

ILLINOIS ENVIRONMENTAL PROTECTION AGENCY  
BUREAU OF AIR

October 2007

Responsiveness Summary for  
Public Comments on an Application from  
Alton Steel for a  
Revision to a Construction Permit for  
Its Melt Shop in Alton, Illinois

Site Identification No.: 119010AAE  
Application No.: 00010015

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## **INTRODUCTION**

Alton Steel has requested a revision to an existing construction permit issued for the melt shop at its steel mill in Alton, Illinois.

Upon review of comments received during the public comment period and final review of the application, the Illinois Environmental Protection Agency (Illinois EPA) has determined that a revised construction permit may be issued. Accordingly, on September 30, 2007, the Illinois EPA issued a revised construction permit to Alton Steel.

However, as a result of the Illinois EPA's further review of the application in response to public comments, the issued permit is different than the draft of the revised permit that was made available for comment. The issued permit imposes additional requirements on the operation of the melt shop and the mill. It also limits the steel production of the mill to a level that is lower than was set in the original permit, rather than increasing the limit, as Alton Steel requested.

## **DESCRIPTION OF PERMITTING ACTION**

Alton Steel operates a steel mill in Alton, Illinois. Alton Steel requested a revision to an existing construction permit for its melt shop, Construction Permit No. 00010015. This permit addressed physical changes and changes in the method of operation of the two electric arc furnaces (EAF) in the melt shop, EAF No. 7 and 8. This construction permit was originally issued on June 30, 2000<sup>1</sup> to Laclede Steel, Alton Steel's predecessor. This permit established "synthetic minor" limits for these furnaces that were necessary so that the modifications addressed by this construction permit would not be a major project subject to permitting requirements of Prevention of Significant Deterioration (PSD) and Nonattainment New Source Review (NA NSR). This construction permit limited total steel production from the furnaces to 88 tons per hour and 769,000 tons per year, in accordance with USEPA policy that requires both production and emission limits for "synthetic minor" modifications.

Alton Steel requested revisions to this construction permit to correct the evaluation of the changes in nitrogen oxides (NO<sub>x</sub>) and sulfur dioxide (SO<sub>2</sub>) emissions accompanying this project, based on actual emission data for EAF No. 7, as collected in emission tests performed in November 2000 and January 2001. Laclede Steel had begun discussions with the Illinois EPA about obtaining a revised construction permit reflecting this emission data shortly after receiving the results of these tests. These discussions were interrupted when Laclede Steel ceased operation and were then resumed by Alton Steel when it took over operation of the plant. The source-specific emission testing showed that the general emission factors for NO<sub>x</sub> and SO<sub>2</sub> emissions used by Laclede Steel in its netting analysis understated the historical emissions of the melt shop. In addition, given the nature of the changes made to the furnace, it was believed that this new data was also representative of the emissions before the changes were made. This was because the changes to the furnace would have affected its potential throughput or capacity but should not have affected its emission rates for SO<sub>2</sub> or NO<sub>x</sub>, when expressed in pounds per tons

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<sup>1</sup> Shortly thereafter, on August 24, 2000, the Illinois EPA issued a revised permit, entitled "Construction Permit -- Revised".

of steel. Indeed, as was later revealed, Laclede Steel did not actually make the changes to the fuel burners of EAF No. 7 that were authorized by the construction permit and this change is no longer authorized by the issued permit. The SO<sub>2</sub> emission rate of an electric arc furnace is a consequence of the initial sulfur content of the scrap steel and other raw materials charged into the furnace, as then reduced by the collection of the sulfur in the flux materials, with only a fraction of the sulfur actually emitted to the atmosphere as SO<sub>2</sub>. These aspects of the operation of the furnace were not being altered by the changes to furnace. Also relevant was that the emission rates measured in the emissions tests were within the range of typical emission rates measured at electric arc furnaces.

Alton Steel also requested a revision to the permit to increase the amount of steel production allowed by this construction permit, relying upon its permanent shutdown of certain finishing departments at the plant. In particular, Alton Steel sought to increase the limit on steel production to 786,000 tons per year based upon additional decreases in NO<sub>x</sub> emissions that occurred when it permanently shut down of the blooming, pipe and rod departments when it took over the plant. The issued permit does not allow such an increase and, in fact, sets a slightly lower limit on the steel production of the plant, 750,000 tons/year. However, as requested by Alton Steel, it would allow EAF No. 8, which has been on standby status for over five years, to operate as a main production furnace if this can be accomplished without a modification of the furnace that would potentially trigger new regulatory requirements for the furnace. The lower limit on the steel production of the plant is due to an additional correction to the netting analysis to address the construction of ladle metallurgy furnace (LMF), which was a project that was contemporaneous with the 2000 modifications. As issued, the revised construction permit would still be accompanied by in net emission changes that are below the significant emissions thresholds established under the federal PSD rules and the state NA NSR rules.

## **COMMENT PERIOD AND PUBLIC HEARING**

The Illinois EPA Bureau of Air evaluates applications and issues permits for sources of emissions. An air pollution control permit application must appropriately address compliance with applicable air pollution control laws and regulations before a permit can be issued. Following its initial technical review of Alton Steel's request for a revised construction permit, the Illinois EPA Bureau of Air made a preliminary determination that the application met the standards for issuance of a revised permit and prepared a draft of a revised permit for public review and comment. The scheduled 30-day public comment period on the draft permit began on April 20, 2006.

## **AVAILABILITY OF DOCUMENTS**

The revised construction permit issued to Alton Steel and this Responsiveness Summary are available on the Illinois Permit Database at [www.epa.gov/region5/air/permits/ilonline.htm](http://www.epa.gov/region5/air/permits/ilonline.htm) (please look for the documents under All Permit Records (sorted by name), State Construction Permits). Copies of these documents may also be obtained by contacting the Illinois EPA at the telephone numbers listed at the end of this document.

## **PUBLIC COMMENTS AND RESPONSES**

### General Comments

1. The Illinois EPA cannot issue the draft revised construction permit, as proposed, and must subject Alton Steel to PSD and NA NSR permitting because the 2000 netting analysis contained errors and the plant actually underwent a major modification in 2000;

**While the 2000 netting analysis contained errors, the effect of the changes that have occurred at the plant since 2000 is generally to reduce emissions from historic levels. First, the steel production of the mill is currently much less than historical levels. The plant has gone from a melt shop with two EAFs and a number of finishing mills to a melt shop with a single operational EAF and a single finishing mill. Steel production has dropped from an average of about 695,000 or 749,000 tons per year in the mid-1990s to less than 340,000 tons in 2006. Second, changes have occurred at the plant that act to reduce the rate of emissions of particulate matter (PM) and other pollutants per ton of steel produced. These changes include improvements to the emission control system in the melt shop, notably rebuilding the furnace evacuation system, shut down of all but one of the finishing departments, and various changes that improve product quality and reduce rework.**

