

ILLINOIS ENVIRONMENTAL PROTECTION AGENCY  
BUREAU OF AIR  
PERMIT SECTION

January 26, 2012

Responses to Comments on the  
Draft CAAPP Operating Permit for  
Chicago Heights Steel, operated  
in Chicago Heights, Illinois

Source Identification No.: 031045ABS  
Application No.: 96030081

## **I. BACKGROUND**

On December 27, 2011, the Illinois EPA, Bureau of Air received a CAAPP operating permit renewal application from Chicago Heights Steel, for its Clean Air Act Permit Program (CAAPP) permit for an existing metal fabrication/coating manufacturing plant in Chicago Heights, Illinois.

The Illinois EPA has completed a public comment period on the draft of a renewed CAAPP permit. Comments were received from USEPA, Region 5, on December 27, 2011. The Illinois EPA has prepared this document, which addresses significant comments to accompany the submittal of proposed CAAPP permit.

## **II. COMMENTS WITH RESPONSES**

### **Comments from USEPA**

1. Throughout the permit, applicable emission rate citations are used to establish applicable requirements without actually including numerical limit. The permit should specify the numerical applicable limit for the corresponding criteria pollutant for each emission unit. As an example, condition 4.1.2.b.i.A requires the source to limit particulate matter emissions to rates specified in 35 IAC 212.321(c), but does not specify the rate. Other conditions that use this scheme include conditions: 4.2.2.b.i.A, 4.3.2.b.i.A, 4.4.2.b.i.A, and 4.5.2.b.i.A.

#### **IEPA Response:**

*One specific numerical limit cannot be established as the comments requested. However, the comment is a valid question and the IEPA has addressed the comment by adding a new Section 7.2 (PM Process Weight Rate Requirements) that establishes the hourly process weight values and corresponding allowable emission limits consistent with the design of the rule. For each emission unit/operation subject to 35 IAC 212.321/322 the permit condition in Section 4 provides a reference to Section 7.2. The values (both process weight rates and corresponding allowable PM emissions), as established in the tables in Section 7.2, represent different sliding values fluctuating due to the nature of the specific operation(s) and different throughputs for any particular unit/operation.*

2. Throughout the permit, the facility is required to keep records of emission factors, along with supporting documentation, in order to demonstrate compliance with emissions restrictions and applicable limitations for many of the regulated criteria pollutants. For example, condition 4.1.2.d.ii.E requires the source to use emission factors derived from the most recent stack test to determine emissions and whether the source is in compliance with applicable limitations. In other conditions (for example condition 4.3.2.d.ii.B), the language is not clear on how the emission factors are derived. Is there a discussion in the statement of basis, or somewhere else in the permit record, of how these emission factors are derived and the basis to how they are sufficient for the facility to use for compliance demonstration?

#### **IEPA Response:**

**The IEPA reviewed each of the condition listed in the comment and determined that the use of emissions factors either were not necessary or**

appropriate based on the negligible emissions associated with such operations. Therefore, all references to the emission factors in Section 4 of the permit draft have been removed. The rationale and justifications for such action are explained below:

a) *Condition 4.1(2): emissions from reheat furnaces*

*Condition 4.1(2)(b)(ii)(A): Permitted emissions of PM from the reheat furnaces (construction permit 07080030) are low and contributed to the burning of natural gas as a fuel for the purposes of heating/reheating metal parts prior to milling and machining operations. Reheat furnace operations do not generate any oil mist and/or cause disintegration of the metals that may contribute to additional PM emissions. The likelihood of the natural gas fired reheat furnaces violating the PM limitations is small. It should also be noted that the source is required to maintain the type of fuel used, maintain inspection records, and maintain maintenance and repair logs of the reheat furnaces. In addition, the source is also doing annual Method 9 opacity readings. These records would help the Illinois EPA determine if the reheat furnaces are being operated properly and therefore would result in PM being minimized. These furnaces use pipeline quality natural gas, which contains low PM content and coupled with monthly operational inspections, ensure the ovens efficiencies to reduce the likelihood of PM emissions. Records of emissions of PM generated by burning natural gas, with supporting calculations, in conjunction with other monitoring and recordkeeping requirements described above, will be sufficient to verify compliance with the permitted PM emissions.*

*Condition 4.1(2)(d)(ii)(C): The permitted emissions of NO<sub>x</sub> from the reheat furnaces (construction permit 07080030) are contributed to the burning of natural gas as a fuel. Reheat furnace demonstrates stable and consistent operations, NO<sub>x</sub> testing data and records of NO<sub>x</sub> emissions (with supporting calculations), all this will be sufficient to verify compliance with the permitted NO<sub>x</sub> emissions.*

*Condition 4.1(2)(e)(ii)(B): The permitted emissions of VOM from the reheat furnaces (construction permit 07080030) are low and contributed mostly to the burning of natural gas as a fuel. Records of emissions of VOM and supporting calculations will be sufficient to verify compliance with the permitted VOM emissions.*

*Condition 4.1(2)(f)(ii)(C): The permitted emissions of CO from the reheat furnaces (construction permit 07080030) are contributed to the burning of natural gas as a fuel. With the stable and consistent furnace operations, regular tune-ups and records of CO emissions (with supporting calculations), all this will*

be sufficient to verify compliance with the permitted CO emissions.

b) Condition 4.2(2)(b)(ii)(A): No permitted emissions of PM from the rolling mills have been established by the CAAPP or construction permit. PM emissions being released are coming mostly in the form of steam from cooling of steel rails and rollers. Rolling mills do not use any organic materials and, as a result, do not generate any oil mist. Rolling mill operations do not cause disintegration of the metals and, as result, do not generate additional PM emissions. In addition, there are no pickling operations performed on the rolling mills, therefore, no acid mist is contributed to PM emissions. In addition, the source is also doing semi-annual Method 22 visual emission observations. Records of emissions of PM and supporting calculations, in conjunction with other monitoring requirements described above, will be sufficient to verify compliance with the allowable PM emissions.

c) Condition 4.3(2): emissions from curing oven

Condition 4.3(2)(b)(ii)(A): The permitted emissions of PM from the coating line #2 and associated curing oven (construction permit 07080030) are extremely low , as a result of coating overspray and the burning of natural gas as a fuel in the curing ovens. Primary emissions related to the coating operations are VOM. FIRE established emission factor for PM<sub>10</sub> emissions from coating operations equal to 4.52 lb PM<sub>10</sub>/ton of VOC. Compliance with allowable and permitted emissions is assured by conducting regular semi-annual Method 22 emission observations. Records of emissions of PM and supporting calculations will be sufficient to verify compliance with the permitted PM emissions.

Condition 4.3(2)(d)(ii)(B): Permitted emissions of NO<sub>x</sub> from the curing oven associated with the coating line (construction permit 07080030) are low and contributed to the burning of natural gas as a fuel. Records of NO<sub>x</sub> emissions and supporting calculations will be sufficient to verify compliance with the permitted NO<sub>x</sub> emissions.

Condition 4.3(2)(f)(ii)(B): The permitted emissions of CO from the curing oven associated with the coating line (construction permit 07080030) are contributed to the burning of natural gas as a fuel. With the stable and consistent oven operations and the records of CO emissions (with supporting calculations), this will be sufficient to verify compliance with the permitted CO emissions.

3. The permit appears to list a condition twice. The second listing of condition 4.1.2.d.ii.C should probably be condition 4.1.2.ii.E.

IEPA Response:

*This typo was fixed.*

4. Please consider changing language used in condition 4.1.2.ii.C. Current language reads, "...with the manufacturer's specifications, whatever coming first." Consider changing "whatever coming first" to "whichever comes first".

**IEPA Response:**

*This typo was fixed.*

### **III. ADDITIONAL INFORMATION**

Questions about the public comment period and permit decision should be directed to:

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