



COOK COUNTY
DEPARTMENT OF ENVIRONMENTAL CONTROL
69 W WASHINGTON, SUITE 1900
CHICAGO, IL 60602

<p>* DATA AND INFORMATION</p> <p>AIR POLLUTION CONTROL EQUIPMENT</p>	
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* THIS INFORMATION FORM IS TO BE COMPLETED FOR AN EMISSION SOURCE OTHER THAN A FUEL COMBUSTION EMISSION SOURCE OR AN INCINERATOR. A FUEL COMBUSTION EMISSION SOURCE IS A FURNACE, BOILER, OR SIMILAR EQUIPMENT USED PRIMARILY FOR PRODUCING HEAT OR POWER BY INDIRECT HEAT TRANSFER. AN INCINERATOR IS AN APPARATUS IN WHICH REFUSE IS BURNED.

1. NAME OF OWNER:	2. NAME OF CORPORATE DIVISION OR PLANT (IF DIFFERENT FROM OWNER):
3. STREET ADDRESS OF CONTROL EQUIPMENT:	4. CITY OF CONTROL EQUIPMENT:
5. NAME OF CONTROL EQUIPMENT OR CONTROL SYSTEM:	

INSTRUCTIONS
<ol style="list-style-type: none"> 1. COMPLETE THE ABOVE IDENTIFICATION SECTION. 2. COMPLETE THE APPROPRIATE SECTION FOR THE UNIT OF CONTROL EQUIPMENT, OR THE APPROPRIATE SECTIONS FOR THE CONTROL SYSTEM. BE CERTAIN THAT THE ARRANGEMENT OF VARIOUS UNITS IN A CONTROL SYSTEM IS MADE CLEAR IN THE PROCESS FLOW DIAGRAM. 3. COMPLETE PAGE 6 OF THIS FORM, EMISSION INFORMATION AND EXHAUST POINT INFORMATION. 4. EFFICIENCY VALUES SHOULD BE SUPPORTED WITH A DETAILED EXPLANATION OF THE METHOD OF CALCULATION, THE MANNER OF ESTIMATION, OR THE SOURCE OF INFORMATION. REFERENCE TO THIS FORM ANY RELEVANT INFORMATION OR EXPLANATION INCLUDED IN THIS PERMIT APPLICATION. 5. EFFICIENCY VALUES AND CERTAIN OTHER ITEMS OF INFORMATION ARE TO BE GIVEN FOR AVERAGE AND MAXIMUM OPERATION OR THE SOURCE EQUIPMENT. FOR EXAMPLE, "MAXIMUM EFFICIENCY" IS THE EFFICIENCY OF THE CONTROL EQUIPMENT WHEN THE SOURCE IS AT MAXIMUM OPERATION, AND "AVERAGE FLOW RATE" IS THE FLOW RATE INTO HE CONTROL EQUIPMENT WHEN THE SOURCE IS AT AVERAGE OPERATION. 6. FOR GENERAL INFORMATION REFER TO "GENERAL INSTRUCTIONS FOR PERMIT APPLICATIONS," APC-201.

DEFINITIONS
<p>AVERAGE - THE VALUE THAT <u>SUMMARIZES OR REPRESENTS</u> THE <u>GENERAL CONDITION</u> OF THE <u>EMISSION SOURCE</u>, OR THE GENERAL STATE OF PRODUCTION OF THE EMISSION SOURCE. SPECIFICALLY:</p> <p>AVERAGE OPERATION - OPERATION TYPICAL OF THE PRECEDING TWELVE MONTH PERIOD, AS REPRESENTED BY AVERAGE OPERATING TIME AND AVERAGE RATES.</p> <p>MAXIMUM - THE GREATEST VALUE <u>ATTAINABLE OR ATTAINED</u> FOR THE <u>EMISSION SOURCE</u>, OR THE PERIOD OF GREATEST OR UTMOST PRODUCTION OF THE EMISSION SOURCE. SPECIFICALLY:</p> <p>MAXIMUM OPERATION - GREATEST EXPECTED OPERATION, AS REPRESENTED BY MAXIMUM OPERATING TIME AND MAXIMUM RATES.</p>

