



STATE OF MISSOURI
 Department of Natural Resources
 Air Pollution Control Program
 205 Jefferson Street, P.O. Box 176
 Jefferson City, Missouri 65102

Emissions Inventory Questionnaire (EIQ)
FORM 1.0 GENERAL PLANT INFORMATION

Shaded Areas for Office Use Only

Facility Name			FIPS	Plant No.	County No.	Year of Data 2002
Facility Street Address			County Name		Region	Classification
City			ZIP Code	Facility Phone Number		
Facility Mailing Address			Product/Principal Activity			
City			ZIP Code	Number of Employees	Land in Acres	
Facility Contact Person		Title		Where to Send EIQ in Future (Check One)		
				<input type="checkbox"/> Facility Mailing Address <input type="checkbox"/> Parent Co. Mailing Address		
Latitude		Longitude		UTM Coordinates		
Degrees			Zone	Easting (m)	Northing (m)	
Minutes			CSTR Legal Description			
Seconds			(1/4):	(1/4):	Section	Township Range
Parent Company Name			Contact Person		Phone Number	
Mailing Address			City		State	ZIP Code
TOTAL PLANT EMISSIONS FROM FORM 3.0 (TONS PER YEAR)						
PM10	SOx	NOx	VOC	CO	LEAD	HAPs
<p>The undersigned hereby certifies that they have personally examined and are familiar with the information and statements contained herein and further certifies that they believe this information and statements to be true, accurate and complete. The undersigned certifies that knowingly making a false statement or misrepresenting the facts presented in this document is a violation of state law.</p>						
Print Name of Person Completing Form			Title		Check Amount	
Signature			Date		Check Number	
Print Name of Authorized Company Representative			Title		Check Date	
Signature			Date		OFFICE USE ONLY	
					Logged In By	Date Received

Form 2.0L Landfill Worksheet

Facility Name		FIPS County No.	Plant No.	Year of Data
Point No.	AIRS ID-Pt	Source Classification Code (SCC)		
Please fill out Section 1 to determine the New Source Performance Standard (NSPS) Classification. Please fill out Sections 1 & 2 to derive VOC and HAP emission factors for the landfill.				
Section (1)				
Type of Landfill <input type="checkbox"/> New <input type="checkbox"/> Existing <input type="checkbox"/> Closed		Type of Control <input type="checkbox"/> Flare <input type="checkbox"/> Control System to Reduce NMOC by 98% <input type="checkbox"/> Enclosed Combustor <input type="checkbox"/> None		
Is Landfill Accepting Waste? <input type="checkbox"/> Yes <input type="checkbox"/> No		If No, Date of last waste acceptance		
Landfill Design Capacity (Mg or cubic meters)		Design Capacity Units	Age of the Landfill (yrs) t =	
Mass of solid waste in the Landfill (Mg) Throughput =		Nonmethane Organic Compound Emission Rate (Mg/yr)		
Section (2)				
Methane Generation Rate Constant (/yr) k = 0.04 /yr		Methane Generation Potential (m3/Mg) L = 125 m3/Mg		
Time since Landfill Closure (yrs) c =		Avg. Annual Refuse Acceptance Rate (Mg/yr) R =		
Methane Generation Rate (m3/yr) QCH4 =		Total NMOC Conc. in Landfill gas (ppmv as hexane) CNMOC =		
NMOC Emission Rate (m3/yr) QNMOC =		Uncontrolled NMOC Mass Emissions (lbs/yr) MNMOC =		
Uncontrolled NMOC Emissions Reported as HAPs (lbs/yr) HNMOC =				
HAP Emission Factor (lb/SCC unit) = HNMOC/[Throughput]				
HAP Emission Factor =				
VOC Emission Factor (lb/SCC unit)				
VOC Emission Factor =				

FORM 2.0S STACK INFORMATION

Facility Name	FIPS County No.	Plant No.	Year of Data
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***** PLEASE NOTE *****
 Use this form only if a point has more than one stack.
 Provide all the stack information that is readily available.

Point No.	AIRS ID-Pt	Source Classification Code (SCC)	Seg No.	For a non-circular stack: Diameter = $(1.128A)^{1/2}$ (A = Cross Sectional Area in sq. feet)
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Stack No.	AIRS ID-St	Height (Ft)	Diameter (Ft)
Temperature (F)	Velocity (Ft/Min)	Flow Rate (Cu Ft/Min)	List other points sharing this stack.

Stack No.	AIRS ID-St	Height (Ft)	Diameter (Ft)
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Stack No.	AIRS ID-St	Height (Ft)	Diameter (Ft)
Temperature (F)	Velocity (Ft/Min)	Flow Rate (Cu Ft/Min)	List other points sharing this stack.

FORM 2.T HAZARDOUS AIR POLLUTANT WORKSHEET

Facility Name		FIPs County No.	Plant No.	Year of Data
Point No.	AIRS ID-Pt	Source Classification Code (SCC)		Seg No.

Use this form to report any HAP (Hazardous Air Pollutant) which is emitted in any amount greater than the chemical reporting levels per each emission point. The instructions for this form provide a list of the HAP's which are regulated under the Clean Air Act. **THE AMOUNT EMITTED SHOULD BE REPORTED BEFORE CONTROL EQUIPMENT REDUCTIONS ARE APPLIED.** Provide documentation (other worksheets, etc.) if the amount in column 3 does not equal the amount in column 4. The HAP reporting levels per emission point are as follows:
 Category 1 HAP's - sum of 20 pounds per year; All other HAP's - sum of 200 pounds per year.

[1] HAP Chemical	[2] CAS Number	[3] Amount used or handled (lbs/yr)	[4] Uncontrolled amount emitted (lbs/yr)	[5] Uncontrolled emissions reported as VOC or PM10 (lbs/yr)	[6] Uncontrolled emissions reported as HAPs (lbs/yr)	[7] HAP Control Device(s)	[8] Control efficiency (%)	[9] Controlled emissions reported as VOC or PM10 (lbs/yr)	[10] Controlled emissions reported as HAPs (lbs/yr)
HAP Emission Totals = >>				Sum (Lbs/Yr)	Sum (Lbs/Yr)			Sum (Lbs/Yr)	Sum (Lbs/Yr)

11) Uncontrolled HAP Emission Factor =	HAP Emission Factor
Sum of Uncontrolled Emissions Reported as HAPs (Column 6 Total)/ Annual Throughput (Form 2.0)	

Enter the HAP emission factor for all HAP chemicals that are NOT reported as VOCs or PM10 from Block 11 above as the HAP Emission Factor on Form 2.0, Emission Point Information for the associated emission point .

FORM 2.0Z OZONE SEASON INFORMATION

("EMISSIONS STATEMENT")

Facility Name		FIPS County No.	Plant No.	Year of Data	
OPERATING RATE/SCHEDULE (DURING PEAK OZONE SEASON ONLY)					
Point No.	AIRS ID-Pt	Source Classification Code (SCC)	Seg No.	Daily Throughput	Units
Days/Week	Weeks Of Operation	Start Time On Typical Day		End Time On Typical Day	
EMISSIONS CALCULATIONS					
Air Pollutant	Emission Factor	Control Efficiency (%)	Actual Emissions (lbs/day)		
VOC					
NOx					
CO					
OPERATING RATE/SCHEDULE (DURING PEAK OZONE SEASON ONLY)					
Point No.	AIRS ID-Pt	Source Classification Code (SCC)	Seg No.	Daily Throughput	Units
Days/Week	Weeks Of Operation	Start Time On Typical Day		End Time On Typical Day	
EMISSIONS CALCULATIONS					
Air Pollutant	Emission Factor	Control Efficiency (%)	Actual Emissions (lbs/day)		
VOC					
NOx					
CO					
OPERATING RATE/SCHEDULE (DURING PEAK OZONE SEASON ONLY)					
Point No.	AIRS ID-Pt	Source Classification Code (SCC)	Seg No.	Daily Throughput	Units
Days/Week	Weeks Of Operation	Start Time On Typical Day		End Time On Typical Day	
EMISSIONS CALCULATIONS					
Air Pollutant	Emission Factor	Control Efficiency (%)	Actual Emissions (lbs/day)		
VOC					
NOx					
CO					

FORM 2.1 FUEL COMBUSTION WORKSHEET

Facility Name	FIPS County No.	Plant No.	Year of Data
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Point No.	AIRS ID-Pt	[1] COMBUSTION EQUIPMENT INFORMATION			
SCC	Seg No.	Equipment Description	Year Put in Service	Coal Firing Code No.	Maximum Design Rate (Million BTU/Hr)
Coal Firing Method Code No. 1. Tangential 2. Opposed 3. Front 4. Dry/Wet Bottom 5. Other (Specify Below) <hr style="width: 100%;"/>					
		Sum of Total Maximum Hourly Design Rates			

Combustion Equipment Use (Check One)

Electric Power Generation
 Industrial Use
 Commercial/Institutional
 Space Heating
 Other (Specify)

Combustion Equipment Category - Coal Use Only (Check One)

Pulverized Coal
 Pulverized Coal Dry Bottom
 Pulverized Coal Wet Bottom
 Cyclone
 Fluidized Bed
 Spreader Stoker
 Overfeed Stoker
 Underfeed Stoker
 Hand Fired
 Other (Specify)

[2] FUEL INFORMATION

Fuel Type (Check One Only)

Oil <input type="checkbox"/> Distillate (Fuel Oil 1-4) <input type="checkbox"/> Residual (Fuel Oil 5-6) <input type="checkbox"/> Waste Oil	Gas <input type="checkbox"/> Natural Gas <input type="checkbox"/> LPG/Propane	Coal <input type="checkbox"/> Anthracite <input type="checkbox"/> Bituminous <input type="checkbox"/> Lignite	Other <input type="checkbox"/> Refuse (Use Form 2.2) <input type="checkbox"/> Trade Wastes (Use Form 2.2) <input type="checkbox"/> Other (Specify)
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(USE SEPARATE PAGE FOR EACH FUEL TYPE)

Fuel Identifier	Annual Throughput	Units	% Sulfur by Wt as Received *	% Ash by Wt as Received *	Heat Content (BTU/Fuel Unit)
Fuel Totals and Weighted Averages					

* Attach a copy of the current supplier statement verifying percentage of sulfur and ash contents of the fuel.

[3] CALCULATION OF MAXIMUM HOURLY DESIGN RATE

Convert the Heat Content units from BTU per Fuel Unit to Million of BTU per Fuel Unit by dividing the BTU figure by 1,000,000.

TOTAL MAXIMUM HOURLY DESIGN RATE =
 {Maximum Design Rate in Million BTU/Hr} / {Heat Content in Million BTU/Fuel Unit}

Total Maximum Hourly Design Rate

Enter the total ANNUAL THROUGHPUT and total MAXIMUM HOURLY DESIGN RATE in Block 4 of Form 2.0, Emission Point Information for this fuel type. Enter the weighted average for the percent ASH/SULFUR in the PM10/SOx box in Block 8 of Form 2.0.

FORM 2.3 VOC PROCESS MASS-BALANCE WORKSHEET

Facility Name		FIPS County No.	Plant No.	Year of Data		
Point No.		AIRS ID-Pt	Source Classification Code (SCC)		Seg No.	
[1] TOTAL ANNUAL THROUGHPUT AND TOTAL POUNDS OF VOC						
Application Method	Material Type	A	B	C	D	E
		Annual Throughput (SCC Units/Yr)	% by Wt of VOC in Material	Density (Lbs/Gal)	Lbs of VOC per Unit	VOC (Lbs/Yr)
Enter the TOTAL ANNUAL THROUGHPUT amount calculated to the right, in Block 4 Annual Throughput on Form 2.0.		TOTAL ANNUAL THROUGHPUT (SCC Units)	If A is in gallons, then $B \times C = D$ If A is in tons, then $B \times 2000 = D$ $A \times D = E$		TOTAL VOC (Lbs/yr)	
[2] CALCULATION OF VOC RECOVERED						
LBS OF VOC RECOVERED = {Material Shipped as Hazardous Waste} x {% VOC Content of Waste}						
Material Shipped as Hazardous Waste		% VOC Content of Waste		Lbs of VOC Recovered		
Documentation must be supplied to support the amount of material shipped and the % VOC Content.						
[3] CALCULATION OF VOC EMITTED PRIOR TO CONTROL						
LBS OF VOC EMITTED PRIOR TO CONTROL EQUIPMENT = {Total Lbs of VOC} - {Lbs of VOC Recovered}						
Lbs of VOC Emitted Prior to Control						
[4] CALCULATION OF EMISSION FACTOR						
EMISSION FACTOR = {Lbs of VOC Emitted Prior to Control Equipment} / {Total Annual Throughput}						
Emission Factor in Lbs/Unit						

Enter the EMISSION FACTOR in VOC Box of Block 7 on Form 2.0, Emission Point Information.

FORM 2.4 PETROLEUM LIQUID LOADING WORKSHEET

******* NOTE *******

This form should be used to calculate the emissions from loading organic liquids into tank trucks, rail tank cars and barges. Form 2.5 should be used to calculate the Load In-Load Out emissions from storage tanks.

Facility Name	FIPS County No.	Plant No.	Year of Data
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[1] LOADING INFORMATION

Point No.	AIRS ID-Pt	Source Classification Code (SCC)	Seg No.
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Annual Throughput of Liquid (1,000 Gallons)	Control Device Type	Control Efficiency (%)
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Type of Loading

Splash Loading

Submerged Loading

Bottom Loading

Other, Please Specify Below

[2] CHEMICAL INFORMATION

Bulk Liquid Type	Molecular Wt of Material Loaded (Lb/Lb-Mole)
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True Vapor Pressure of Bulk Liquid (Psia)	Saturation Factor
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Temperature of Liquid (Deg R) = Degrees Fahrenheit + 460 Degrees Fahrenheit

[3] LOADING LOSS EMISSION FACTOR CALCULATION

LOADING LOSS EMISSION FACTOR =

$$12.46 \times \{\text{Molecular Wt}\} \times \{\text{True Vapor Pressure}\} \times \{\text{Saturation}\} / \{\text{Temperature (Deg R)}\}$$

Loading Loss Emission Factor	Units Lbs per 1000 Gallons
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Enter the Control Efficiency (%) from Section 1 in Block 3 of Form 2.0. Enter the Annual Throughput of Liquid from Section 1, expressed in thousands of gallons, in Block 4 on Form 2.0. Enter the Loading Loss Emission Factor (Block 3) in the VOC Box of Block 7 on Form 2.0.

REMEMBER when calculating emissions, use a SEPARATE Form 2.0, Emission Point Information, for each type of liquid loaded in the tank during the year. Use the same Point Number but with the SCC that corresponds to the different liquid type.