Knox County Department of Air Quality Management
Application for Potential Air Contaminant Source

140 Dameron Avenue, Suite 242
Department of Public Health
Knoxville, TN 37917-6413
Phone: (865) 215-5900
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Section 1.0: General Facility Information

Source Name:	Source Number:
Mailing Address:	Source Address:
City	City: Zip Code
State: Zip Code:	County:
Technical Contact	Title:
Telephone: ( ) Fax:	e-mail Address (Optional):
Description of Operation:	
SIC Code(s):	Primary SIC Description:

Application is being made for: ( ) Construction Permit ( ) Modification
( ) Synthetic Minor Permit ( ) Operating Permit

Emission Source Listing:

Emission Source I.D. No.	Emission Source Description	Control Device I.D. No.	Control Device Description	Emission Point or "Fugitive"
Equipment to be permitted by this application (new, previously unpermitted, or replacement)				
If application is made for synthetic minor permit, list all current emissions source ID's				
Existing Permitted Equipment to be modified by this application				
Equipment to be deleted by this application				

Person or firm that prepared application: _____

Name: _____

Address: _____ Telephone ( ) _____

Signature of responsible official:

I certify, based on information and belief formed after reasonable inquiry, that the statements and Information in this document are true, accurate, and complete.

Signature: _____ Name: _____

Title: _____ Date: _____

Attachments:

1. Indicate all requested Federally Enforceable Permit Limits (e.g. hours of operation, material throughput rates,etc.) and describe how these limits are monitored and with what frequency.
2. Calculations and references (e.g. AP-42, TANKS 3.1)
3. Flow Sheets
4. Assumptions and any other information needed to process this application

Section 2.0 : Applicable Regulations

Emission Source ID No. And Description	Applicable Knox County Department of Air Quality Management Regulations

A copy of KCDAQM regulations may be obtained from this department at 140 Dameron Avenue, Suite 242, Department of Public Health or at http://aqm.co.knox.tn.us on the Internet.

Section 3.0 : Emission Information

Emission Source Description:	Emission source I.D. No(s):
Control Device I.D. No(s):	Emission Point I.D. No.(s):

Indicate whether this source is applicable to : ( ) NSPS ( ) NESHAP

Indicate applicable subparts in 40 CFR: _____

Proposed Construction Date:	Proposed Completion Date:
Estimated Startup Date:	

Percentage Annual Throughput (%): Dec-Feb. _____ Mar-May _____ June-Aug _____

Sept-Nov._____

Emission Source: Complete Appropriate Sections on the Following Pages:

( ) Coal/Wood/Oil or Gas Burner
( ) Coating/Finishing Operations
( ) Liquid Storage Tank
( ) Hot Mix Asphalt Plant
( ) Quarry Operations
( ) Solvent Degreasers
( ) Incineration
( ) Other Specify: _____

Current Facility Wide Emissions Summary:

Pollutant:	*Annual Emissions in Tons/Year:*	
	Actual (After Control)	Potential (After Control)
Particulate Matter (PM):		
Sulfur Dioxide (SO2):		
Oxides of Nitrogen (Nox):		
Volatile Organic Compounds (VOC):		
Carbon Monoxide (CO):		
Haz. Air Pollutants (Combination):		
Individual HAP's (List All):		

Stack Information

Emission Point ID	Emission Point Height (Ft)	Equiv. Diameter (Ft)	Temp (F)	Velocity (Ft/Sec)	Flow Rate (ACFM)	Emission Point Direction

Section 3.0: Emission Information

Coal/Wood/Oil/Gas Burner

Emission Source I.D. No(s).
(Group Identical Emission Sources)

Heat Transfer Media ( ) Steam ( ) Air

Describe Use:
( ) Process Heat
( ) Electrical Generation
( ) Space Heat
( ) Continuous Use
( ) Stand By Emergency
( ) Other

Hours of Operation: Hrs/Day Days/Week Weeks/Yr.

Fuel Usage and Characteristics: (Include Startup Fuel, Complete All That Are Applicable

Fuel Type:	Max. Design Capacity (MMBTU/HR)	BTU/Content (Units)	Sulfur Content % By Weight	Ash Content (% By Weight)	Requested Limitation

Oil/Gas Fired Burner/Boiler Information

Type of Boiler: ( ) Utility ( ) Industrial ( ) Commercial

Coal Fired Burner Information

Pulverized	Oversized Stoker	Underfed Stoker	Spreader Stoker	Fluidized Bed
( ) Wet Bed	( ) Uncontrolled	( ) Uncontrolled	( ) Uncontrolled	( ) Circulating
( ) Dry Bed	( ) Multicyclone	( ) Multicyclone	( ) Flyash Reinjection	( ) Recirculating
			( ) No Flyash Reinjection	