ADSORPTION UNIT

1. FLOW DIAGRAM DESIGNATION(S) OF ADSORPTION UNIT:	
2. MANUFACTURER:	3. MODEL NAME AND NUMBER:
4. ADSORBENT: <input type="checkbox"/> ACTIVATED CHARCOAL: TYPE _____ <input type="checkbox"/> OTHER: SPECIFY _____	
5. ADSORBATE(S):	
6. NUMBER OF BEDS PER UNIT:	7. WEIGHT OF ADSORBENT PER BED: LB
8. DIMENSIONS OF BED: THICKNESS _____ IN, SURFACE AREA _____ SQUARE IN	
9. INLET GAS TEMPERATURE: °F	9. PRESSURE DROP ACROSS UNIT: INCH H₂O GAUGE
11. TYPE OF REGENERATION: <input type="checkbox"/> REPLACEMENT <input type="checkbox"/> STEAM <input type="checkbox"/> OTHER: SPECIFY _____	
12. METHOD OF REGENERATION: <input type="checkbox"/> ALTERNATE USE OF _____ ENTIRE UNITS <input type="checkbox"/> ALTERNATE USE OF _____ BEDS IN A SINGLE UNIT SOURCE SHUT DOWN OTHER: DESCRIBE	
AVERAGE OPERATION OF SOURCE	MAXIMUM OPERATION OF SOURCE
13. TIME ON LINE BEFORE REGENERATION: MIN/BED	15. TIME ON LINE BEFORE REGENERATION: MIN/BED
14. EFFICIENCY OF ABSORBER (SEE INSTRUCTION 4): %	16. EFFICIENCY OF ABSORBER (SEE INSTRUCTION 4): %

AFTERBURNER

1. FLOW DIAGRAM DESIGNATION(S) OF AFTERBURNER:	
2. MANUFACTURER:	3. MODEL NAME AND NUMBER:
4. COMBUSTION CHAMBER DIMENSIONS: LENGTH _____ IN, CROSS-SECTIONAL AREA _____ SQUARE IN	
5. INLET GAS TEMPERATURE: °F	7. FUEL: <input type="checkbox"/> GAS <input type="checkbox"/> OIL: SULFUR _____ WT%
6. OPERATING TEMPERATURE OF COMBUSTION CHAMBER: °F	8. BURNERS PER AFTERBURNER: _____ @ _____ BTU/HR EACH
9. CATALYST USED: <input type="checkbox"/> NO <input type="checkbox"/> YES: DESCRIBE CATALYST _____	
10. HEAT EXCHANGER USED: <input type="checkbox"/> NO <input type="checkbox"/> YES: DESCRIBE HEAT EXCHANGER _____	
AVERAGE OPERATION OF SOURCE	MAXIMUM OPERATION OF SOURCE
11. GAS FLOW RATE: SCFM	13. GAS FLOW RATE: SCFM
12. EFFICIENCY OF AFTERBURNER (SEE INSTRUCTION 4): %	14. EFFICIENCY OF AFTERBURNER (SEE INSTRUCTION 4): %

CYCLONE

1. FLOW DIAGRAM DESIGNATION(S) OF CYCLONE:

2. MANUFACTURER:

3. MODEL:

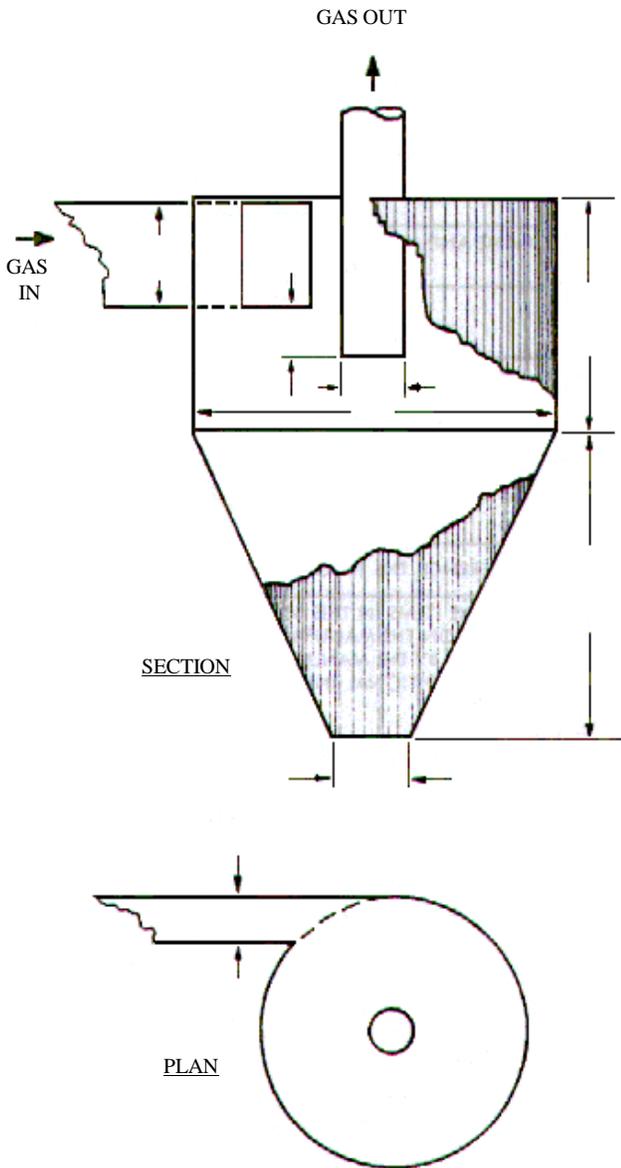
4. TYPE OF CYCLONE:

SIMPLE MULTIPLE

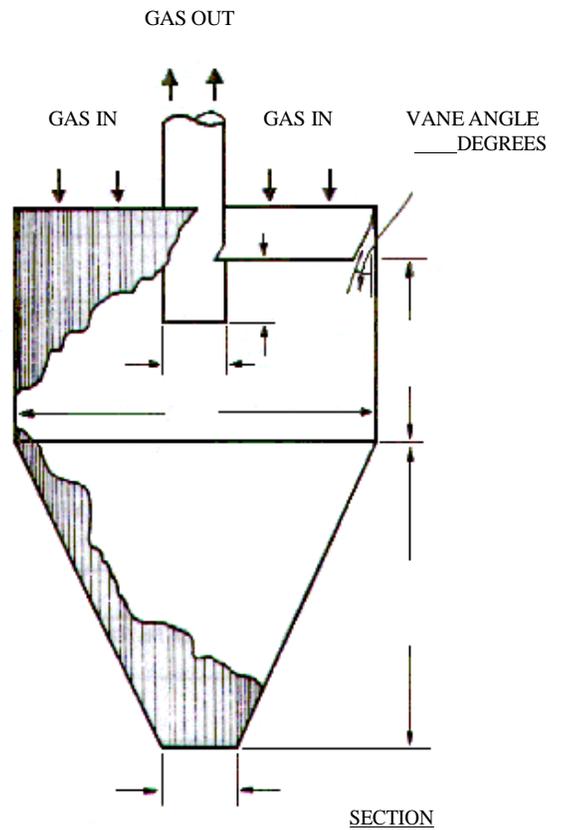
5. NUMBER OF CYCLONES IN EACH MULTIPLE CYCLONE:

6. DIMENSION THE APPROPRIATE SKETCH (IN INCHES) OR PROVIDE A DRAWING WITH EQUIVALENT INFORMATION:

TANGENTIAL INLET CYCLONE



AXIAL INLET CYCLONE
(INDIVIDUAL CYCLONE OF MULTIPLE CYCLONE)



NOT TO SCALE

AVERAGE OPERATION OF SOURCE		MAXIMUM OPERATION OF SOURCE	
7. GAS FLOW RATE:	SCFM	9. GAS FLOW RATE:	SCFM
8. EFFICIENCY OF CYCLONE (SEE INSTRUCTION 4):	%	10. EFFICIENCY OF CYCLONE (SEE INSTRUCTION 4):	%

CONDENSER			
1. FLOW DIAGRAM DESIGNATION(S) OF CONDENSER:			
2. MANUFACTURER:		3. MODEL NAME AND NUMBER:	4. HEAT EXCHANGE AREA: FT²
AVERAGE OPERATION OF SOURCE		MAXIMUM OPERATION OF SOURCE	
5. COOLANT FLOW RATE PER CONDENSER: WATER _____ GPM AIR _____ SCFM OTHER: TYPE _____, FLOW RATE _____		10. COOLANT FLOW RATE PER CONDENSER: WATER _____ GPM AIR _____ SCFM OTHER: TYPE _____, FLOW RATE _____	
6. GAS FLOW RATE: SCFM		11. GAS FLOW RATE: SCFM	
7. COOLANT TEMPERATURE: INLET _____ °F OUTLET _____ °F	8. GAS TEMPERATURE: INLET _____ °F OUTLET _____ °F	12. COOLANT TEMPERATURE: INLET _____ °F OUTLET _____ °F	13. GAS TEMPERATURE: INLET _____ °F OUTLET _____ °F
9. EFFICIENCY OF CONDENSER (SEE INSTRUCTION 4): %		14. EFFICIENCY OF CONDENSER (SEE INSTRUCTION 4): %	

