



INSTRUCTIONS FOR FORM 235-CAAPP

AGGREGATE CRUSHING PLANT DATA AND INFORMATION

PURPOSE OF 235-CAAPP

This form provides data on a single mode of operation of any aggregate crushing plant. Aggregate crushing plants are used to process sand, gravel and rock for specific markets. Emission units included in the aggregate crushing plant category are washers, screens, and classifiers to segregate particle sizes; crushers to reduce oversized material; and storage and loading facilities. A 220-CAAPP form or any other applicable data and information form must be completed for additional emissions units, not listed above. A 260-CAAPP form must accompany this application for each air pollution control device utilized at this plant, if any (except water spray bars).

Help for specific items: (Note: items which are self explanatory are not addressed).

SOURCE INFORMATION

Identify the source at which the process emission unit is located. This information should be identical to information on the 200-CAAPP form.

- 1) **SOURCE NAME:** The company name, or specific plant name if different from company name, must be provided.
- 2) **DATE FORM PREPARED:** This should be the date that the entire initial application is submitted to the Agency. If this form is being submitted separate from the initial application, such as additional information, then enter the actual date the form is completed.
- 3) **SOURCE ID NO.:** This is the ID number assigned to the source by the Agency. This number can be found at the top of the first page of any state air pollution control permit or at the top of the CAAPP permit (if existing). This number is unique to air pollution and should not be confused with water or land pollution ID numbers.

GENERAL INFORMATION

- 4) **AIR POLLUTION CONTROL EQUIPMENT:** If the aggregate crusher has any air pollution control equipment such as a baghouse or cyclone, it is to be identified. Water spray bars are not considered control equipment in this case. A separate form 260-CAAPP must also be completed for each item of air pollution control equipment. The name and designation of each item of air pollution control equipment must be identical to that stated on the form 260-CAAPP.
- 5) **STARTUP EMISSIONS:** If emissions during startup from the aggregate crusher exceed either the allowable emission limit pursuant to a specific rule, or the allowable limit as established by an existing or proposed permit condition, a 203-CAAPP form must be completed and attached to this form. For example, if the baghouse is

bypassed during startup, the emissions will be uncontrolled and may exceed applicable limits.

6) **RESTRICTION ON OPERATION:** Complete this section if the crushing plant is restricted in operation to specific periods or modes. Examples of operating restrictions are - *only one crusher is operated at a time, fall peak demand, etc.* Be as specific as possible. If the plant is operated only at certain times during the day, month, or year, the operating times must be furnished. These restrictions must be verifiable through recordkeeping and/or monitoring.

OPERATING INFORMATION

The applicant may provide information on typical operating parameters in terms of expected ranges, rather than as single numbers.

9) **MATERIAL MOISTURE CONTENT:** The materials to be crushed, in general, contain a certain amount of inherent moisture. This moisture helps control the particulate emissions during handling and crushing. The amount of inherent moisture in the material at this plant must be given on a percent by weight basis. This moisture content does not include any moisture obtained from spray systems utilized at this plant. If spray systems are used, this should be indicated in item 8.

10) **OPERATING INFORMATION:** The name, model, serial number, crushing rate, hours of operation, and percentage of annual throughput must be furnished for each crusher at the plant. The crushing rate and hours of operation must be given for both maximum and typical levels. The maximum operating level is the upper level of operation at which each crusher was designed to operate or will be limited to operate. This operating level should be determined by taking into consideration any possible increases in production or applicable emission regulations. The typical operating level is the level at which each crusher operates during normal conditions. This operating level should be determined from data from previous years operation, if available, or if not available, the expected level for operation during normal conditions. The percentage of annual throughput for each three month period must be furnished. The total should equal 100 percent. Examples of annual throughput would be:

If the unit is operated mostly during the summer months, the information could be presented as follows:			
Dec-Feb(%): 0	Mar-May(%): 25	Jun-Aug(%): 50	Sep-Nov(%): 25
If the unit is operated equally throughout the year, it would be appear as:			
Dec-Feb(%): 25	Mar-May(%): 25	Jun-Aug(%): 25	Sep-Nov(%): 25

APPLICABLE RULES

Applicable state and federal rules governing emissions for the mode of operation for the unit must be stated. The contaminant, applicable rule, and requirement(s) of the rule must be furnished. When citing rules, the following abbreviations may be used: IAC - 35 Illinois Administration Code and CFR - 40 Code of Federal Regulations.