### Comments on the Proposed Production Increase

2. The proposed increase in the plant's allowable steel production from 769,000 to 786,000 tons per year must be addressed as a separate modification under the PSD and NA NSR rules, which will be accompanied by significant increases in the permitted emissions of the plant. The Illinois EPA improperly proposes to reopen the prior "netting" exercise, done in 2000 for other modification to determine that NA NSR and PSD requirements do not apply to this modification. In other words, Illinois EPA is effectively proposing to proceed as if the this proposed increase in allowed steel production actually was being permitted and occurring in 2000. However, the proposed increase in allowable production is a separate project that would be accompanied by a significant net emission increases and would constitute a major modification for which Alton Steel must undergo NA NSR/PSD permitting. The reopening of the prior netting analysis, rather than preparation of a new netting analysis for this proposed modification, is improper because a netting analysis looks at "creditable" emission increases or decreases that occur within 5 years of the date that the proposed change will occur, which will be May 15, 2006 or later. In other words, a "major modification" determination for the proposed increase in the production should look only at "creditable" increases and decreases since May 15, 2001. "Reopening" of the historic netting analysis would ignore this mandatory timeframe and improperly include emission decreases that occurred since 1995, far more than five years before the proposed change.

**The revised construction permit issued to Alton Steel does not raise the limit on the steel production of the plant, as was proposed in the draft permit. As noted by this comment,**

**such a change would be a future modification and cannot be combined with the corrections of the netting analysis for historical modifications to the plant by Laclede Steel, which is the primary purpose of the issuance of a revised construction permit.**

3. Reopening of the netting analysis conducted in 2000, as proposed, would violate relevant rules because the analysis cannot include emission decreases, including NO<sub>x</sub> emission decreases, that occurred prior to USEPA designating the area nonattainment. 35 IAC 203.208(a). USEPA designated Madison County as nonattainment for 8-hour ozone on April 30, 2004, effective June 15, 2004.<sup>2</sup> Therefore, emission decreases that occurred before this date cannot be “netted” with the proposed emissions increases. Reopening a netting analysis that occurred prior to USEPA’s nonattainment designation would be contrary to 35 IAC 203.208. Illinois EPA must determine whether a significant net emission increase will occur, without crediting any decreases that occurred prior to June 15, 2004, the effective date of the nonattainment designation.

**This comment is no longer relevant. This is because the revised construction permit does not authorize a further, future increase in the allowable steel production of the plant beyond that allowed by the 2000 construction permit, as discussed above.**

#### Correction of the 2000 Netting Analysis

4. It does not appear that the netting exercise conducted in 2000 was accurate and this must be corrected. As described by USEPA in the *NSR Manual*, the “net emissions change” from a project, as determined by a netting analysis, is the 1) Emissions increases associated with the proposed modification, 2) Minus the source-wide creditable contemporaneous emissions decreases, 3) Plus the source-wide creditable contemporaneous emissions increases. The purported emissions “decrease” used in the 2000 netting analysis was the decrease from 1995-1996 levels to the permitted level on June 30, 2000, when the construction permit was issued. It appears that the 1995-1996 emissions were incorrectly used as the baseline, with a synthetic minor limit on future emissions set as the 1995-1996 baseline plus the significant emission threshold. *See e.g., Draft Permit, Attachment 1, Revised Evaluation of Net Changes in Emissions.*

A correct approach would first determine the increase from the 24 months preceding the change, then look back five years from the date that construction commenced to determine whether any creditable increases or decreases occurred. 40 CFR 52.21(b)(21)(ii); *NSR Manual* at A.34 - 35 and 49. In other words, what were the average annual emissions from June 30, 1998 through June 30, 2000? Then, what will the post-modification emissions be, based on the federally-enforceable potential to emit? 40 CFR 52.21(b)(4) and (21)(iv). If the increase from the past actual emissions to the future potential to emit would be “significant,” 40 CFR 52.21(b)(23) (2000), Illinois EPA could then consider whether there were any contemporaneous and creditable emission decreases that must be considered to determine the “net emission increase.” 40 CFR

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<sup>2</sup> Madison County is designated as “moderate” nonattainment for 8-hour ozone, 69 FR at 23858, 23898. It is also designated nonattainment for PM<sub>2.5</sub> on January 5, 2005, effective April 5, 2005. (*PM 2.5*), 70 FR 944, 969

52.21(b)(3).<sup>3</sup> Illinois EPA should re-determine the actual emission during the 24 month period preceding the June 30, 2000 permit, compared to the post-permit potential to emit. Only then should Illinois EPA consider prior decreases.

**The use of production data from the 1995 - 1996 time period is not a flaw in the 2000 netting exercise. For this purpose, it is necessary to distinguish between the provisions of the definition of “actual emissions” and the definition of “net emissions increase.” In particular, the definition of actual emissions provides that a two-year period other than the two-year period that precedes a particular date may be used to determine actual emissions of a unit if such period is determined to be more representative of normal source operation (40 CFR 52.21(b)(21)(ii) and *NSR Manual* at A.49). In this case, the Illinois EPA made such a determination based on information submitted by Laclede that showing that the two-year period preceding 24-years were not representative of normal production. Beginning in 1997, the steel industry in the United States was being seriously impacted by the availability of less expensive foreign steel. In November 1998, the economic situation of Laclede Steel had deteriorated to the point where it declared bankruptcy, with business conditions becoming desperate in 1999. Accordingly, the Illinois EPA concluded that the time period of 1995 and 1996 was more representative of normal source operation of the plant than the two-year period preceding the 2000 permit application. Use of this time period yielded a baseline steel production rate for the plant of 694,638 tons/year (the average of 744, 408 tons in 1995 and 644,868 tons in 1996).**

5. The 2000 netting analysis is based upon Laclede Steel’s application, which provided “Historical Steel Production Data for 1995-1996. This data does not accurately provide the emissions for the units at the plant. For example, the data assumes exactly equal production between the two furnaces. It is unlikely that steel production was exactly equal between the two furnaces. The data also includes emissions that are not even attributable to the plant. Footnote 4 to the “Historical Steel Production Data for 1995-1996” submitted with the February, 2000, permit application states: “Not all downstream finishing is for the Alton, IL Plant operations.” In its March 31, 2004 analysis, Alton Steel again admits that “not all of Laclede’s steel production was finished in the finishing mills at the Alton plant. Historically, steel was also sent to Laclede’s Madison, Illinois, Memphis, Tennessee, and Fairless Hills, Pennsylvania finishing mills.” See March 31, 2004 Revised Netting Analysis by Alton Steel, p. 2. In other words, Laclede attributed emissions for finishing operations that were not actually done at the Alton plant, as if those finishing operations contributed to baseline PM emissions at the plant. As a result, the plant’s emissions from 1995-1996 are artificially inflated, and the netting analysis gave credit for decreases that never actually occurred.

**These comments do not identify flaws in the data provided by Laclede that acted to artificially inflate emissions and that must now be corrected. Given that the design, service and control systems for EAF No. 7 and 8 were identical, as is standard in arc furnace melt shop with a pair of furnaces, it was appropriate to address emission of the melt shop as a**

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<sup>3</sup> Illinois EPA, *New Source Review Part I- NSR Q & A: Answers to Frequently Asked Questions Regarding NSR and PSD* (available at <http://www.epa.state.il.us/air/new-source-review/new-source-review-part-1.html>, last visited April 27, 2006)

**whole rather than separately address the individual furnaces. As Alton Steel has clarified, the production data for the melt shop and the finishing departments that has been provided for the plant are not identical. Depending upon supply and demand at a particular time, unfinished steel from the Alton mill has been sold for finishing off-site at other plants and unfinished steel from other plants has been finished in the finishing departments at the Alton mill.<sup>4</sup> The occurrence of these transfers, as acknowledged by Laclede Steel, does not indicate a flaw in the production data provided by Laclede.**

6. Emission decreases can only be “netted” against a proposed emission increase if the decreases occurred between “the date five years before construction on the particular change commences” and “the date that the increase from the particular change occurs,” 40 CFR 52.21(b)(3)(ii). Therefore, certain decreases in emissions at the plant were improperly used to “net out” of PSD/NA NSR. In particular, emissions decreases from 1995 annual emission levels are not within five years of the date when construction commenced on the physical changes permitted in 2000, so can not be used in the netting exercise. A decrease is only “contemporaneous,” and therefore “creditable” in a netting analysis, when it occurs within a five year period preceding the change. 40 CFR 52.21(b)(3)(i)(b). This five year period is 60 months, not the five calendar years preceding the change. Construction did not commence in 2000 until Laclede Steel obtained the construction permit (as well as any other required permits) and either entered into sufficient binding agreements or began a continuous program of actual on-site construction. 40 CFR 52.21(b)(9) (2000). At the earliest, this occurred on June 30, 2000, when the construction permit was issued. Assuming construction commenced immediately, only emissions that occurred from July 1, 1995 forward could be considered in calculating “contemporaneous” decreases. Nevertheless, emissions from the entire year 1995 (January through December) appear to have been used in the netting analysis. The 2000 netting analysis must be corrected to account for only those emission reductions that occurred within 60 months of the commencement of construction on the 2000 modifications.

**This comment again confuses the definitions of actual emissions and net emission increase. While the first part of 1995 was not within the five year contemporaneous time period for the determination of the net emissions increase for the 2000 modifications, the first part of 1995 was properly considered part of the 24-month period for determination of the actual emissions of the plant prior to the 2000 modifications.<sup>5</sup>**

7. The 2000 netting analysis did not correctly calculate actual emissions before and after the modifications, as it failed to account for actual emissions. The analysis appears to have estimated post-modification emissions based on the permitted emission levels during normal operations. However, during periods of startup, shutdown, and malfunction, the

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<sup>4</sup> In 1995, the plant operated with a “deficit” of steel as the melt shop produced only 744,408 tons of steel but the plant finished 824,340 tons, importing unfinished steel from other plants. In 1996, the plant operated with a “surplus” as the melt shop produced 644,868 tons but the plant only finished 586,684 tons.

<sup>5</sup> For further explanation, refer to the *NSR Manual*, pp. A.44 – A.50. In particular, Figure A-2 on Page A.50 describes exactly this situation, with the 24-month period for determination of actual emissions extending out across the five-year contemporaneous time period.

plant is exempted from the permit limits and the plant's PM emission are much higher than the permit limits applicable during normal operations. *See* August, 2000 Permit Condition 4(b)(i). Therefore, the higher emissions that occur during startup, shutdown, and malfunction were required to be considered when calculating the emission increase from the 2000 modifications. 40 CFR 52.21(b)(3) (net increase is calculated by the difference in actual emissions before and actual emissions after the modification), 52.21(b)(4) and (21)(iv) (without an enforceable limit, the actual emissions after the modification are equal to the maximum capacity).<sup>6</sup> Therefore, because emissions are not limited during startup, shutdown and malfunction, the "actual emissions" are the maximum theoretical emissions during these periods. This maximum theoretical emission rate must be used to determine post-modification emissions. The Illinois EPA must redo the netting exercise to account for the potential-to-emit after the modifications.

**The netting analysis has been conservatively prepared for PM emissions. "Extra" PM emissions were not included in the baseline actual PM emissions for excess PM emissions during startup, shutdown and malfunction, which were "allowed" based on applicable practices during the baseline time period, as observed by this comment. The permitted PM emissions of the melt shop also do not include any allowance or exclusion from the applicable limits to account for additional PM emissions during periods of startup, shutdown and malfunction. While the issued permit "allows" or authorizes additional PM emissions during such periods relative to the applicable state emission standard, this allowance does not extend to emission limits in the permit that set the future permitted PM emissions of the melt shop. Moreover, the allowance for additional PM emissions during these periods relative to the state standard is subject to operational restrictions and oversight by the Illinois EPA, consistent with current administrative practice, so that Alton Steel minimizes as reasonably practicable any such additional PM emissions.**

8. The permit limits in the netting analysis for PM and PM10 are also based upon measurements by USEPA Method 5, which only measures filterable PM. The thresholds for "significant increases" of PM/PM10 apply to total PM/P10, including the condensable fraction, as measured with USEPA Method 202. Fugitive PM emissions must also be included in the potential to emit. Moreover, Alton Steel's most recent netting analysis erroneously uses maximum theoretical emissions for the baseline, rather than actual emissions. Specifically, Alton Steel assumed a maximum grain loading (0.0052 gr/dscf) and maximum flow to the baghouse (446,134 dscfm). *See March 31, 2004 Revised Netting Analysis*, p. 4. This must be revised and the actual emissions must be used to establish the baseline. Therefore, the PM "net emissions increase" calculation for the 2000 modifications was erroneous and must be revised.

**A conservative approach has also been taken to other aspects of the quantification of PM emissions for purposes of the netting analysis, which is both reasonable and appropriate given the nature of the modifications that are addressed by the analysis. Alton Steel has quantified the historic, baseline PM/PM10 emissions from the furnaces using calculations**

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<sup>6</sup> *See also* Presentation by Jim Little, USEPA, to AWMA, Mississippi Chapter, 2005 Technical Conference, Richmond, Mississippi, November 8, 2005, which confirms that baseline actual emissions include emissions associated with startup, shutdown and malfunction.

**for the stack emissions of filterable particulate to represent the total emissions of PM/PM10 from the furnaces. These calculations combined factors for the rate of PM emissions from the associated baghouses, in grains per standard cubic foot (scf), and the design exhaust flow rate from the baghouses, which are the most substantial data currently available to determine the PM emissions of the furnaces.<sup>7</sup> This approach using design parameters for the baghouses for filterable particulate reasonably serves to address all PM emissions of the furnaces, including “fugitive” or uncaptured emissions and emissions of condensable particulate. The limits for emissions of PM/PM10 in the issued permit address all emissions from the furnaces, including condensable particulate and any fugitive or uncaptured emissions. If in the future based on additional emission data that is assembled, Alton Steel determines that this analysis has failed to adequately account for the historic emissions of the furnaces before the modifications, Alton Steel may again apply for a revision to the construction permit to consider that emission data.**

9. Laclede installed a new ladle metallurgy furnace (LMF) pursuant to Construction Permit 93100108. This furnace must be considered in the netting analysis. While this permit was issued in January 1994,<sup>8</sup> Laclede’s 1996 application for a Clean Air Act Permit Program (CAAPP) permit states that “The Ladle Furnace... is scheduled to commence operation in March 1996.” Laclede, Application for CAAPP Permit, February 15, 1996, p. 6-2. The increases in emissions associated with this project must be netted with (i.e., added to) the increases associated with the construction in 2000.

**Alton Steel has corrected the 2000 netting analysis underlying the issuance of the revised construction permit so that it addresses the ladle metallurgy furnace.<sup>9</sup> The general effect of this correction is to reduce the permitted emissions of the EAFs, as the emissions of the LMF must be considered when determining whether the 2000 modifications are accompanied by significant increases in emissions. This correction to the netting analysis also results in a lowering of the limit on the annual production of the melt shop, to 750,000 tons from 769,000 tons, to ensure that the 2000 modifications are not accompanied by a significant increase in emissions of SO<sub>2</sub>. To appropriately address this project, the 24-month period for the netting exercise was shifted to the period of July 1994 through June 1996, so as to address the baseline status of the plant prior to the initial startup and emission increases from the LMF. During this period, Laclede Steel produced 748,802 tons of steel per year, so that the revised permit only allows an increase in production of 1,198 tons per year from historical production during this period. While the addition of the LMF**

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<sup>7</sup> For the EAFs, an exhaust factor of 0.0052 gr/dscf was used, which is the emission standard of the NSPS for stack emissions of filterable particulate. This factor is indicative of the emission rate that should be reliably achieved, with a reasonable margin of compliance on a day-to-day basis, from baghouses for EAFs that have been properly sized and designed and are being appropriately maintained. As such it is a relevant benchmark for the emission factor for Alton Steel. As Alton Steel was not required to comply with this emission factor during the baseline time period, it is possible, if not probable, that the actual emission factor during this period was higher.

<sup>8</sup> Construction Permit 93100108 was issued for the new ladle furnace in January 1994. Operating Permit 93100108 was issued for this furnace in October 1996.

<sup>9</sup> The construction permit for the LMF, as explicitly stated in that permit, was issued based on this furnace not being accompanied by any increase in emissions of the production limit of the melt shop, as covered by Operating Permit 72090071. This was because this new stand-alone ladle metallurgy furnace, with its own 60,000 cfm baghouse, would perform the refining process that had until that time been conducted in the EAFs or the ladle.

**to the netting analysis alters the net changes in emissions from the 2000 modifications, it does not result in the applicability of PSD or NA NSR. This is because the annual production of the plant has been less than 748,802 tons and the modifications have actually not been accompanied by significant increases in the emissions of the plant.**

10. The 2000 netting analysis includes emissions decreases that are not creditable because historical emissions of the plant exceeded the allowable emissions. Any decrease from an “old level of emissions” in 1995 and 1996 cannot be used in a netting analysis because the old level of emissions exceeded the allowable level of emissions. In particular, the plant’s allowable emissions in June, 2000, were either zero or much lower than the historic emission levels used in the netting analysis because of modifications made in 1985, which should have triggered NSR, which requires lower emission limits and a lower historic baseline for the Netting Analysis. In particular, in 1985, Laclede Steel installed oxy fuel burners on the EAFs. According to Laclede’s documents, this increased the plant’s annual capacity from 850,000 tons to 1,000,000 tons of steel. Based on Alton Steel’s own emission factors, and excluding emission increases from processes downstream from the EAFs, this 150,000 ton per year increase in capacity resulted in significant net emission increases of PM emissions. Alton Steel’s calculations reflect an uncontrolled PM emission factor of 35.5 lbs per ton of steel. *See* “Particulate Emissions Calculations,” (produced by Alton Steel as page 18 of its response to USEPA’s Clean Air Act Section 114 Request). Alton Steel calculated that the oxy fuel burners increased PM emissions by the EAFs by 4.88 pounds per hour or 21.37 tons per year. *Id.* While 21.37 tons per year is just under the 25 ton per year threshold for a “significant increase,” this 21.37 ton per year increase does not appear to include either condensable particulate or increases associated with processes other than the EAFs.<sup>10</sup> In addition, USEPA’s published PM emission factor is higher, 38 pounds per ton of steel produced, plus another 1.4 pounds per ton of steel for charging, tapping and slagging. *See* Section 7.5 of USEPA’s *Compilation of Air Pollutant Emission Factors*, AP-42. Additionally, increased capacity in the EAFs also increased throughput and therefore emissions from other operations in the melt shop. The increased emissions from all processes must be considered to determine if this project resulted in a significant net emission increase. Therefore, the EAFs underwent a major modification that triggered PSD permitting.

**These comments do not demonstrate that changes to the furnaces made in 1985 resulted in an increase in PM emissions that is relevant for purposes of the current correction of the 2000 netting analysis. An essential element for the commenter’s claim that a significant increase in PM emission occurred from those 1985 changes is the increase in capacity of the melt shop claimed by Laclede Steel. However, the steel production of the melt shop did not actually increase. Indeed, the 2000 construction permit issued for modifications to the melt**

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<sup>10</sup> It is also notable that the threshold for a significant emissions increase for PM10 is 15 tons per year. As indicated by USEPA in AP-42, 76% of the particulate emitted from a baghouse controlling an arc furnace is PM10. *See* Alton Steel’s Application for CAAPP Permit, (April 5, 2004) (“According to AP-42 and other documents, about 76 percent of the particulates exiting the baghouse is PM-10. The AP-42 estimate of 76 percent is based on a baghouse serving an EAF.”). Therefore, if the modifications made in 1985 increased annual PM emissions by 21.37 tons, the PM10 emissions increased by 16.24 tons ( $21.37 \times 0.76 = 16.24$ ). If PM10 had been regulated in 1985, the plant would have undergone a major modification for PM10.

shop restricted annual steel production to 769,000 tons, with an increase in annual production of only 74,362 tons. This limit is below the historic annual capacity of 850,000 tons of the melt shop in 1985 historically claimed by Laclede. The permitting of the changes to the furnaces in 1985 may have been deficient based on current practice, as future production of the furnaces was not restricted. However, this is not a sufficient basis, as part of the processing of this application, to now invoke applicability of PSD to changes that occurred over 20 years ago that were not accompanied by an actual increase in emissions. This is especially true as the original 2000 construction permit did act to limit steel production to a level that is lower than the baseline capacity of the melt shop claimed by Laclede Steel in 1985. Moreover, relative to emissions of PM10, USEPA did not adopt a National Ambient Air Quality Standard for PM10 until July 1987.

11. The installation of oxyfuel burners in 1985 also resulted in significant net emission increases for CO, NOx, SO2 and lead. Applying Alton Steel's CO emission factor for CO, 2.5 lbs/ton of steel, the installation of oxy fuel burners increased CO emissions by 187.5 tons per year. *See* Alton Steel Revised Netting Calculations, March 31, 2004 (attached to letter from Allen C. Dittenhoefer, Enviroplan Consulting, to Kevin Smith, Illinois EPA, March 31, 2004). Applying Alton Steel's emission factors of 0.7, 0.63 and 0.012616 pounds per ton of steel, this project resulted in net increases of 52.5, 47.25 and 0.945 tons per year for NOx, SO2 and lead, respectively. These increases are significant and subject to PSD permitting.

**These comments rely on the increase in the historical capacity of the melt shop claimed by Laclede. As discussed above, it is not appropriate at this time to address the 1985 changes to the furnaces based on this theoretical increase in capacity.**

12. The 21.37 ton per year increase in PM from the installation of oxyfuel burners in 1985 estimated by Alton Steel also appears to be based on the very emission factors, which, according to the Project Summary, underestimated the emissions. *See* Project Summary at 3 ("The 2000 and 2001 stack tests... showed that the generation emission factors for NOx and SO2 emissions originally used in the netting analysis understated the historical emissions of the melt shop."). It should also be noted that NOx and SO2, which were emitted at higher-than-expected rates during the 2001 stack tests, are large components of condensable particulate matter. Based on the 2001 test results, and Alton Steel's assertions that it underestimated historic emission rates, it appears that the post-construction emissions in 1985/1988 resulted in a significant net emission increase.

**The SO2 and NOx emissions data for the EAFs obtained by site-specific emission testing in the fall and winter of 2000 - 2001 does not reflect a change in the actual emission rates for these pollutants. Rather, it represents the collection of emission data from source-specific emission testing that is more accurate than the general emission factors that were previously relied upon. This data does not indicate that any changes in actual emissions of SO2 or NOx have occurred, that might affect the emissions rate of the EAFs for PM10.**

13. In addition, the emission calculations for the installation of oxyfuel burners in 1985 assume 99.5% control across the baghouse, which is not the same as 99.5% control. The

99.5% control only applies to the PM that enters the baghouse. Not all PM is captured by the hood and ducted to the baghouse, so that total control of PM is lower than assumed for the 1988 permit. This factors also puts the 1985/1988 increase over the threshold for a major modification, subject to PSD/NA NSR.

**These comments again rely on the increase in the historical capacity of the melt shop claimed by Laclede. As discussed above, it is not appropriate at this time, as part of the processing of this permit application, to address the 1985 changes to the furnaces based on this theoretical increase in capacity.**

14. The EAFs are subject to an NSPS standard for PM that reduces their allowable PM emissions below the level used in the 2000 netting analysis. The Project Summary notes that the 2000 construction permit was issued based on the EAFs not being subject to 40 CFR 60, Subpart A and AAa, because the capital expenditure for that project did not qualify it as a modification as provided by 40 CFR 60.14(e)(2). However, this finding is not supported in the record for this permit. In addition, USEPA issued a Finding of Violation (FOV) to Alton Steel on June 23, 2005 alleging that the NSPS does apply.

...Alton Steel is violating the Standards of Performance (NSPS) for Electric Arc Furnaces (EAF) and the Argon-Oxygen Decarburization Vessels Constructed After August 17, 1983, at 40 CFR. Part 60, Subpart AAa ... FOV p. 1.

USEPA found that by replacing the capacitor bank and reactor on EAF 7 after April, 2000, this EAF underwent a modification triggering applicability of the NSPS. FOV Paragraphs 12-15, 17-20. This finding by USEPA is conclusive and demonstrates noncompliance for purposes of permitting. *See e.g., New York Public Interest Research Group v. Johnson*, 427 F.3d 172, 180-81 (2nd Cir. 2005); 42 USC § 7413(a)(1). Thus, any “net emission increase” must be calculated based on any decrease from the allowable NSPS limit, rather than the actual emissions.

**This comment is no longer relevant as the revised permit will not make changes to the 2000 netting analysis relative to PM emissions. The current status of EAF 7 with respect to the NSPS due to changes to the capacitor bank and reactor is not relevant to the 2000 netting analysis, as the “baseline” for this analysis was the status of the EAF prior to such changes.**

**The cited case, which addressed actions in the context of the Title V permit program, is also misapplied. This matter involves an application for a construction permit that has been processed by the Illinois EPA. In the cited case, the authority issuing the Title V permit, the New York Department of Environmental Control, was also the author of the Notice of Violation issued to the sources. USEPA, not the Illinois EPA, is the author of the Finding of Violation issued to Alton Steel for violation of the NSPS, 40 CFR 60, Subpart AAa.<sup>11</sup>**

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<sup>11</sup> This comment also arguably place undue reliance on the Finding of Violation (FOV) by USEPA. In this case, the FOV is almost two years old and was disputed by Alton Steel. The FOV has not been followed by a further finding by USEPA confirming the applicability of the NSPS, 40 CFR 60, Subpart AAa, to EAF 7 but instead by request by USEPA for further information from Alton Steel on this matter. Accordingly, this FOV is patently not a definitive statement of legal fact but one step in the process of reviewing the compliance status of this source.

Comments Indicating That the Plant Should Be Subject To NA NSR/PSD Permitting

15. The plant is subject to PSD/NA NSR permitting because Construction Permit No. 00010015 was violated. According to a letter from Laclede to Illinois EPA:

Construction Permit emission limits were exceeded for particulate matter (PM) and SO<sub>2</sub> on November 8, 2000 and for SO<sub>2</sub> and NO<sub>x</sub> on January 10, 2001. The PM exceedance for the November test was attributed to poor baghouse performance... The measured SO<sub>2</sub> emission rates were fairly consistent between the November and January tests and were about a factor of three above the permit limit of 17.28 lb/hr. The NO<sub>x</sub> test results for November showed compliance well below the permit limit of 48.85 lb/hr, but indicated an exceedance of slightly over 20% for the January test. The CO test results for November showed an average emission rate that was about 15% of the permit limit of 170.8 lb/hr.

*Letter, April 2, 2001, Randy Galati, Laclede, to Donald Sutton, Illinois EPA*

When the limits in this construction permit were violated, the plant immediately became subject to PSD/NA NSR permitting and should have been required to submit an application for a PSD/NA NSR permit. Relevant USEPA guidance clearly states that a source that fails to meet emission limits accepted to avoid NSR permitting is subject to NSR permitting.<sup>12</sup> The source does not have the option of later coming into compliance, as Alton Steel is attempting, by applying for another synthetic minor permit. The Illinois EPA must require that Alton Steel obtain a PSD/NA NSR permit.

In fact, Laclede did submit an application for a PSD permit to address its failure to meet construction permit limits. Laclede proposed BACT limits based on failure to comply with synthetic minor limits during emissions testing. *See* Letter from Randy Galati, Environmental Manager for Laclede to Donald Sutton, Illinois EPA, (April 2, 2001).<sup>13</sup>

**This comment misapplies the cited USEPA policy. This policy is predicated upon the occurrence of an increase in actual emissions that exceeded a PSD or NA NSR applicability threshold. It also applies in circumstances in which applicable limits on emissions have been repeatedly violated. In this case, the exceedance of emission limits that were set for EAF No. 7 did not directly result in an accompanying increase in actual emissions. As has already been discussed, the limits for emissions of SO<sub>2</sub> and NO<sub>x</sub> were set based on**

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<sup>12</sup> See Memorandum from Eric Schaeffer, USEPA Director of Office of Regulatory Enforcement, *Guidance on the Appropriate Injunctive Relief for Violations of Major New Source Review Requirements*, November 17, 1998 (Schaeffer Memo). "Thus, the source cannot simply claim that it has a limit that restricts its potential emissions; obviously this is not the case if the source's actual emissions have exceeded that "limit." A source should not be able to hold a limit up as a shield to major source status when it repeatedly violates the limit... Allowing sources to merely come into compliance with the synthetic minor limits would encourage sources to make modifications without preconstruction review and even exceed existing permits until they were caught, rather than go through NSR review prior to making modifications." Schaeffer Memo, Page 5

<sup>13</sup> Illinois EPA correctly denied this application because it did not include the requisite information for a PSD application. *See* Illinois EPA, Permit Denial to Laclede Steel, (June 29, 2001).

**inaccurate emission data. As such, the exceedance of those limit did not demonstrate that a significant increase in actual emissions had actually occurred. The testing for PM emissions in November 2000, which showed an exceedance of the PM limit, was quickly followed by further testing in January 2001 that showed compliance. Accordingly, emission testing does not show that Laclede Steel repeatedly violated the applicable PM limit, as discussed in the cited USEPA policy.**

16. The plant is subject to PSD/NA NSR permitting for several major modifications that occurred after 2000. According to Alton Steel, it has undertaken a number of capital improvements at the plant recently.<sup>14</sup> Other improvements have also occurred at the plant.<sup>15</sup> These modifications, which were not permitted, have resulted in significant net emissions increases using the actual-to-potential emissions test, since the historic “baseline” actual emissions before each modification exceeds the potential to emit after the modification. Therefore, because the plant’s potential emissions greatly exceed its actual emissions, each of these projects resulted in a significant net emission increase. The actual-to-potential test must be used to evaluate whether these projects were major modifications because Alton Steel did not make the requisite analysis and keep post-construction records to be eligible to use the actual-to-projected-actual test.<sup>16</sup>

**The information accompanying this comment does not show that Alton Steel has made modifications to the plant that have triggered applicability of PSD or NA NSR. Rather this information broadly shows that Alton Steel has made improvements to the plant to improve control of emissions, as well as making other upgrades to the plant to improve product quality and energy efficiency.**

**This comment overlooks a key element of the definition of modification. A modification is a physical change or a change in the method of operation of a source that results in an increase in emissions. The determination whether a particular modification would be a major modification occurs only after a determination has been made that a particular change to a source would constitute a modification. This initial step, the determination that a particular change would constitute a modification, is essential. Otherwise, when a source’s actual emissions have been significantly below its potential emissions, changes to the source that would have no affect on emissions or would act to reduce emissions would be inappropriately categorized as major modifications. This would be an absurd outcome,**

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<sup>14</sup> Based on information made available by Alton Steel at <http://www.altonsteel.com/products.html> (last visited May 10, 2006), Alton Steel has “revamped” the Continuous Caster; expanded the ConCast equipment (15.5” x 4”); installed a 14” Mill Orbis On-Line Bar Diameter Measurement System; installed a QS9000 Quality System Hot Rolled Product Line; installed a new Baird DV6 Spectrometer; rebuilt the furnace evacuation system for EAF 7; installed a harmonic reduction system on EAF 7; and installed new 14” Mill Controls and updated drivers.

<sup>15</sup> The Growth Association of Southwestern Illinois also published a list of capital expenditures in the region around Alton. According to the report, in 2005, Alton Steel installed new electrical controls in 2005 at a cost of \$1,500,000, as well as replacing and repairing “structural supports” at a cost of \$130,000. See *River Bend Region Investments*, The Growth Association of Southwestern Illinois, available at <http://www.growthassociation.com/DL/Economy.pdf> (last visited May 1, 2006).

<sup>16</sup> Unless the owner or operator of a source makes the required pre-construction determination of projected actual emissions and keeps the required records after the modification, it must use the actual-to-potential test to determine whether a change to the source is a major modification.. See 40 CFR 52.21(b)(41)(ii)(d) and (i)(6)

**determined only by the difference in the source's actual and potential emissions, completely independent of the effects of particular changes on the source on emissions.**

17. The draft revised construction permit cannot be issued as proposed because the plant underwent a major modification when it restarted operation in 2003 after an extended shut down period. Laclede shut down the plant in July, 2001. At that time, Laclede had already filed for dissolution in bankruptcy and its assets were being sold. The plant did not operate between July 2001 and September 2003 (Alton Steel resumed operation on September 12, 2003, after purchasing the plant.)<sup>17</sup> Laclede had no definite plans to restart the plant within a reasonable time when it shut down. In fact, Laclede permanently laid off its employees in 2002 and removed equipment from the plant. Laclede did not “continuously demonstrate concrete plans to restart the plant sometime in the reasonably foreseeable future...”<sup>18</sup> Moreover, the plant was shut down for over two years. Therefore, the plant is presumed to be permanently shut down and cannot restart without an NA NSR/PSD permit. According to USEPA policy, when a plant is shut down for a two year period, restarting the plant is a “modification” subject to PSD and NA NSR permitting.<sup>19, 20</sup>

**The PSD and NA NSR rules do not include any provisions that specify that the resumption of operation of this plant must be considered a major modification of a source, as suggested by this comment. The USEPA policy cited in this comment merely recognizes that a shut down of a source lasting longer than two year is typically permanent, which leads to a presumption that a shut down lasting two years is permanent. In the case of this plant, any such presumption is readily rebutted by the actions that occurred during the transition period when Laclede ceased operation and Alton Steel resumed operation. In particular, the plant was not “abandoned” by Laclede when it ceased operation and a variety of actions took place that preserve the status of the plant as an existing source. Perhaps, most notable, the resumption of operation by Alton Steel was addressed in a settlement agreement between Laclede Steel, Alton Steel, USEPA, the United States Department of Justice to facilitate resumption of operation of the plant and the environmental clean-up of**

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<sup>17</sup> Letter from Jeannine Kelly, Alton Steel, to Donald Sutton, Illinois EPA (January 6, 2005)

<sup>18</sup> *In the Matter of Monroe Electric Generating Plant, Proposed Operating Permit* (Petition No. 6-99-2), Order Partially Granting and Partially Denying Petition for Objection to Permit 10 (USEPA Administrator June 11, 1999)

<sup>19</sup> “EPA has a well-established policy that reactivation of a permanently shutdown facility will be treated as operation of a new source for purposes of PSD review. The key determination to be made under this policy is whether the facility to be reactivated was “permanently shutdown.” In general, EPA has explained that whether or not a shutdown should be treated as permanent depends on the intention of the owner or operator at the time of shutdown based on all facts and circumstances. Shutdowns of more than two years, or that have resulted in the removal of the source from the State’s emissions inventory, are presumed to be permanent.” *In the Matter of Monroe Electric Generating Plant, Proposed Operating Permit*.

<sup>20</sup> See also Memo from Ed Reich, Director, Division of Stationary Source Enforcement, to Stephen Dvorkin, Chief, General Enforcement Branch, Region II (Sept. 6, 1978); Memo from Ed Reich to William Sawyer, General Enforcement Branch, Region II (Aug. 8, 1980); Memo from John Seitz, Director, Stationary Source Compliance Division, OAQPS, to David Howekamp, Director, Air Management Division, Region IX (May 27, 1987); Letter from David Howekamp to Robert Connery, Holland & Hart (Nov. 6, 1987); Memo from John Rasnic, Director, Stationary Source Compliance Division, OAQPS, to Douglas Skie, Director, Air Programs Branch (Nov. 9, 1991).

**the site under the Resource Conservation Recovery Act (RCRA).<sup>21</sup>**

18. Alton Steel violated PSD and NA NSR by reactivating the plant after a long shut down period without first obtaining a PSD/NA NSR permit.

**As explained above, Alton Steel did not violate PSD or NA NSR when it resumed operation of the plant after it had been idle for approximately two years. In addition, Alton Steel obtained a “minor” construction permit to resume operation of the plant, Construction Permit 03030101. That permit served to assure that the resumption of operation of the plant did not entail a major modification.**

#### Requirements for Monitoring and Emission Testing

19. The draft permit does not require appropriate monitoring to ensure compliance. Opacity observations by USEPA Method 9 should be required at least once each day when weather allows, rather than only once per year. The values of operating parameters should be recorded at least three times per day. Alton Steel should be required to immediately conduct emissions testing for EAF 7, rather than testing within one year. Emission testing for EAF 8 should be required immediately after resuming normal operation of this furnace, rather than within 180 days.

**The requirements for opacity observations in the issued permit for the EAFs are more rigorous than those in the draft permit, as generally recommended by this comment. The issued permit generally requires observations of opacity from the melt shop on a weekly basis. If an opacity level of 25 percent or more is observed, which approaches the applicable standard of 30 percent, daily observations are required until the levels of opacity that are observed return to below 25 percent.<sup>22</sup> This approach is appropriate because this melt shop does not have an open roof monitor. The primary purpose of opacity observations is to verify the continued, general physical integrity of the melt shop building, which should not vary greatly or deteriorate from day to day. This is different than the circumstances of a melt shop that has an open roof monitor, in which the primary purpose of opacity observations is to verify the effectiveness with which emissions are captured by furnace evacuation and primary and secondary capture hooding.**

**The timing for emission testing of the EAFs required by the issued permit is not significantly different from that in the draft permit. The timing of emission testing for EAF No. 8, if this furnace would ever resume operation, is unchanged. A reasonable amount of time is provided for thorough shakedown of this furnace following an extended outage and subsequent performance in due time of emission testing. The total amount of time that has been provided to accomplish this is consistent with general provisions of the**

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<sup>21</sup> The Notice of Lodging of this Settlement Agreement was published in the Federal Register, 68 FR 6180 – 6181, February 6, 2003.

<sup>22</sup> The applicable opacity standard for the EAFs and melt shop is 30 percent, pursuant to 35 IAC 212.123. A value of 25 percent opacity was selected as the trigger for daily opacity observations as it would require daily observations if there is a small compliance margin with the standard. “Daily” observations are defined as observations on 5 out of 7 operating days of the EAFs, so as to accommodate difficulties that could be reasonably encountered by Alton Steel in scheduling opacity observations with a small number of staff who are qualified to perform such observations.

**NSPS for emissions testing. For EAF No. 7, additional time is provided for testing of emissions to be completed, 18 months rather than 12 months. This is because the melt shop is currently operating at a level of production that is well below that at which a significant increase in emissions should actually occur. There is not a need to speedily confirm the emissions of EAF No. 7 as related to the netting analysis. It is preferable that ample time be provided to enable testing of this furnace to be well thought out and properly performed for all pollutants under representative operating conditions of the furnace. This also enables comprehensive emission testing for EAF No. 7 to be coordinated with the testing of the ladle metallurgy furnace (LMF) that is now also required by the issued permit.**

20. Because the EAFs are subject to the USEPA's rules for Compliance Assurance Monitoring (CAM), 40 CFR 64.2, the construction permit should, at a minimum, include the same requirements as the CAM rules. From emission test results, Alton Steel should be required to develop emission factors that correlate to baghouse pressure drop, fan motor amperes, static pressure and temperature of the exhaust, and other relevant operating parameters.

**The operation of the EAFs is not subject to USEPA's CAM rules at this time, as the CAM rules are initially addressed during the processing of CAAPP permits for sources.<sup>23</sup> The "future" applicability of the CAM rules as part of the processing and issuance of a CAAPP permit for this plant does not provide a legal basis to impose relevant requirements of the CAM rules on Alton Steel as part of the processing of this construction permit.**

**Moreover, the CAM rules do not require that a source develop emission factors from emission test results in the manner suggested by this comment. Rather, the CAM rules require a source to formally establish levels of operating parameters or an "operational envelope" for an emission units and its associated control device within which compliance with applicable standards and limits may be assured. For this purpose, it is reasonable to expect that Alton Steel will rely on opacity as a key operating parameter as related to the effectiveness of both capture and control of PM emissions from the EAFs.**

#### Other Comments

21. Construction Permit No. 00010015, by its own terms, expired long ago and is no longer valid. Pursuant to the Standard Condition 6(a), the emission units covered by this permit are not allowed to operate. This permit only allowed a 30-day period of operation for "shakedown and testing." See Standard Condition 6(b). This shakedown period ended on or before October 28, 2004. See *Letter, October 28, 2004, Jeannine Kelly, Alton Steel, to Donald Sutton, Illinois EPA.*

**As a permit issued pursuant to authority under Title I of the Clean Air Act, Construction Permit 00010015 is still in effect. Laclede undertook at least one of the actions addressed by this construction permit, emission units addressed by this permit are still in existence, and this permit has not been superseded by a subsequent permit or permit action. The**

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<sup>23</sup> A CAAPP permit has not yet been issued for this plant. the Illinois EPA is currently reviewing an application for a CAAPP permit for the plant, Application No. 96020056.

**authorization to operate new or modified equipment pursuant to this permit, as addressed by this comment, is a separate matter from whether the conditions in permit continue in effect to apply to and govern the emission units that are addressed by the permit.**

22. In the period since Construction Permit 00010015 expired, Alton Steel has not held a legally-valid permit. Although “Construction” Permit 03030101 was issued for the plant on November 4, 2005,<sup>24</sup> the permit is invalid and without legal effect. First, this permit was issued under the mistaken assumption that “the operating permit for the plant was maintained by Laclede Steel...” See Condition 2. An operating permit was not in effect for the plant either before or after this “permit” was issued. Second, this construction permit was not issued for any “construction project.” Instead, this permit is intended to allow Alton Steel to operate, but does not comply with any of the procedural requirements for an operating permit. Third, the plant restarted after an extended shut down and was required to obtain a construction permit before restarting. This permit is not a valid construction permit because it lacks BACT and LAER limits, was not accompanied by an air quality analysis, and was not subject to a public comment period.

**As noted by this comment, at a minimum, Alton Steel’s operation of the plant since September 2003 has been addressed by Construction Permit 03030101. Operation of the plant has also been addressed by state operating permits. In particular, various state operating permit permits originally issued to Laclede Steel were transferred over to Alton Steel on May 27, 2003 and continue in effect to address the operation of the plant.<sup>25</sup>**

**As further observed by this comment, resumption of operation of the plant by Alton Steel required a construction permit. Construction Permit 03030101 is that construction permit. This permit is also a valid construction permit. Since Alton Steel’s resumption of operation did not entail a major modification and this construction permit specifically does not authorize a major modification from resumption of operation, this permit was not required to include BACT and LAER limits, be accompanied by an air quality analysis, or be subject to a public comment period.**

23. Because Alton Steel has not held a legally valid permit, even based on the construction permits issued for the plant, the plant’s “allowable” emissions are zero. Without an operating permit pursuant to 35 IAC 201.144,<sup>26</sup> the plant cannot operate, so it has no allowable emissions. Any decrease in emissions from 1995-1996 levels was not “creditable” for the 2000 netting analysis because the 1995-1996 emissions exceeded the

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<sup>24</sup> Construction Permit 03030101 was originally issued on May 16, 2003. It was subsequently reissued several times, including November 4, 2005. It was most recently reissued on November 2, 2006.

<sup>25</sup> Section 39.5(4)(a) of the Environmental Protection Act provides that “An owner or operator of a CAAPP source shall not be required to renew an existing State operating permit for any emission unit at such CAAPP source once a complete application timely submitted prior to expiration of the State operating permit has been deemed complete. -

<sup>26</sup> 35 IAC 201.144 provides that “No person shall cause or allow the operation of any existing emission source of any existing air pollution control equipment without first obtaining an operating permit from the Agency ...” Unlike the Title V operating permit program under the federal Clean Air Act, there is no “application shield” under the state operating permit program that allows a source to operate without a permit if a timely and complete application for an operating permit has been submitted.

“allowable” emissions, which were zero, and a decrease in actual emissions is only creditable for netting purposes if the allowable emissions exceed the new level of emissions, 40 CFR 52.21(b)(3)(vi)(a). Allowable emissions, as defined by 40 CFR 52.21(b)(16), are those allowed, *inter alia*, by the most stringent SIP limit.

**Laclede operated (and Alton Steel now operates) the plant pursuant to permit(s) issued by the Illinois EPA. Even if this were not the case, a legal requirement to hold a permit is not an emission limitation, as is addressed in the PSD definition of allowable emissions at 40 CFR 52.21(b)(16). In addition, as the plant has been modified, 35 IAC 201.143 is the relevant state rule that governs the requirement for operating permit, not 35 IAC 201.144.**

#### **FOR ADDITIONAL INFORMATION**

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

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## **ATTACHMENT 1:**

### **LISTING OF SIGNIFICANT CHANGES BETWEEN THE DRAFT AND ISSUED PERMITS**

Condition 1: This provision, which provides a narrative description of the history and nature of the permit, has been revised to address the circumstances of the issued permit. In particular, the issued permit no longer addresses changes to the burners on EAF No. 7, as Alton Steel has determined Laclede did not actually carry out this change authorized by the original construction permit. The issued permit also does not increase the allowable steel production of the plant above the level in the original construction permit, instead setting a slightly lower limit for the production of the plant.

Condition 2: The listing of emission units has been revised to indicate that EAF No. 8 is not currently being operated but is on reserve status.

Condition 6(a)(i): The annual production of the melt shop, determined as the output of the EAFs, is limited to 750,000 tons, rather than 786,000 tons.

Condition 6(a)(ii): Operational limits are set for the fishing department (rolling mill) that restrict the type (natural gas) and amount of fuel used in the reheat furnaces, as relevant to the emissions of this mill.

Condition 6(b): Operation and maintenance of the emission units in the melt shop in accordance with good air pollution control practice is explicitly required, including operation of the EAFs in accordance with written procedures developed and maintained by Alton Steel.

Conditions 6(c): Alton Steel is required to notify the Illinois EPA before returning EAF No. 8 to service pursuant to the issued permit. This will enable the Illinois EPA to review Alton Steel's evaluation showing that the activities that would be entailed in returning EAF No. 8 to service (, which furnace has now been idle for over five years), does not entail a modification for purposes of NSPS, PSD or NA NSR.

Condition 7(a)(i): Limits for PM emissions and opacity are sets for the baghouses for the EAFs to facilitate practical enforceability of provisions addressing the PM emissions of the EAFs and proper operation of these baghouse. The standards of the NSPS, 40 CFR 60, Subpart AAa, for stack emissions have been used as they are considered to be generally representative of the performance levels of properly operated baghouses on electric arc furnaces.

Conditions 7(a)(ii): Revised emission limits are set for the EAFs that are consistent with the final Netting Exercise for the issued permit.

Condition 7(b): Emission limits are set for the ladle metallurgy furnace (LMF).

Condition 7(d): The provisions setting emission limits for steel finishing (rolling) now generically address the single finishing mill now remaining at the plant (the 14" rolling mill) without further identifying the mill.

Condition 8-1(a)(i) and (ii): Testing of emissions of the LMF, as well as EAF No. 7, is required, with 18 month allowed for this testing to be completed (rather than 12 months) to enable coordinated testing of representative operation of the two furnaces.

Condition 8-2(c): Observations of opacity from the melt shop are generally required on a weekly basis, with provision for more frequent observations (5 out of 7 operating days) if there is a small margin of compliance with the applicable opacity standard (25 percent or higher opacity compared to the standard of 30 percent opacity).

Condition 14: A provision is added to explicitly state that this construction permit is “separate” from other ongoing activities involving Alton Steel, such as USEPA’s investigation into the compliance status of the plant and the Illinois EPA’s processing of a Clean Air Act Permit Program (CAAPP permit for the plant).

Tables I and II: The emission data in the Attachment have been updated to be consistent with Netting Exercise for the issued permit.