstrating that
  the benefits of the proposed source outweighs the environmental 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 sollution emergencies, air quality modeling, etc.

			Mavimum	Emissions Rate		<del> </del>	Calculation/
Pollutant	specify un	its	pounds/hour	hours/year	tons/yea		calculation/ stimation Method
M	Speedy un		Pourseynous	nouts/jear	tons/yez		Jennation Michiga
M10							
Ox							
co							
Юх			31.169	8760	136.03		AP-42
700			27.10		110.00	1254.00	ED A CONTONI OF I
oc			27.19	8760	118.663		FRACTION OF V IN COG/AP-42
ther:							
.g.HAPs)							
				<u> </u>			
				nd/or process rate. E.g., ope			
aximum limits or restricted	l hours of operati	on and/or restr	icted throughput. Des	scribe how the emission valu	es were determined	-	
tach calculations.							
2. Stack and Ex	nauster						
ack Designation/ Number	*****				·····		
EXISTING FLAR	E STACK "A"						
SUPPLEMENTA		K "B"					
ack height above grade (ft.			diameter (ft.) or Ou	tlet duct area (ft²).	Weather cap		
	"B"	221	"A" 0.79		•		
rade elevation (ft.)		763	"B" 0.79	<b>)</b>		YES	X NO
istance of discharge to near	est property line	(ft.). Locate on	topographic map.				
NA							
oes stack height meet Goo	d Engineering Pr	actice (GEP)?					
NA							
modeling (estimating) of a	mbient air quality	/ impacts is nee	eded, attach a site pla	n with buildings and their di	mensions and		
ner obstructions					_		
Location of stac			Latitud	le			
Latitude/Longit						Longitude	.,,
Point of Origi	n	Degrees	Minutes	Seconds	Degrees	Minutes	Seconds
•					1		<u>, </u>
ack exhaust							
"A" ~5,50		Temperature	F	Moisture	<u>4</u> %		
"B" ~14,0	00 ACFM	Temperature	3,660 F	Moisture	<u>4</u> %		
<del>.,</del>							
				t fan, breeching etc. Give al			
				CATED 47 FEET DOWNS	TREAM NEARES	ST	
STURBANCE AND 10 I	EET UPSTREA	M NEARES	F DISTURBANCE.				
nauster (attach fan curves)	-	in of	water	HP@		RPM	

<sup>20</sup> 

	nitted with this application b	DEIOW.		 
DEFED TO TABLE C	NE CONTERNES INTES	οσκα στ εκίπτυς	A BDI TC ATTON	
REFER TO TABLE O	F CONTENTS IN FE	RONI OF ENTIRE	APPLICATION	
•				

# 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
	***************************************	
· · · · · · · · · · · · · · · · · · ·		
,		

Section 1: Applicable Requirem	ient			
Federal Tax Id: <b>25-1588399</b>	Firm Name:	Koppers	Industries, Inc.	
Plant Code:	Plant Name:	Moness	sen Coke Plant	
Applicable Requirement for:	(please check onl	y one box below)		
The entire site				
A group of sources, Group I	D			
X A single source, Unit ID:		Flare	es (2)	
Alternative Scenario, Scenario	rio Name:			
Citation #:	65-00	00-853		
This plan approval (Condition 6 &	(27) imposes the fo	llowing NOx & VO	C emission limitations for	
stack emissions from this unit:				
NOx VOC		.7 tpy		
KII wishes to revise these limits as		'.6 tpy		
NOx		6 tpy		
VOC		9 tpy		
NOx emissions are based on AP-4. VOC emissions are based on AP-4 of 12%.	2 emission factors	and a higher heatin		CF.
Compliance Method based upon:	Applie	cable Requirement	X Gap Filling Requireme	nt
Method of Compliance Type: (0	Check all that applie	s and complete all a	appropriate sections below)	
Monitoring	Testing	X	Reporting	
Record Keeping	Workpractice	Standard		
Section 2: Monitoring				
1. Monitoring device type (stack tes	t, CEM, etc):			
2. Monitoring device locations:				
3. Describe all parameters being mo each parameter?	onitored along with	he frequency and di	uration of monitoring	
4. How will data be reported?				

# 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:

Federal Tax Id: 25-1588399	Firm Name:	Koppers Industries, Inc.	
Plant Code:	Plant Name:	Monessen Coke Plant	
Applicable Requirement for:	(please check only on	e box below)	
The entire site			
A group of sources, Group II			
X A single source, Unit ID:		Flares (2)	
Alternative Scenario, Scenar	io Name:		
Citation #:	65-305-0	48	
Compliance Method based upon:	Applicable	Requirement X Gap Filling Require	
Method of Compliance Type: (C	heck all that applies and	d complete all appropriate sections below)	
Monitoring	Testing	Reporting	
Record Keeping X	Workpractice Stan	dard	
Section 2: Monitoring			
Monitoring device type (stack test	CEM etc)		
<ol> <li>Monitoring device type (stack test)</li> <li>Monitoring device locations:</li> </ol>			
Describe all parameters being more		11	
	intored along with the h	requency and duration of monitoring	
each parameter?			

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).

Federal Tax Id: 25-1588399	Firm Name:	Koppers Industries, Inc.
Plant Code:	Plant Name:	Monessen Coke Plant
Applicable Requirement for:	(please check only on	ie box below)
The entire site		
A group of sources, Group II		
X A single source, Unit ID:		Flares (2)
Alternative Scenario, Scenario	io Name:	
Citation #:	25 PA 129.91	120.05
Compliance Method based upon:	Applicable	e Requirement X Gap Filling Requirem
Method of Compliance Type: (C	heck all that applies an	d complete all appropriate sections below)
	• • •	id complete an appropriate sections below)
Monitoring	Testing	Reporting
Monitoring  Record Keeping  X		Reporting
	Testing	Reporting
Record Keeping X  Section 2: Monitoring	Testing Workpractice Stan	Reporting
Record Keeping X  Section 2: Monitoring  1. Monitoring device type (stack test	Testing  Workpractice Stan , CEM, etc):	Reporting
Record Keeping X  Section 2: Monitoring  1. Monitoring device type (stack test 2. Monitoring device locations:	Testing  Workpractice Stan , CEM, etc):	Reporting
Record Keeping X  Section 2: Monitoring  1. Monitoring device type (stack test	Testing  Workpractice Stan , CEM, etc):	Reporting
Record Keeping X  Section 2: Monitoring  1. Monitoring device type (stack test 2. Monitoring device locations: 3. Describe all parameters being more each parameter?	Testing  Workpractice Stan , CEM, etc):	Reporting
Record Keeping X  Section 2: Monitoring  1. Monitoring device type (stack test 2. Monitoring device locations: 3. Describe all parameters being more	Testing  Workpractice Stan , CEM, etc):	Reporting

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.