*ELECTRICAL PRECIPITATOR			
1. FLOW DIAGRAM DESIGNATION(S) OF ELECTRICAL PRECIPITATOR:			
2. MANUFACTURER:		3. MODEL NAME AND NUMBER:	
4. COLLECTING ELECTRODE AREA PER CONTROL DEVICE:			FT ²
AVERAGE OPERATION OF SOURCE		MAXIMUM OPERATION OF SOURCE	
5. GAS FLOW RATE: SCFM		7. GAS FLOW RATE: SCFM	
6. EFFICIENCY OF ELECTRICAL PRECIPITATOR(SEE INSTRUCTION 4): %		8. EFFICIENCY OF ELECTRICAL PRECIPITATOR(SEE INSTRUCTION 4): %	
SUBMIT THE MANUFACTURER'S SPECIFICATIONS FOR THE ELECTRICAL PRECIPITATOR. REFERENCE THE INFORMATION TO THIS FORM.			

*ELECTRICAL PRECIPITATORS VARY GREATLY IN THEIR DESIGN AND IN THEIR COMPLEXITY. THE ITEMS IN THIS SECTION PROVIDE A MINIMUM AMOUNT OF INFORMATION. THE APPLICANT MUST, HOWEVER, SUBMIT WITH THIS APPLICATION THE MANUFACTURER'S SPECIFICATIONS, INCLUDING ANY DRAWINGS, TECHNICAL DOCUMENTS, ETC. IF THE INFORMATION PROVIDED BY THE MANUFACTURER'S SPECIFICATIONS IS INSUFFICIENT FOR FULL AND ACCURATE ANALYSIS, THE AGENCY WILL REQUEST SPECIFIC ADDITIONAL INFORMATION.

FILTER UNIT			
1. FLOW DIAGRAM DESIGNATION(S) OF FILTER UNIT:			
2. MANUFACTURER:		3. MODEL NAME AND NUMBER:	
4. FILTERING MATERIAL:		5. FILTERING AREA: FT²	
6. CLEANING METHOD: <input type="checkbox"/> SHAKER <input type="checkbox"/> REVERSE AIR <input type="checkbox"/> PULSE AIR <input type="checkbox"/> PULSE JET <input type="checkbox"/> OTHER: SPECIFY _____			
7. GAS COOLING METHOD: <input type="checkbox"/> DUCT WORK: LENGTH _____ FT., DIAM _____ IN. <input type="checkbox"/> BLEED-IN AIR <input type="checkbox"/> WATER SPRAY <input type="checkbox"/> OTHER: SPECIFY _____			
AVERAGE OPERATION OF SOURCE		MAXIMUM OPERATION OF SOURCE	
8. GAS FLOW RATE (FROM SOURCE): SCFM		12. GAS FLOW RATE (FROM SOURCE): SCFM	
9. GAS COOLING FLOW RATE: BLEED-IN AIR _____ SCFM, WATER SPRAY _____ GPM		13. GAS COOLING FLOW RATE: BLEED-IN AIR _____ SCFM, WATER SPRAY _____ GPM	
10. INLET GAS CONDITION: TEMPERATURE _____ °F DEWPOINT _____ °F		14. INLET GAS CONDITION: TEMPERATURE _____ °F DEWPOINT _____ °F	
11. EFFICIENCY OF FILTER UNIT (SEE INSTRUCTION 4): %		15. EFFICIENCY OF FILTER UNIT (SEE INSTRUCTION 4): %	

SCRUBBER

1. FLOW DIAGRAM DESIGNATION(S) OF SCRUBBER:	
2. MANUFACTURER:	3. MODEL NAME AND NUMBER:
4. TYPE OF SCRUBBER: <input type="checkbox"/> HIGH ENERGY: GAS STEAM PRESSURE DROP _____ INCH H ₂ O <input type="checkbox"/> PACKED: PACKING TYPE _____, PACKING SIZE _____, PACKING HEIGHT _____ IN. <input type="checkbox"/> SPRAY: NUMBER OF NOZZLES _____, NOZZLE PRESSURE _____ PSIG <input type="checkbox"/> OTHER: SPECIFY _____ ATTACH DESCRIPTION AND SKETCH WITH DIMENSIONS	
5. TYPE OF FLOW: <input type="checkbox"/> COCURRENT <input type="checkbox"/> COUNTERCURRENT <input type="checkbox"/> CROSSFLOW	
6. SCRUBBER GEOMETRY: LENGTH IN DIRECTION OF GAS FLOW _____ IN., CROSS-SECTIONAL AREA _____ SQUARE IN.	
7. CHEMICAL COMPOSITION OF SCRUBBANT:	
AVERAGE OPERATION OF SOURCE	
8. SCRUBBANT FLOW RATE: GPM	12. SCRUBBANT FLOW RATE: GPM
9. GAS FLOW RATE: SCFM	13. GAS FLOW RATE: SCFM
10. INLET GAS TEMPERATURE: °F	14. INLET GAS TEMPERATURE: °F
11. EFFICIENCY OF SCRUBBER (SEE INSTRUCTION 4): _____% PARTICULATE _____% GASEOUS	15. EFFICIENCY OF SCRUBBER (SEE INSTRUCTION 4): _____% PARTICULATE _____% GASEOUS

OTHER TYPE OF CONTROL EQUIPMENT

1. FLOW DIAGRAM DESIGNATION(S) OF "OTHER TYPE" OF CONTROL EQUIPMENT:		
2. GENERIC NAME OF "OTHER" EQUIPMENT:	3. MANUFACTURER:	4. MODEL NAME AND NUMBER:
5. DESCRIPTION AND SKETCH, WITH DIMENSIONS AND FLOW RATES, OF "OTHER" EQUIPMENT:		
AVERAGE OPERATION OF SOURCE		MAXIMUM OPERATION OF SOURCE
6. FLOW RATES: _____ GPM _____ SCFM	8. FLOW RATES: _____ GPM _____ SCFM	
7. EFFICIENCY OF "OTHER" EQUIPMENT (SEE INSTRUCTION 4): _____ %	9. EFFICIENCY OF "OTHER" EQUIPMENT (SEE INSTRUCTION 4): _____ %	

EMISSION INFORMATION

1. NUMBER OF IDENTICAL CONTROL UNITS OR CONTROL SYSTEMS (DESCRIBE AS REQUIRED):

AVERAGE OPERATION

CONTAMINANT	CONCENTRATION OR EMISSION RATE PER IDENTICAL CONTROL UNITS OR CONTROL SYSTEM		METHOD USED TO DETERMINE CONCENTRATION OR EMISSION RATE
PARTICULATE MATTER	2a. GR/SCF	b. LB/HR	c.
CARBON MONOXIDE	3a. PPM (VOL)	b. LB/HR	c.
NITROGEN OXIDES	4a. PPM (VOL)	b. LB/HR	c.
ORGANIC MATERIAL	5a. PPM (VOL)	b. LB/HR	c.
SULFUR DIOXIDE	6a. PPM (VOL)	b. LB/HR	c.
**OTHER (SPECIFY)	7a. PPM (VOL)	b. LB/HR	c.

MAXIMUM OPERATION

CONTAMINANT	CONCENTRATION OR EMISSION RATE PER IDENTICAL CONTROL UNITS OR CONTROL SYSTEM		METHOD USED TO DETERMINE CONCENTRATION OR EMISSION RATE
PARTICULATE MATTER	8a. GR/SCF	b. LB/HR	c.
CARBON MONOXIDE	9a. PPM (VOL)	b. LB/HR	c.
NITROGEN OXIDES	10a. PPM (VOL)	b. LB/HR	c.
ORGANIC MATERIAL	11a. PPM (VOL)	b. LB/HR	c.
SULFUR DIOXIDE	12a. PPM (VOL)	b. LB/HR	c.
**OTHER (SPECIFY)	13a. PPM (VOL)	b. LB/HR	c.

***"OTHER" CONTAMINANT SHOULD BE USED FOR AN AIR CONTAMINANT NOT SPECIFICALLY NAMED ABOVE. POSSIBLE OTHER CONTAMINANTS ARE ASBESTOS, BERYLLIUM, MERCURY, VINYL CHLORIDE, LEAD, ETC.

EXHAUST POINT INFORMATION

1. FLOW DIAGRAM DESIGNATION(S) OF EXHAUST POINT:

2. DESCRIPTION OF EXHAUST POINT (LOCATION IN RELATION TO BUILDINGS, DIRECTION, HOODING, ETC.):

3. EXIT HEIGHT ABOVE GRADE:

4. EXIT DIAMETER:

5. GREATEST HEIGHT OF NEARBY BUILDINGS:

6. EXIT DISTANCE FROM NEAREST PLANT BOUNDARY:

AVERAGE OPERATION

MAXIMUM OPERATION

7. EXIT GAS TEMPERATURE:

°F

9. EXIT GAS TEMPERATURE:

°F

8. GAS FLOW RATE THROUGH EACH EXIT:

ACFM

10. GAS FLOW RATE THROUGH EACH EXIT:

ACFM