Method of Loading: ( ) Cyclone ( ) Travelling Grate ( ) Handfired

Wood Fired Burner Information

Wood Type: ( ) Bark ( ) Wood/Bark ( )Other/Specify _____ Fuel Feed Method:

( ) Uncontrolled ( ) Flyash Reinjection ( ) No Flyash Reinjection

Coating/Finishing

Emission Source I.D.:
(Group Identical Emission Sources)

Type of Emission Source: ( ) Station ( ) Booth ( ) Wash-Off Tank ( ) Dip Tank ( ) Other (Describe):

Type of Coating/Finishing Operation

Method of Spray: ( ) Airless ( ) Air Atomize ( ) Electrostatic ( ) Other (Describe):

Exhaust Control: ( ) None ( ) Dry Filter ( ) Waterwash ( ) Baffles ( ) Other (Describe):

Continuous Operation: Type of Feed System: Max. No. Items Coated/Hr:

Batch Operation: Max. No. Items Coated/Batch: Batch Time at Max. (Min):

Daily Batch Rate:

Number of Spray Guns: Transfer Efficiency: Capture Efficiency:

Requested Limitation:

Comments:

Section 3.0: Emission Information

Liquid Storage Tank			
Emission Source I.D. No(s).		Liquid Stored:	
(Group Identical Emission Sources)		Average Liquid Surface Temp.	MW Lb/Lb Mole:
		Vapor Pressure at Liquid Surface Temp. (PSIA)	
Capacity (Gal).	Diameter (Ft).	Tank Roof Height (Ft).	
Tank Liquid Height (Ft.) Max.	Min.	Tank Shell Height (Vert.)	
Max. Throughput Per Year (Gal.)		Max. Turnovers Per Year.	
Storage Tank Type: ( ) Vertical Fixed ( ) Horizontal Fixed ( ) External Floating ( ) Internal Floating			
Roof Color/Shade:		Shell Color/Shade:	
Roof Condition:		Shell Condition:	
Vertical Fixed Roof Tank:	( ) Cone	( ) Dome	
	Slope of Cone Roof (Ft/Ft):	Radius of Dome Roof (Ft):	
Floating Roof Tank:	Construction:	Fitting Category:	
	Primary Seal:	Secondary Seal:	
External Floating Roof Tank:	Roof Type: ( ) Pontoon ( ) Double Deck		
Internal Floating Roof Tank:	Self Supporting Roof? (Y/N)	No. of Columns:	
Deck Construction:	( ) Continuous Sheet	( ) Panel	
	Sheet Width:	Panel Dimensions (Ft):	
Deck Seam Length (Ft):			
Requested Limitation:			

Hot Mix Asphalt Plant:	Type of Operation: ( ) Batch	Batches/Day:_____	( ) Continuous
Emission Source I.D. No (s).	Normal Batch Time:		
	Input Rates (Tons Per Year)	Control Device:	Comments:
	Maximum / Average		
Aggregate:			
Recycled Asphalt:			
Tons Transported on Haul Roads:			
Paved Haul Roads: Vehicle Miles Traveled (Yr.).			
Unpaved Haul Roads: Vehicle Miles Traveled (Yr.).			
Storage Piles Area: Acreage:			
Requested Limitation:			

Quarry Operations	Type of Operation: ( ) Continuous	( ) Batch	
Emission Source ID No.(s)		Batches/Day_____	
(Group Identical Emission Sources)		Normal Batch Time:_____	
Process Type or Method	Design Rate (Tons/Year)	Average Rate (Tons/Year)	Control Device
1. Primary Crusher			
2. Secondary Crusher			
3. Tertiary Crusher # 1			
4. Tertiary Crusher # 2			
5. Tertiary Crusher # 3			
6. Screens			
7. Conveyors			
8. Pugmill			
9. Storage Piles Area			
10. Haul Roads			
Requested Limitation:			

Section 3.0: Emission Information

Incineration:	Type of Charging:	Excess Air %:
Emission Source I.D. No(s).	Overfired/Underfired:	
(Group Identical Emission Sources)	Air Flow Entering Unit (ACFM):	
Heat Transfer Media ( ) Steam ( ) Air		
Primary Chamber	***Secondary Chamber***	
Firing Rate (MMBTU/HR):	Firing Rate (MMBTU/HR):	
Operating Temperature (F):	Operating Temperature (F):	
Volume (Ft3):	Volume (Ft3):	
Air Flow (ACFM):	Retention Time (Sec):	Air Flow (ACFM):

Waste Composition

Waste Type	% By Weight	Average BTU/LB	Average % Moisture Content

Fuel Usage and Characteristics (Include Startup Fuel, Complete All That Are Applicable)