11) Examples of emission standards and limitations set by rule(s) would be:

<u>REGULATED AIR POLLUTANT</u>	<u>EMISSIONS STANDARD(S)</u>	<u>REQUIREMENT(S)</u>
<i>Opacity</i>	<i>CFR 60.672(c), Subpart 000</i>	<i>Opacity <= 15% from crusher</i>

12) An example of a recordkeeping rule would be:

REGULATED AIR POLLUTANT <i>Particulate Matter</i>	<u>RECORDKEEPING RULE(S)</u> <i>CFR 60.676(d), Subpart 000</i>	<u>REQUIREMENT(S)</u> <i>Scrubber pressure recorded during stack test</i>
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13) An example of a reporting rule would be:

REGULATED AIR POLLUTANT <i>Particulate Matter</i>	<u>REPORTING RULE(S)</u> <i>CFR 60.676(d), Subpart 000</i>	<u>REQUIREMENT(S)</u> <i>Scrubber pressure recorded during stack test</i>
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14) An example of a monitoring rule would be:

REGULATED AIR POLLUTANT <i>Particulate Matter</i>	<u>MONITORING RULE(S)</u> <i>CFR 60.674(a), Subpart 000</i>	<u>REQUIREMENT(S)</u> <i>Continuous monitor of pressure in scrubber</i>
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15) An example of a testing rule would be:

REGULATED AIR POLLUTANT <i>Particulate Matter</i>	<u>TESTING RULE(S)</u> <i>CFR 60.8(a)</i>	<u>REQUIREMENT(S)</u> <i>Compliance with CFR 60.672(a)(1), demonstrated by Method 5</i>
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16) EXEMPTIONS: An example of an exemption from applicable rules would be CFR 60.670(c)(1) which exempts crushing plants from the requirements of Subpart 000 that have capacities of less than 25 tons per hour.

COMPLIANCE INFORMATION

17) COMPLIANCE STATUS: The compliance status of the emission unit with all applicable requirements must be provided. If the unit is not in compliance, a 294-CAAPP form must be completed and submitted.

18) INITIAL COMPLIANCE: If compliance has not previously been demonstrated then provide the method by which compliance will be demonstrated. If compliance was previously demonstrated, then provide the method used. Initial compliance may be demonstrated through a stack test, standard emission factor (AP-42 or AIRS), material balance, or some other acceptable form of engineering calculation or test. Give all necessary information to verify that the chosen method of compliance demonstration is acceptable, including the title of any stack test report, the reference for any emission factor, and any other pertinent information. If a compliance demonstration is, or was, required by an applicable rule, the rule should be identified along with the method(s) by which compliance has been, or will be, demonstrated.

19) ONGOING COMPLIANCE: For example, ongoing compliance may be demonstrated through necessary work practices, periodic maintenance and inspections, raw material records, or emission monitoring. If compliance demonstration is required in applicable rules, the rule should be provided along with the requirement.

TESTING, MONITORING, RECORDKEEPING AND REPORTING

20a) RECORDED PARAMETERS: Examples of recorded parameters and frequency of such records would be as follows:

<u>PARAMETER</u>	<u>UNIT OF MEASUREMENT</u>	<u>METHOD OF MEASUREMENT</u>	<u>FREQUENCY</u>
<i>Distillate fuel oil use</i>	<i>Gallons</i>	<i>Flow meter</i>	<i>Record on monthly basis</i>

20b) RECORD METHODS: The method used to create and maintain records must be described. An example of such description would be as follows:

<u>PARAMETER</u>	<u>METHOD OF RECORDKEEPING</u>	<u>TITLE OF PERSON RESPONSIBLE</u>	<u>TITLE OF CONTACT PERSON</u>
<i>Distillate fuel oil use</i>	<i>continuous recorder</i>	<i>Maintenance Engineer</i>	<i>Plant manager</i>

20d) RECORD AVAILABILITY: All records must be available at the source for inspection by the Agency, and copying or submittal to the Agency upon request.

21 a through c) MONITORS: The identification and description of any compliance monitoring devices or activities must be provided.

22) TESTS: Any stack tests performed on this unit for which the results are used to determine fees, rule applicability and/or compliance must be described here. An example of a stack test description would be as follows:

<u>TEST DATE</u>	<u>TEST METHOD</u>	<u>TESTING COMPANY</u>	<u>OPERATING CONDITIONS</u>	<u>SUMMARY OF RESULTS</u>
<i>4/10/89</i>	<i>USEPA-5</i>	<i>ABC, Inc.</i>	<i>Crusher at full Capacity</i>	<i>Max Part = 0.04 gr/dscm Typ Part = 0.03 gr/dscm</i>

23) REPORTING REQUIREMENTS: A description of all reporting requirements must be provided. An example of a reporting requirement description would be as follows:

<u>REPORTING REQUIREMENTS</u>	<u>TITLE OF REPORT</u>	<u>FREQUENCY</u>
<i>Liquid flow rate of scrubber</i>	<i>scrubber flow rate</i>	<i>Semi-Annually</i>

EMISSION INFORMATION

24) If emissions from this unit are not controlled by a control device, then the ACTUAL EMISSION RATE box should be checked and the ACTUAL EMISSION RATE, ALLOWABLE BY RULE EMISSION RATE, and PERMITTED EMISSION RATE sections completed.

If emissions from this unit are being controlled by a control device, then this specific table need not be completed and the controlled emissions should instead be provided on the similar table in form 260-CAAPP, not on this 220-CAAPP form, except if uncontrolled emissions are needed to determine rule applicability or compliance. If the unit is controlled and uncontrolled emissions are required, then the UNCONTROLLED EMISSION RATE box should be checked and only the UNCONTROLLED EMISSION RATE section completed (the ACTUAL EMISSION RATE, ALLOWABLE BY RULE EMISSION RATE and PERMITTED EMISSION RATE sections must then be provided on form 260-CAAPP).

Emission rates must be provided in tons/yr and in such terms as are necessary to establish compliance consistent with the standard reference test method. If not already required, the Agency also requests that the emissions be provided in terms of lbs/hr. If the emission rate as determined by the applicant is in units other than pounds or tons, the emissions should be converted to these units and provided and the original units should be stated in the "Other Terms" block. Emissions in units of tons/year may be calculated by multiplying the emissions in lbs/hr by the hours of operation per year. Emissions in units of lbs/hr are requested, however, they are only required to be provided if emissions are normally calculated this way or needed to determine rule applicability or compliance.

Maximum emissions are the emissions that theoretically could be emitted by the unit if it were operated at the maximum design capacity or maximum production capacity, or the maximum rate at which the source agrees to accept as a limit. The maximum tons/yr emission rate should be calculated using the maximum hours of operation per year.

Typical emissions are the emissions that would be emitted by the unit when it is operated at normal working capacity. The typical tons/yr emission rate should be calculated using the typical hours of operation per year. Typical emissions need only be supplied if different than maximum.

DM - Determination Method - The corresponding number 1-5 of the method used to estimate emissions must be provided, the most accurate means of estimating emissions should be used;

- 1) Stack Test,
- 2) Material Balance,
- 3) Standard Emission Factor (Standard emission factors are found in the following publications from the Office of Air Quality Planning and Standards, USEPA, Research Triangle Park, North Carolina 27717:
 - Compilation of Air Pollution Emission Factors, Volume 1, Stationary Point and Other Sources, No. **AP-42**.
 - **AIRS** Facility Subsystem, Source Classification Codes and Emission Factor Listing for Criteria Air Pollutants. EPA Document Number EPA 450/4-90-003),
- 4) Engineering Estimate, or
- 5) Special Emission Factor

ACTUAL EMISSION RATE: The actual emission rate for purposes of the 235-CAAPP emission table are those emissions which are generated by an emission unit without a control device. This box should be checked and this section completed on the 235-CAAPP form only if this unit does not duct emissions to a control device.

UNCONTROLLED EMISSION RATE: Uncontrolled emissions are the emissions that would result if no add-on pollution control equipment were used on this unit. This box should be checked and this section completed if emissions from this unit are being ducted to a control device and uncontrolled emissions are required to determine rule applicability or compliance.

ALLOWABLE BY RULE EMISSION RATE: This section must be completed on the 235-CAAPP form if the emissions from this unit are not being ducted to a control device. The maximum allowable emission rate is calculated using the rated capacity of the emission unit and the most stringent of the following:

- a) Any applicable standards as adopted by the USEPA and made applicable in Illinois pursuant to the Environmental Protection Act;
- b) The applicable emission standards or limitations contained in 35 Ill. Adm. Code, Subtitle B, Chapter I.

The allowable emission rate, applicable rule, and ton per year rate must be provided for each regulated air pollutant emitted by the unit. The units for the emission rate must be provided as stated in the applicable rule.

PERMITTED EMISSION RATE: This section must be completed on the 235-CAAPP form if the emissions from this unit are not being ducted to a control device. These emissions are the maximum emission rates which the applicant agrees to accept as limits in the permit. These rates must be greater than or equal to the maximum actual emission rate and less than or equal to the allowable by rule emission rate. If the Agency finds these limits to be in compliance, the CAAPP permit will contain conditions requiring that these limits not be exceeded. The annual limit will also be used in fee calculations. In general, the difference in the two limits in this section will be the time period over which the limits extend. The short term limit is to be provided on the left and the annual limit on the right. For the limits to be enforceable, and therefore acceptable, the tons/yr limit must be accompanied by a shorter term limit such as lbs/hr. These short term limits should extend over as short as time period as possible and should not exceed one month. The short term limit should be at least as stringent as the allowable by rule emission rate. Note that these may not be the only limits placed on the permit to ensure that the permitted emission rates are not exceeded.

This section need not be completed if permittee will be paying the maximum fee amount and permitted emissions are not needed for any other purpose.

THE CALCULATIONS, TO THE EXTENT THAT THEY ARE AIR EMISSIONS RELATED, ON WHICH EMISSIONS WERE DETERMINED MUST BE ATTACHED AND LABELED AS EXHIBIT 235-5.

HAZARDOUS AIR POLLUTANT EMISSION INFORMATION

25) HAZARDOUS AIR POLLUTANT EMISSION INFORMATION: This table must be completed on this 235-CAAPP form if emissions are not ducted to a control device, otherwise this table must be completed as provided in the 260-CAAPP form. Complete the ACTUAL EMISSION RATE and ALLOWABLE BY RULE sections per instructions given in the emission information section above. This table must summarize the emissions of Hazardous Air Pollutants (HAPs) emitted by this emission unit. The Clean Air Act list HAPs in section 112. If there are no emissions of HAPs, then this Table should be left blank. Additionally, insignificant emissions of HAPs, as set forth in 35 Ill. Adm. Code Part 201, Subpart F, need not be included on this table. An example of an entry on this table would be:

HAP EMITTED	CAS NUMBER	ACTUAL EMISSION			RATE OR STANDARD	APPLICABLE RULE
		(LBS/HR)	(TON/YR)	METHOD		
Benzene	71432	Max	10.0	1.2	98% by wt control device	CFR 61
		Typ	8.0	0.8		61.302(b)
					leak-tight trucks	61.302(d)

THE CALCULATIONS, TO THE EXTENT THAT THEY ARE AIR EMISSIONS RELATED, ON WHICH EMISSIONS WERE DETERMINED MUST BE ATTACHED AND LABELED AS EXHIBIT 235-6.

CRUSHER EXHAUST POINT INFORMATION:

The Agency requests that the information in this section be provided with the submittal of this application, however, this information is only required to be submitted as part of this application if it is needed to determine or regulate emissions, needed to determine

rule applicability, or related to stack height limitations developed pursuant to section 123 of the Clean Air Act.

Exhaust point data should be provided for the maximum and typical operating rates of the associated emission unit(s). An applicant may note the basis of data provided for exit gas flow rate, temperature and other parameters. For example, stack test values, engineering estimates or calculations, e.g., exit gas temperature - 350 deg. F max, 300 deg. F typical, estimated values.

26) FLOW DIAGRAM DESIGNATION: The flow diagram designation must be stated, along with the label applied to the applicable flow diagram.

30) GEP HEIGHT: Good Engineering Practice (GEP) Stack Height, as defined in 40 CFR 51.100(ii), means the greater of:

- i) 65 meters, measured from the ground-level elevation at the base of the stack
- ii) For stacks in existence on January 12, 1979, and for which the owner or operator had obtained all applicable permits or approvals,
 $H_g = 2.5 \times H$
- iii) For all other stacks,
 $H_g = H + 1.5L$, where
 H_g = good engineering practice stack height, measured from the ground-level elevation at the base of the stack,
 H = height of nearby structure(s) measured from the ground-level elevation at the base of the stack,
 L = lesser dimension, height or projected width, of nearby structure(s).

31) DIAMETER OF EXHAUST POINT: If exit point of the exhaust is non circular, the diameter must be determined by the following formula:

$$\text{Diameter} = 1.128 \times (\text{Area of Exit})^{0.5}$$

34) DIRECTION OF EXHAUST: The direction that the exhaust point directs the exhaust stream must be described here. For example, if the exhaust point is on the side of the building with a cover pointing the exhaust stream towards the ground, the direction would be stated as downward.

NOTE: The applicant need only provide either item 48 or 49 on the application form, not both. Given one, the Agency will calculate the other.

36) LATITUDE AND LONGITUDE: The latitude and longitude at the center of the exhaust point must be provided here. These parameters can be determined from the United States Geological Survey (USGS) map that contains this unit. Maps can be obtained from the USGS for a fee. These maps may be found at a local library.

37) UTM: The Universal Transverse Mercator zone and horizontal (easting) and vertical (northing) coordinates of a point at the center of the exhaust point must be provided if the latitude and longitude were not provided. This coordinate system, which has units of kilometers, divides the globe into 60 north-south zones each covering six degrees of longitude. The State of Illinois is covered by two zones (15 & 16). Sources west of 90 degrees are in Zone 15 while sources east of 90 degrees are in Zone 16. Sources in Illinois may only have a vertical coordinate ranging from 4094.000 - 4719.000 kilometers. The allowable range of horizontal values is 616.000 - 767.000 kilometers for Zone 15 and 233.000 - 469.000 kilometers for Zone 16.