Fuel Type:	Max. Design Capacity (MMBTU/HR)	Requested Capacity Limitation (MMBTU/HR)	BTU Content (Units)	Sulfur Content (% By Weight)	% Ash Content

Attachments: 1. Start Up Procedures
2. Maintenance Procedures
3. Manufacturers Literature/ Specification
4. Description of Automatic and Manual Controls
5. Schematic of Incinerator

Solvent Degreasers:	Solvent(s) Used:
Emissions Source ID No.	
(Group Identical Emission Sources)	

Degreaser Type: ( ) Batch Vapor ( ) In-Line Vapor ( )In-Line Cold ( ) Batch Cold ( ) Other (Describe)

Describe Articles Being Degreased:	Exhaust Control (if any):
Tank Capacity (Gal):	Make Up Rate (Gal/Day):

Requested Limitation:

Other:	Describe Emission Source:
Emission Source ID No.	
(Group Identical Emissions)	( ) Continuous Process ( ) Batch Process Batches/Day_____ Batches/Yr_____

List Materials Entering Process	Maximum Input Rate (Lb./Hr):	Requested Limitation

Requested Limitation:

Section 4.0: Control Device Information

Control Device I.D. No(s).	Controls Emissions from which emission source ID no(s).	
Emission Point ID No(s).		
Proposed Construction Date:	Completion Date:	Startup Date:
Manufacturer/Model:		Date Manufactured:

Indicate Control Device: (Complete Appropriate Control Device Section On Following Pages)

( ) Fabric Filter ( ) Electrostatic Precipitator ( ) Thermal/Catalytic ( ) Cyclone ( ) Gaseous Absorber

( ) Wet Scrubber ( ) Adsorber ( ) Condenser ( ) Other -Describe_____

Pollutant(s) Collected: _____, _____, _____, _____, _____,

Corresponding Efficiency _____% _____% _____% _____% _____%

Efficiency Determination: _____

Before Control Emissions (Lb./Hr) _____ _____ _____ _____ _____

After Control Emissions (Lb./Hr) _____ _____ _____ _____ _____

Particle Size Distribution (Microns) _____0-1 _____1-10 _____10-25 _____25-50 _____50-100

Corresponding Efficiency _____% _____% _____% _____% _____%

Attachments:

1. Describe Startup Procedures
2. Describe Any Monitoring Devices, Gauges, Warning Alarms, Test Ports, Etc.
3. Describe By Diagram The Relationship Of The Control Device To Its Emission Sources.
4. Describe Conditions Under Which Bypass Vent Of Control Device (If Any) Would Be Used.

Indicate All Requested Enforceable Permit Limitations(e.g. Material Input Rates, Minimum Efficiency Rate, ETC.) And Describe How These Limits Are Monitored And With What Frequency.

Fabric Filter

Control Device ID No(s). (Group Identical Control Devices)	Pressure Drop (IN H2O) Min_____ Max_____	Inlet Temp (F): Min_____ Max_____
Inlet Air Flow Rate (ACFM):	Air To Cloth Ratio:	Filter Surface Area (Ft2)
Filter Max. Operating Temp.(F):	Filter Material:	Particulate Material:
No. Of Compartments:	Gas Stream Moisture %:	Felted (Y/N):

Cleaning Method: ( ) Mechanical ( ) Reverse Flow ( ) Simple Bag Collapse ( ) Sonic ( ) Ringed Bag Collapse

( ) Air Pulse ( )Other-Describe_____

Time Between Cleanings:

ESP

Control Device ID No(s). (Group Identical Control Devices)	Pressure Drop (in H2O): Min_____ Max_____	Inlet Temp (F): Min_____ Max_____
Inlet Air Flow Rate (ACFM):	Collection Plate Area (Ft2):	No. Fields:
No. Plates/Field:	Particle Migration Velocity (Ft/Sec)	
Particle Density (Lb/Ft3):	Field Strength (Volts) Charging:	Collecting:
Corona Power (Watts/1000 CFM):	Electrical Usage (KW/Hour):	
Resistivity Of Pollutant (OHM-CM):	Gas Viscosity (POISE):	

Cleaning Method: ( ) Plate Wrapping ( ) Plate Vibrating ( ) Washing ( ) Other-Describe:

Comments:

Section 4.0: Control Device Information

Condenser: Control Device I.D. No(s).	Emission Stream Flow Rate (CFM):	Inlet Emission Stream Temp (F)
Moisture Content of Emission Stream (%):	Temp. Of Condensation (F):	
Coolant Used:	Temp. of Inlet Coolant (F):	
Coolant Flow Rate (LB/HR):	Refrigeration Capacity (Tons):	
Condenser Surface Area (Ft2):	Spec. Heat of Pollutant Collected (BTU/Lb.-Mol F):	
Heat of Vaporization of Collected Pollutant (BTU/LB-Mol):		
Gaseous Absorber: Control Device ID:	Pressure Drop (In H2O): Min. Max.	Inlet Temp (F) Min Max.
Gas Dew Point (F):	Gas Velocity (Ft/Sec):	
Type of System:		
Packed Column: Type of Packing:	Column Length (Ft):	Column Diameter (Ft):
Plate Column: Plate Spacing (IN):	Column Length (Ft):	Column Diameter (Ft):
Additive Liquid Scrubbing Medium:	% Recirculated:	
Wet Scrubber Control Device ID	Pressure Drop (In H2O): Min. Max.	Inlet Temp (F): Min. Max.
Inlet Air Flow Rate (ACFM):	Moisture Content: Inlet_____ % Outlet _____%	
Throat Velocity (Ft/Sec):	Throat Type: (Fixed) ( ) Variable	
Emission Stream Mean Particulate Diameter (Microns):		
Type of Scrubber: ( ) Venturi ( ) Impingement ( ) Packed Tower ( ) Gravity Tower ( ) Mist Eliminator ( ) Orifice Type ( ) Cyclonic ( ) Other (Describe)_____		
Type of Packing Used If Any:		
Additive Liquid Scrubbing Medium:	% Recirculated	
Total Liquid Injection Rate (Gal/Min): Min_____ Max_____	Flow Rate Gauge Installed? (Y/N)	
Make Up Rate (Gal/Min):	For Additive (Gal/Min):	
Other (Describe): Control Device ID:	Pressure Drop (IN H2O): Min_____ Max_____	Inlet Temp (F): Min_____ Max_____
Inlet Air Flow Rate (ACFM):	Outlet Air Flow Rate (ACFM):	
Inlet Air Flow Velocity (Ft/Sec):	Outlet Air Flow Velocity (Ft/Sec):	
Inlet Moisture Content (%):	Collection Surface Area (Ft2):	
Fuel Used:	Fuel Usage Rate:	
Comments:		

Section 4.0: Control Device Information

Thermal/Catalytic Control Device I.D. No(s). (Group Identical Control Devices)		Pressure Drop (In H2O): Min_____ Max_____	Inlet Temp (F): Min_____ Max_____
If Catalyst Used Type:		Catalyst Space Velocity (1/Hr):	
Inlet Air Flow Rate (ACFM):		Residence Time (Sec):	Combustion Temp (F):
Combustion Chamber Volume (Ft3):		Inlet Moisture Content %:	% Excess Air:
Fuel Used:	Total Maximum Firing Rate (Million BTU/Hr):		
Maximum Annual Fuel Use:		Maximum Hourly Fuel Use:	
Method Used To Increase Mixing:			

Cyclone Control Device ID No(s). (Group Identical Control Devices)		Inlet Temp (F): Min_____ Max_____ Inlet Air Flow Rate (ACFM): Particle Density (Lb./Ft3):	
Settling Chamber	*Cyclone*		*Multicyclone*
Length (Inches):	Inlet Velocity (Ft/Sec):		Press. Drop. Min____ Max____
Width (Inches):	Dimensions (Inches):	*If Water Spray Utilized*	No. of Tubes:
Height (Inches):		Liquid Used:	Diameter of Tubes:
Velocity (Ft/Sec):		Flow Rate (GPM):	Hopper Aspiration System?
No. Trays		Make Up Rate (GPM):	( ) Yes ( ) No
No. Baffles			Louvers? (Y/N):

Adsorber Control Device ID No(s). (Group Identical Control Devices)		Pressure Drop (In H2O) Min_____ Max_____	Inlet Temp (F): Min_____ Max_____
Size of Compartments Length:	Width	Height:	Diameter:
Method of Adsorption: ( ) One Pass Regenerative ( ) One Pass Non-Regenerative ( ) Recirculating ( ) Other-Describe_____			
Type of Adsorption Material:		Amount of Sorbent (Lbs.):	No. of Compartments:
Regenerative Method: ( ) Thermal (Dry Heat) ( ) Chemical ( ) Thermal (Steam) ( ) Other-Describe_____			
Regenerative Schedule: Max. Time for Desorption		Length of Time to Max Saturation:	
How Are Emissions Controlled During Regeneration?			
Volatile Concentrations (PPM): Entering Unit:		Leaving Unit:	
Relative Humidity of Air Stream Entering Unit (%):		Cycle Time:	
Breakthrough Capacity (Lb. Vapor/Lb. Adsorbent):		Breakthrough Alarm?	
Orientation of Beds:			

Comments:

Section 5.0: Facility Potential Emissions with Federally Enforceable Limitations

Facility Name:

Complete the Following Table:

Pollutant	*Potential Emissions with Limitations (Tons/Year)*	*Major Source Threshold (Tons/Year)*

Comments: