BEFORE THE ILLINOIS POLLUTION CONTROL BOARD

UNITED STATES STEEL CORPORATION, a Delaware corporation, Petitioner, v. ILLINOIS ENVIRONMENTAL PROTECTION AGENCY, Respondent.	)	PCB No. 12-___ (Air Permit Appeal)

NOTICE OF FILING

TO: Mr. John Therriault
Assistant Clerk of the Board
Illinois Pollution Control Board
100 West Randolph Street
Suite 11-500
Chicago, Illinois 60601
(VIA ELECTRONIC MAIL)

(SEE PERSONS ON ATTACHED SERVICE LIST)

PLEASE TAKE NOTICE that I have today filed with the Office of the Clerk of the Illinois Pollution Control Board a copy each of an **PETITION FOR REVIEW, ENTRY OF APPEARANCE OF KATHERINE D. HODGE,** and **ENTRY OF APPEARANCE OF MONICA T. RIOS** on behalf of United States Steel Corporation, copies of which are hereby served upon you.

Respectfully submitted,

UNITED STATES STEEL CORPORATION,
Petitioner,

Dated: October 5, 2011

By:/s/ Katherine D. Hodge
Katherine D. Hodge

Katherine D. Hodge
Monica T. Rios
HODGE DWYER & DRIVER
3150 Roland Avenue
Post Office Box 5776
Springfield, Illinois 62705-5776
(217) 523-4900

CERTIFICATE OF SERVICE

I, Katherine D. Hodge, the undersigned, certify that I have served the attached PETITION FOR REVIEW, ENTRY OF APPEARANCE OF KATHERINE D. HODGE, and ENTRY OF APPEARANCE OF MONICA T. RIOS, upon:

Mr. John Therriault
Assistant Clerk of the Board
Illinois Pollution Control Board
100 West Randolph Street
Suite 11-500
Chicago, Illinois 60601

via electronic mail on October 5, 2011; and upon:

Division of Legal Counsel
Illinois Environmental Protection Agency
1021 North Grand Avenue East
Post Office Box 19276
Springfield, Illinois 62794-9276

by depositing said documents in the United States Mail, postage prepaid, in Springfield, Illinois, on October 5, 2011

By: /s/ Katherine D. Hodge
Katherine D. Hodge

USSC:005/Fil/NOF-COS –EOAs – Petition for Review

BEFORE THE ILLINOIS POLLUTION CONTROL BOARD

UNITED STATES STEEL CORPORATION, a Delaware corporation,	)	
Petitioner,	)	
v.	)	PCB No. 12-___ (Air Permit Appeal)
ILLINOIS ENVIRONMENTAL PROTECTION AGENCY,	)	
Respondent.	)	

PETITION FOR REVIEW

NOW COMES Petitioner, UNITED STATES STEEL CORPORATION ("U.S. Steel"), a Delaware corporation, by and through its attorneys, HODGE DWYER & DRIVER, pursuant to Section 40(a)(1) of the Illinois Environmental Protection Act ("Act"), 415 ILCS 5/40(a)(1), 35 Ill. Admin. Code § 105.204 and 35 Ill. Admin. Code § 105.Subpart B, and petitions the Illinois Pollution Control Board ("Board") for review of the Construction Permit issued to U.S. Steel by the Illinois Environmental Protection Agency ("Illinois EPA") on August 31, 2011.

In support of this Petition, U.S. Steel states as follows:

I. BACKGROUND

1. U.S. Steel owns and operates an integrated steel mill plant in Granite City, Illinois (Facility I.D. No. 119813AAI) (the "Facility") pursuant to Revised Clean Air Act Permit Program ("CAAPP") Permit No. 96030056 ("Revised CAAPP Permit"), issued by Illinois EPA on May 2, 2011. *See* http://yosemite.epa.gov/r5/in_permt.nsf/93a421690cb50df18625762300769ee3/1312cb5d9ab23e6286257918004b2d92/$FILE/96030056%20Final%20Revised%20CAAPP%20Permit.pdf. As part of the steel making

process, the Facility operates two basic oxygen process furnaces ("BOP Furnaces"). The BOP Furnaces are used to melt and refine scrap metal and molten iron into steel.

2. On August 31, 2011, Illinois EPA issued a Construction Permit (Application No. 11050006) to U.S. Steel for the installation of a new Control System for Charging and Tapping of the BOP Furnaces at the Facility. The Construction Permit is attached hereto as Exhibit 1.

3. The Control System is intended to reduce emissions of particulate matter in accordance with the Memorandum of Understanding ("MOU"), dated July 1, 2010, between U.S. Steel and Illinois EPA. The MOU is attached hereto as Exhibit 2.

4. The MOU provides that, as an emission reduction project, U.S. Steel will install and operate secondary emission control for tapping, consisting of a "a dedicated tapping emission control system that includes a fabric filter control device (baghouse)." Exhibit 2 at Section 4(c)(i); *see also* Exhibit 2 at Sections 4(c) and (d) (describing requirements and timelines for the emission reduction projects for secondary emission control for tapping and charging). In addition, the MOU provides that U.S. Steel will "evaluate the current emission control system for charging and potential projects to reduce particulate matter emissions from charging." Exhibit 2 at Section 4(d)(i).

5. In accordance with the MOU, on April 29, 2011, U.S. Steel submitted an application to construct a "new baghouse and related equipment to employ better capture and control of particulate emissions from charging and tapping operations at the two basic oxygen furnaces (BOFs) at our Granite City steel production facility," and to modify the (then) anticipated Revised CAAPP Permit. The permit application is attached hereto as Exhibit 3.

6. Thereafter, U.S. Steel and Illinois EPA engaged in a number of discussions regarding the permit application, the new control system, and the draft construction permit, as well as the appropriate procedures related to issuance of the construction permit.

7. On August 31, 2011, Illinois EPA issued the final Construction Permit for the "Control System for Charging and Tapping of the BOP Furnaces;" however, U.S. Steel did not have the opportunity to review and provide comments on the final Construction Permit prior to its issuance. Illinois EPA has yet to act on the application to modify the Revised CAAPP Permit. Instead, Illinois EPA included requirements in the Construction Permit that are in direct conflict with certain conditions, in the Revised CAAPP Permit.

8. Section 40(a)(1) of the Act states that an "applicant may, within 35 days after the date on which the Agency served its decision on the applicant, petition for a hearing before the Board to contest the decision of the Agency." 415 ILCS 5/40(a)(1). The Construction Permit was issued on August 31, 2011, and U.S. Steel received a copy of the final Construction Permit via U.S. Mail on September 6, 2011. Therefore, this Petition is timely filed.

9. As set forth in more detail below, U.S. Steel submits this Petition for Review of the Construction Permit on the following grounds:

II. ILLINOIS EPA FAILED TO UTILIZE THE INTEGRATED PROCESSING PROCEDURE OR, IN THE ALTERNATIVE, TO PROCESS A SIGNIFICANT MODIFICATION OF THE REVISED CAAPP PERMIT, THUS RESULTING IN CONFLICTING REQUIREMENTS BETWEEN THE CONSTRUCTION PERMIT AND THE REVISED CAAPP PERMIT RELATED TO CERTAIN WORK PRACTICES AND OPERATIONAL CONDITIONS AT THE BOP FURNACES.

10. The Permit application provides in relevant part:

> Appendix A includes a table of existing permit conditions that will be superseded by this project or required to be modified or deleted as appropriate. In addition, U.S. Steel has provided form 283 CAAPP in the event that the Granite City Works CAAPP permit is issued during the review of this permit application. CAAPP permit conditions from the permit version that was noticed for public comment on March 16, 2011 are included in the table.

Exhibit 3 at Section 6.0. In addition, Appendix A specifically provides a table identifying the conditions in the Revised CAAPP Permit that would need to be modified, i.e., these work practices and operational conditions are contained in Condition 7.5.5-3(a) and (b) and Condition 7.5.6(h) of the Revised CAAPP Permit, and are identified therein as Title I conditions established in previously issued Permits 72080043 and 95010001. Further, the table is prefaced by the following statement: "Title I Conditions and related Operating Permit Conditions to be revised in the CAAPP permit to reflect Charging and Tapping Baghouse." *Id.* at Appendix A.

11. The application clearly provides that Title I conditions in the Revised CAAPP Permit would need to be revised due to the installation of the new control system. U.S. Steel also clearly articulated to Illinois EPA during its discussions regarding the application and draft permit that CAAPP permit conditions, i.e., those conditions related to certain work practices and operational conditions referenced above, would require revision as a result of the installation of the new control system in order to

avoid conflicting requirements between the Construction Permit and the Revised CAAPP Permit.

12. Illinois EPA has a means of processing construction permits in a way that addresses not only the issuance of the Construction Permit, but also revisions to the Revised CAAPP Permit. In 2009, Illinois EPA and the United States Environmental Protection Agency ("USEPA") entered into a Memorandum of Agreement for the Implementation of the Title V Operating Permit Program ("MOA"), which includes the "acceptable procedures for integrating the modification of a CAAPP permit with the processing of a construction permit." The MOA is attached hereto as Exhibit 4; *see* MOA at 10 (Section X).

13. U.S. Steel identified in the permit application, as well as in discussions with Illinois EPA, that the Revised CAAPP Permit would need to be modified. Illinois EPA failed to use the integrated processing procedures, which were established to address this very situation, where a construction permit prompts necessary modifications to a CAAPP permit.

14. As an alternative to utilizing integrated processing procedures, Illinois EPA could have addressed the conflicting requirements between the Construction Permit and the Revised CAAPP Permit through a significant modification to the Revised CAAPP Permit, pursuant to Section 39.5(14)(c) of the Act. 415 ILCS 5/39.5(14)(c). As noted above, U.S. Steel clearly intended for Illinois EPA to modify its Revised CAAPP Permit as part of this permitting transaction. In fact, U.S. Steel included the 283-CAAPP form (Request for a Title I Incorporation into the CAAPP: T1, T1 Revised (TIR), T1 New (T1N)) in its permit application. *See* Exhibit 3. If Illinois EPA chose not to utilize

integrated processing to modify the Revised CAAPP Permit, a reasonable alternative would have been to incorporate the requirements from the Construction Permit and modify the Revised CAAPP Permit conditions via significant modification.

15. Thus, because there are conflicting requirements between the Construction Permit and the Facility's Revised CAAPP Permit as a result of the installation of the new control system, the Board should remand the Construction Permit back to Illinois EPA and direct Illinois EPA to process the permit in accordance with the integrated processing procedures or to incorporate the necessary revisions into the Revised CAAPP Permit via significant modification procedures.

III. REQUIREMENTS ESTABLISHED IN CONDITION 1(a) ARE IN CONFLICT WITH REQUIREMENTS IN THE REVISED CAAPP PERMIT AND REQUIRE CLARIFICATION AS TO ENFORCEABILITY.

16. Condition 1 of the Construction Permit is entitled "Introduction," and subsection (a) describes the project and "activities that will occur as part of this project." In addition, Condition 1(a) explains that when the new control system is operational, "certain requirements that currently apply to these furnaces and the existing ESP would no longer be feasible, necessary or appropriate as the emissions would be controlled by the affected system."

17. The prefatory language to the Construction Permit states that "[t]his Permit is subject to the standard conditions attached hereto and the following special condition(s):" In addition, Condition 2 of the Construction Permit is entitled "Other Requirements." Considered in conjunction with each other, these statements imply that Condition 1 is an enforceable requirement of the Construction Permit. Further,

statements in Condition 1(a) appear to contradict requirements in the Revised CAAPP Permit.

18. For example, Condition 1(a) provides that "fume suppression would no longer be feasible." However, the Revised CAAPP Permit requires fume suppression. *See* Revised CAAPP Permit Condition 7.5.5-3(a)(ii) (requiring a fume suppression system when tapping is occurring during overlapping operations). The conflicting requirements and the ambiguity regarding whether Condition 1(a) is enforceable warrants clarification from Illinois EPA. Therefore, the Board should remand the Construction Permit with direction to Illinois EPA to clarify and/or revise Condition 1(a).

IV. ILLINOIS EPA FAILED TO GRANT U.S. STEEL'S REQUEST TO CONTINUE TO OPERATE DURING MALFUNCTION OR BREAKDOWN, AND CONDITION 4(c) OF THE PERMIT INACCURATELY DESCRIBES OPERATIONS DURING MALFUNCTIONS OF THE NEW CONTROL SYSTEM.

19. In its Permit Application, U.S. Steel specifically requested authority to continue to operate the BOP Furnaces during malfunction or breakdown of the new control system. *See* Exhibit 3 at 204-CAAPP Form (Request to Continue to Operate during Malfunction or Breakdown).

20. No where in the permit does Illinois EPA clearly grant authority for U.S. Steel to continue operations during a malfunction or breakdown of the new control system. Moreover, Condition 4(c) of the Construction Permit provides:

> After the shakedown of the affected system is complete and in no case later than six months after initial operation of the affected furnaces with the affected system, the existing ESP shall only be used for control of emissions from charging and tapping of the affected furnace(s) during a malfunction of the affected system.

Exhibit 1 at Condition 4(c).

21. Condition 4(c) of the Construction Permit is not achievable at the Facility. Because of system modifications for the installation of the new control system, directing emissions from charging and tapping to the ESP during a malfunction or breakdown of the new control system cannot occur immediately. The condition is ambiguous and does not recognize that such emissions cannot immediately be directed to the ESP during malfunction of the new control system.

22. Accordingly, because the Construction Permit does not explicitly authorize operation during malfunction or breakdown of the new control system, and Condition 4(c) does not reflect actual physical operational conditions, the Construction Permit must be corrected to explicitly authorize operation of the BOP Furnaces during malfunction or breakdown of the new control system, and it must accurately reflect the operation of the BOP Furnaces during malfunction or breakdown of the control system. Therefore, the Board should remand the Construction Permit to Illinois with direction to revise the Construction Permit to clearly authorize operation of the BOP Furnaces during a malfunction or breakdown of the new control system, to modify the conditions associated with the same, and to reflect actual operations of the Facility.

V. CONDITION 5(a) INCLUDES A REQUIREMENT THAT IS NOT RELATED TO THE NEW CONTROL SYSTEM.

23. Condition 5(a) of the Construction Permit includes the following text:

> Note: Pursuant to the Agreement, the emission of particulate matter from the existing ESP for the affected furnaces, as would be measured by USEPA Method 5, 5D, or 17, must not exceed 0.01 gr/dcsf, beginning January 1, 2012.

Exhibit 1 at Condition 5(a). The above-referenced Note follows the text of Condition 5(a), limiting emissions of particulate matter from the affected baghouse. *Id.*

24. The emissions limit referenced in the Condition 5(a) Note is for the existing ESP, which is not related to the project authorized by the Construction Permit, i.e. the installation of a new baghouse control system for charging and tapping of the existing BOP Furnaces and, thus, an emission limit for the ESP should not be included in this Construction Permit. Furthermore, the requirement that the ESP emission limitation be met by January 1, 2012 clearly shows that the limitation has no relation to this project, as construction of the new control system will not be completed by January 1, 2012. Therefore, the Board should remand the Construction Permit to Illinois EPA with direction to revise Condition 5(a) to delete the Note.

VI. CONDITION 6(a) REQUIRES CLARIFICATION AS TO THE TESTING REQUIREMENTS FOR THE ESP.

25. Condition 6(a) provides that U.S. Steel must test the affected baghouse and ESP. However, it would be unreasonable and inefficient to test the ESP during charging and tapping operations, since those emissions will be routed to the new baghouse. The condition is further ambiguous as the testing provisions in Condition 6(a)(ii) specifies what testing would be required for the "affected system" which is defined in the Construction Permit as "the new control system for charging and tapping of the BOP furnaces." By definition, the new control system for charging and tapping of the BOP furnaces does not include the ESP. The inclusion of "ESP" in Condition 6(a) is ambiguous and, therefore, the means of compliance with Condition 6(a) is unclear. To the extent that Illinois EPA intended to require U.S. Steel to direct the charging and tapping emissions to the ESP during a baghouse malfunction, and then to test during that event, U.S. Steel cannot anticipate if a malfunction will occur and, if it does, whether emissions testing of the ESP during such malfunction would be feasible. However, in the

event of a catastrophic failure of the baghouse, adjustments could be made to resume normal operations by capturing the charging and tapping emissions with the ductwork routed to the ESP. This is the scenario in which the BOP Furnaces operate now, and compliance with the applicable NESHAP has already been established.

26. Because Condition 6(a) is unclear as to the testing requirements for the ESP, the Board should remand the Construction Permit to Illinois EPA with direction to clarify such testing requirements.

VII. CONDITION 6(a)(iii) INCLUDES TESTING REQUIREMENTS THAT ARE BEYOND THE SCOPE OF THIS PROJECT.

27. Condition 6(a)(iii) of the Construction Permit requires U.S. Steel to conduct emissions testing for not only filterable and condensable particulate matter, but also NOx, CO, VOM, and lead. As discussed in the permit application, the focus of this project is to install a new control system that reduces particulate matter emissions. Accordingly, emission testing should be limited to particulate matter.

28. Because Condition 6(a)(iii) requires testing for emissions of pollutants that are not the target of this project, and the new control system is not designed to control emissions of contaminants other than particulate matter, the Board should remand the Construction Permit to Illinois EPA with direction to revise Condition 6(a)(iii) to require testing for this project's only target pollutant for which the control system was designed to remove – particulate matter.

VIII. CONDITION 9(b)(v) IS AMBIGUOUS AND INCLUDES REQUIREMENTS THAT ARE BEYOND THE SCOPE OF THIS PROJECT.

29. Condition 9(b) of the Construction Permit states:

> Within 18 months of the date that tapping and charging of both affected furnaces are initially controlled with the affected system, the Permittee shall submit a Project Report to the Illinois EPA that evaluates emissions of particulate matter (PM10 and PM2.5) and lead from the affected furnaces with the affected system. This report shall include the following:
>
> * * *
>
> v. An assessment of the distribution of emissions of particulate matter and lead from the furnaces between the ESP, baghouse, and roof monitor (uncaptured emissions) on a short term basis, with the typical distribution of emissions, the distribution of emissions with maximum emissions at the roof monitor, and the distribution of emissions with maximum emissions at the ESP, all for normal operation.

Exhibit 1 at Condition 9(b)(v).

30. Condition 9(b)(v) requires an assessment of the distribution of emissions of particulate matter and lead from the furnaces between the ESP, baghouse, and roof monitor. It is not clear as to how the assessment should be conducted and what operations should be included. With language at Condition 9(b), it would appear that the assessment is to address emissions during charging and tapping which are to be directed to the new baghouse; however, the language at Condition 9(b)(v) includes an assessment of emissions and distribution to the ESP. The ESP will no longer be controlling emissions from charging and tapping with the installation of the new control system; therefore, it is not clear if Illinois EPA intended the assessment to include refining, which will not be affected by the project, or if the inclusion of the ESP in Condition 9(b)(v) is in error.

31 Because Condition 9(a) is unclear as to the scope of the assessment and the inclusion of ESP, the Board should remand the Construction Permit to Illinois EPA with direction to clarify these requirements.

32. Condition 9(b)(v) also requires an assessment of lead emissions, and further requires that such assessment be included in the Project Report.

33. The permit application for installation of the new control system does not include any information or discussion on lead emissions. The focus of the MOU and the new control system is to reduce particulate matter emissions from charging and tapping at the BOP Furnaces and, thus, U.S. Steel should not be required to assess lead emissions from the BOP Furnaces under this Construction Permit. Therefore, the Board should remand the Construction Permit to Illinois EPA with direction to revise Condition 9 to exclude any requirements to assess and report on lead emissions from the BOP Furnaces.

IX. CONDITION 10 IS INCONSISTENT WITH THE CAAPP PERMIT.

34. Condition 10 grants operating authority for the BOP Furnaces with the new control system under the Construction Permit "until final action is taken to address this system in the CAAPP permit for the source." As noted above, the conditions in the Revised CAAPP Permit that are in conflict with the Construction Permit are "applicable requirements," which can only be changed by processing of a significant modification of the Revised CAAPP Permit, or by the integrated permitting approach. As established above, Illinois EPA failed to process the permit application using integrated procedures or as a significant modification and, thus, there are conflicting requirements between the Construction Permit and the Revised CAAPP Permit. It will be impossible for U.S. Steel to operate the BOP Furnaces with the new control system in compliance with the

conflicting requirements set forth in the Construction Permit and those in the Revised CAAPP Permit.

35. Accordingly, as requested in previous sections of this Petition, the Board should remand the Construction Permit to Illinois EPA with direction to process the permit in a manner that allows for modification to the Revised CAAPP Permit, consistent with the operation of the Facility.

XI. CONCLUSION

36. The Illinois EPA's action of issuing the Construction Permit is arbitrary, capricious, not supported by the Act or Board regulations, and is an abuse of discretion.

37. As set forth above, the Illinois EPA failed to utilize integrated processing procedures or, in the alternative, to process the application as a significant modification to the Revised CAAPP Permit, and included conditions in the Construction Permit that are in conflict with existing conditions in the Revised CAAPP Permit, and that also do not accurately reflect operations at the Facility. Accordingly, the Construction Permit must be revised in order to remedy the procedural, as well as substantive defects.

38. Therefore, the Board should remand the Construction Permit back to Illinois EPA with direction to Illinois EPA to revise the Construction Permit consistent with the objections raised herein, and to utilize integrated processing procedures or to revise the Revised CAAPP Permit via significant modification proceedings.

WHEREFORE, Petitioner UNITED STATES STEEL CORPORATION, petitions the Illinois Pollution Control Board for a hearing on the issues raised herein regarding the Construction Permit.

Respectfully submitted,

UNITED STATES STEEL CORPORATION,
Petitioner,

Dated: October 5, 2011

By: /s/ Katherine D. Hodge
One of Its Attorneys

Katherine D. Hodge
Monica T. Rios
HODGE DWYER & DRIVER
3150 Roland Avenue
Post Office Box 5776
Springfield, Illinois 62705-5776
(217) 523-4900

USSC:005/Filings/Petition for Review

EXHIBIT 1

ILLINOIS ENVIRONMENTAL PROTECTION AGENCY

1021 North Grand Avenue East, P.O. Box 19276, Springfield, Illinois 62794-9276 • (217) 782-2829
James R. Thompson Center, 100 West Randolph, Suite 11-300, Chicago, IL 60601 • (312) 814-6026

PAT QUINN, GOVERNOR

217/782-2113

CONSTRUCTION PERMIT

PERMITTEE

U. S. Steel - Granite City Works
Attn: Jill Foust, Environmental Director
1951 State Street
Granite City, Illinois 62040

Application No.: 11050006 I.D. No.: 119813AAI
Applicant's Designation: Date Received: May 4, 2011
Subject: Control System for Charging and Tapping of the BOP Furnaces
Date Issued: August 31, 2011
Location: 1951 State Street, Granite City, Madison County

This Permit is hereby granted to the above-designated Permittee to CONSTRUCT emission source(s) and/or air pollution control equipment consisting of a baghouse control system for charging and tapping of the existing basic oxygen process (BOP) furnaces, as described in the above-referenced application. This Permit is subject to standard conditions attached hereto and the following special condition(s):

1. Introduction

a. This permit authorizes the installation of a new control system (the affected system) for emissions of particulate matter from charging and tapping of the two existing Basic Oxygen Process (BOP) Furnaces. The existing electrostatic precipitator (ESP) would continue to be used to control particulate matter emissions from these furnaces from refining. The installation of the affected system is an emission reduction project required by a Memorandum of Understanding between the Permittee (United States Steel Corporation) and the Illinois EPA, dated July 1, 2010, for reductions in particulate matter emissions from the Permittee's Granite City Works (Agreement).

Activities that will occur as part of this project include:

- Installation of a baghouse with a nominal capacity of 900,000 actual cubic feet per minute.
- Upgrade of the existing local capture hoods for charging and installation of new ductwork to connect to the new baghouse rather than to the existing ESP.
- Installation of local capture hoods for tapping and ductwork to connect to the new baghouse.
- Installation of dampers, actuators, automated operating system and other equipment associated with the new ductwork.
- Repairs and upgrades to the enclosures at each BOP furnace.

Beginning when emissions of particulate matter from tapping and charging of the BOP furnaces are controlled with the affected system, certain requirements that currently apply to these furnaces and the existing ESP would no longer be feasible, necessary or appropriate as the emissions would be controlled by the affected system. In particular, use of fume suppression to control emissions from tapping would no longer be feasible because of the presence of induced draft from the local capture hoods. The affected system would also be designed with the capacity to control emissions from tapping of one furnace and charging of the other furnace at the same time so that tapping and charging of the furnaces do not have to be staggered.

b. For the purpose of this permit:

i. The "affected system" is the new control system for charging and tapping of the BOP furnaces, as described above.

ii. The "affected baghouse" is the baghouse in the affected system.

iii. The "affected furnaces" are the existing BOP furnaces.

2. Other Requirements

a. This permit does not affect applicable regulatory requirements for the affected furnaces, including associated control equipment, as set forth in the CAAPP permit for the source, including the following:

i. Applicable emission standards of the NESHAP, 40 CFR 63, Subpart FFFFF, including standards for both captured and uncaptured emissions.

ii. Applicable requirements of the NESHAP for operation and maintenance, including requirements for implementation of good air pollution control practice to minimize emissions.

iii. Applicable requirements of the NESHAP for operational monitoring.

iv. Applicable requirements of the NESHAP for periodic emission testing and observations of opacity.

3. Non-Applicability Provisions

a. This permit is issued based on this project not constituting a major modification subject to Prevention of Significant Deterioration (PSD), 40 CFR 52.21, or Major Stationary Sources Construction and Modification (MSSCAM), 35 IAC Part 203. This is because this project is an emissions reduction project that will reduce particulate matter emissions (See Attachment 1) and will

not act to increase production or emissions of any pollutants from the affected furnaces.

b. This permit is issued based on this project, as described in the application, not constituting a modification of the affected furnaces under the federal New Source Performance Standards, 40 CFR 60, Subpart Na, as the project has the primary function of reducing emissions and therefore is not a modification pursuant to 40 CFR 60.14(e)(5).

4. Operational Requirements

a. The design capacity of the affected baghouse shall be at least 900,000 scfm, so as to be able to simultaneously control tapping of one affected furnace and charging of the other and the simultaneous tapping of both furnaces.

b. The Permittee shall prepare and submit to the Illinois EPA its initial revisions to the plans for the affected furnaces required by the NESHAP, 40 CFR 63 Subpart FFFFF (i.e., the operation and maintenance plan and startup, shutdown and malfunction plan) to address the affected system at least 30 days in advance of initial operation of the furnaces with the affected system.

c. After the shakedown of the affected system is complete and in no case later than six months after initial operation of the affected furnaces with the affected system, the existing ESP shall only be used for control of emissions from charging and tapping of the affected furnace(s) during a malfunction of the affected system.

5. Emission Limits

a. The emissions of particulate matter from the affected baghouse, as would be measured by USEPA Method 5, 5D or 17, shall not exceed 0.005 grains per dry standard cubic foot (gr/dcsf), consistent with the Agreement.

Note: Pursuant to the Agreement, the emissions of particulate matter from the existing ESP for the affected furnaces, as would be measured by USEPA Method 5, 5D or 17, must not exceed 0.01 gr/dcsf, beginning January 1, 2012.

6. Emission Testing Requirements

a. The Permittee shall have emissions testing conducted for the affected baghouse and the existing ESP by a qualified testing service as follows:

i. Performance testing for filterable particulate matter (PM) shall be promptly conducted, in accordance with 40 CFR 63.7824(c), following initial operation of the affected furnaces with the affected system to establish new

operating limits for the capture systems for the affected furnaces pursuant to the NESHAP. For this purpose, performance testing shall be conducted for operation of the affected furnaces with the affected system and for other mode(s) of operation for which the Permittee seeks to show compliance with the NESHAP (e.g., control of tapping by the ESP in the event of a malfunction of the affected system).

ii. Further testing for PM emissions and testing for emissions of filterable particulate matter (PM_{10} and $PM_{2.5}$), condensable particulate matter, NO_x, CO, VOM and lead shall be conducted within one year of initial operation of both affected furnaces with tapping and charging controlled by the affected system. In conjunction with this emission testing, the Permittee shall conduct or have conducted measurements as necessary to evaluate the actual operation and capture efficiency achieved by the hoods for charging and tapping as compared to their design.

iii. Follow-up testing for emissions of filterable particulate matter (PM, PM_{10}, and $PM_{2.5}$), condensable particulate matter and lead shall be conducted between 24 and 36 months of the completion of the emission testing required by Condition 6(a)(ii).

iv. In conjunction with the emission testing required by Condition 6(a)(ii) or (iii), the Permittee shall conduct or have conducted measurements as necessary for a determination of the control efficiency of the affected baghouse for particulate matter, which may be determined either "directly" (e.g., by measurements of the particulate loading at the inlet of the baghouse for comparison to the measured emissions) or "indirectly" (e.g., by recordkeeping for the amount of material collected by the baghouse over a week or month, to determine an average collection rate per hour or per steel production cycle, for comparison to the measured emission rates).

b. i. Testing for emissions of filterable particulate matter (PM) shall be conducted using applicable methods and procedures specified by the NESHAP.

ii. Applicable USEPA test methods and procedures shall be used for testing of emissions of pollutants other than PM, including the following methods for measurement of the emissions of different pollutants, unless other methods are approved by the Illinois EPA as part of the approval of a test plan. Refer to 40 CFR 60, Appendix A, and 40 CFR 51, Appendix M, for USEPA test methods.

PM_{10} and $PM_{2.5}$ (filterable)	Method 201 or 201A
Particulate (condensable)	Method 202

iii. During all test runs for emissions of filterable particulate, observations of the opacity of the exhaust from the roof monitor of the BOP furnace shop shall also be conducted in accordance with applicable methods and procedures of the NESHAP and information recorded on the timing of charging, tapping and refining of each affected furnace, so opacity data may be correlated with the operation of the furnaces.

c. The Permittee shall submit a written plan to the Illinois EPA for review and comment for this testing. This plan shall be submitted at least 60 days prior to the actual date of testing and include the following information as a minimum:

i. A description of the planned emission test.

ii. The person(s) who will be performing sampling and analysis and their experience with similar tests.

iii. The specific operating conditions under which testing will be performed, including a discussion of why these conditions will appropriately address operation of the BOPF and associated control systems and the levels of operating parameters of the affected system at or within which compliance is intended to be shown.

iv. The specific determination of emissions intended to be made, including sampling and monitoring locations.

v. The test methods that will be used, with the specific analysis method.

vi. Any minor changes in standard methodology proposed to accommodate the specific circumstances of testing, with justification.

vii. A statement that the testing will be performed by a qualified independent testing service.

d. i. Prior to carrying out each set of emission tests, the Permittee shall notify the Illinois EPA a minimum of 30 days prior to the scheduled date of these tests with the exact date and time that testing would begin, to enable the Illinois EPA to witness these tests.

ii. If the scheduled date for testing is changed, the Permittee shall inform the Illinois EPA within 5 working days of the new date and time for testing.

iii. Notwithstanding the above, the Illinois EPA may at its discretion accept notifications with shorter advance notice provided that the Illinois EPA will not accept such

notifications if it interferes with the Illinois EPA's ability to observe testing.

e. The Permittee shall submit three copies of the Final Report(s) for emissions tests to the Illinois EPA no later than 60 days after completion of sampling. The Final Report shall include at a minimum:

i. General information, i.e., date of test, names of testing personnel, and names of Illinois EPA observers.

ii. A summary of the measured emissions in pounds per hour, lbs/ton steel and, for particulate matter, gr/dscf.

iii. Detailed data for operating parameters of the control system operating parameters during testing, including data recorded by the operational monitoring systems and, as applicable, proposed operating parameter limits based on the emission testing.

iv. Description of test method(s), including description of sampling points, sampling train, analysis equipment, and test schedule.

v. Data and calculations, including copies of all raw data sheets and records of laboratory analyses, sample calculations, and data on equipment calibration.

vi. A comparison of measured data to applicable emission standards and limits and a statement whether compliance was demonstrated.

vii. The data for opacity of the exhaust through the roof monitor of the BOP furnace shop during testing and the timing of charging, refining and tapping of the affected furnaces, as determined and recorded pursuant to Condition 6(b)(iii), accompanied by copies of the certification(s) pursuant to USEPA Method 9 of the individual(s) who made the observations of opacity.

f. The Permittee shall retain copies of emission test reports for at least five years beyond the date that an emission test is superseded by a subsequent test.

7. Monitoring and Instrumentation Requirements

a. The Permittee shall fulfill applicable monitoring requirements of the NESHAP, 40 CFR 63 Subpart FFFFF, for the affected system, including:

i. As required by 40 CFR 63.7800(b)(3) and 63.7830(a), monitoring for selected operating parameters of the capture system that are appropriate for its design and

representative and reliable indicators of the performance of the capture system. At a minimum, the selected parameters must include parameters that indicate the level of the ventilation draft and the damper position settings for the capture system when operating to collect emissions, including revised settings for seasonal variations. The selection of operating parameters must be supported by documentation in the revised operation and maintenance plan for the affected furnaces.

ii. As required by 40 CFR 63.7800(b)(4) and 63.7830(b)(3), operating a bag leak detection system on the affected baghouse, with timely initiation of appropriate corrective action(s) in the event that the bag leak detection system alarm is triggered.

b. The Permittee shall monitor the following operating parameters for the affected system if not otherwise monitored pursuant to the NESHAP. For this purpose, the Permittee may either directly monitor these parameters or indirectly derive and automatically record data for these parameters from other operating parameters that are continuously monitored.

i. The actual volumetric flow rate, in cubic feet per minute (acfm), through each separately ducted hood.

ii. The actual volumetric flow rate (acfm) at the inlet to the baghouse.

8. Recordkeeping Requirements

a. The Permittee shall maintain a file or other records that contain the following information:

i. Design data for the capture hoods for charging and tapping, including the analysis for the levels of capture achieved by the hoods for emissions of particulate, i.e., percentages of total emissions from charging and tapping that are collected and directed to the affected baghouse.

ii. The manufacturer's specifications for the capacity (acfm and scfm) and particulate matter emissions (gr/dscf) of the affected baghouse and the manufacturer's recommended operating and maintenance procedures for the baghouse.

b. After tapping and charging of both affected furnaces first begin to be controlled with the affected system, the Permittee shall keep records of the following information for the furnaces. The preparation of these records by the Permittee may be automated or these records may be prepared manually or by a combination of manual and automated methods. These records may be combined with other records that are kept by the Permittee for the furnaces.

i. Records for the furnaces for the total number of steel production cycles per day (24-hours).

ii. Records for each furnace for each steel production cycle for:

A. The time at which the charging phase begins;

B. The time at which the charging phase ends;

C. The time at which the tapping phase begins; and

D. The time at which the tapping phase ends.

iii. Records for the following information, as calculated from data monitored pursuant to Condition 7(b):

A. The average flow rate through each separately ducted hood for each affected furnace for each steel production cycle.

B. The average flow rate at the inlet to the baghouse per steel production cycle (acfm/cycle), daily (24-hour) average.

c. After tapping and charging of both affected furnaces first begin to be controlled with the affected system, the Permittee shall keep records for periods when tapping or charging of an affected furnace is not controlled by the affected system, including a description of the event, the probable cause(s) of the event, the remedial action(s) taken and any measure(s) taken to prevent similar events in the future.

9. Reporting Requirements

a. The Permittee shall notify the Illinois EPA of the following:

i. Finalization of the design for the affected baghouse, within 15 days, which notification shall include the following information: total filter area, number of compartments, number of bags and dimensions and the selected filter material with performance specifications.

ii. Periods, if any, during the construction of the affected system that would be accompanied by extended interruptions in the operation of the affected furnaces (i.e., interruptions whose duration would be longer than 24 hours). For this purpose, the Permittee may provide a separate notice in advance of each such period, with the notice submitted at least 5 days in advance if possible or otherwise as soon as practical. Alternatively, the Permittee may provide copies of the schedules for the construction of the affected system identifying such

periods, with a schedule initially submitted within 10 days of the initial development of the schedule and revised schedules submitted within 15 days of substantial revisions to the schedule.

iii. The planned date for initial operation of the affected furnace(s) with the affected system, at least 5 days in advance. If operation with the affected system will be phased, i.e., the emissions from charging and tapping of both furnaces will not initially all be controlled by the affected system, this notification shall include the planned schedule for phase-in of control of emissions by the affected system.

iv. The date that tapping and charging of both affected furnaces are initially controlled with the affected system, no later than 30 days after this date.

v. The date that the shakedown of the affected system is completed, no later than 30 days after this date.

b. Within 18 months of the date that tapping and charging of both affected furnaces are initially controlled with the affected system, the Permittee shall submit a Project Report to the Illinois EPA that evaluates the emissions of particulate matter (as PM_{10} and $PM_{2.5}$) and lead from the affected furnaces with the affected system. This report shall include the following:

i. An assessment of the actual levels of capture (percent) that are achieved for emissions from charging and tapping, during normal operation of the furnaces and control systems.

ii. An assessment of the actual level of overall control (percent) for emissions from charging and tapping, for normal operation.

iii. An assessment of overall emissions of particulate matter and lead from the affected furnaces on a short-term basis (in lbs/hour and lbs/ton of steel), with typical and maximum emission rates, for normal operation.

iv. A review of the probable effect of upsets in the operation of the affected system on the short-term emissions, considering upsets that have been experienced.

v. An assessment of the distribution of emissions of particulate matter and lead from the furnaces between the ESP, baghouse and roof monitor (uncaptured emissions) on a short-term basis, with the typical distribution of emissions, the distribution of emissions with maximum emissions at the roof monitor, and the distribution of

emissions with maximum emissions at the ESP, all for normal operation.

vi. An assessment of the actual reductions in annual emissions of particulate matter (tons/year) that should be achieved with the affected system.

vii. An assessment of the typical range of opacity from the roof monitor during tapping of a single furnace, charging of a single furnace, overlapping tapping and charging of the furnaces, and periods of operation other than charging and tapping.

viii. Appropriate data and analysis to support the above assessments.

c. The Permittee shall report any deviation of the requirements of this permit to the Illinois EPA with the periodic reports for the affected furnaces required by the CAAPP permit for the source, until such time as operation of the furnaces with affected system is addressed by the CAAPP permit for the source. These reports shall include a description of the deviation, the probable cause of the deviation, the corrective actions taken, and any preventive measures taken.

10. Authorization for Operation

The Permittee is allowed to operate the affected furnaces with the affected system under this construction permit until final action is taken to address this system in the CAAPP permit for the source.

If you have any questions on this permit, please contact Kevin Smith at 217/782-2113.

Edwin C. Bakowski

Edwin C. Bakowski, P.E.
Manager, Permit Section
Division of Air Pollution Control

Date Signed: August 31, 2011

ECB:KLS:psj

cc: FOS - Region 3, Illinois EPA
CAAPP Permit File - 96030056

ATTACHMENT I:

Evaluation of Change in PM Emissions of the BOP Furnaces (tons/year)

Emission	Current Emissions	Future Emissions	Change
Electrostatic Precipitator	262.8	235.5	-27.3
Baghouse	----	139.9	139.9
Roof Monitor	176.7	30.0	-146.7
Total	439.5	405.4	-34.1

KLS:psj

STATE OF ILLINOIS
ENVIRONMENTAL PROTECTION AGENCY
DIVISION OF AIR POLLUTION CONTROL
P. O. BOX 19506
SPRINGFIELD, ILLINOIS 62794-9506

STANDARD CONDITIONS FOR CONSTRUCTION/DEVELOPMENT PERMITS ISSUED BY THE ILLINOIS ENVIRONMENTAL PROTECTION AGENCY

July 1, 1985

The Illinois Environmental Protection Act (Illinois Revised Statutes, Chapter 111-1/2, Section 1039) authorizes the Environmental Protection Agency to impose conditions on permits which it issues.

The following conditions are applicable unless susperseded by special condition(s).

1. Unless this permit has been extended or it has been voided by a newly issued permit, this permit will expire one year from the date of issuance, unless a continuous program of construction or development on this project has started by such time.

2. The construction or development covered by this permit shall be done in compliance with applicable provisions of the Illinois Environmental Protectlon Act and Regulations adopted by the Illinois Pollution Control Board.

3. There shall be no deviations from the approved plans and specifications unless a written request for modification, along with plans and specifications as required, shall have been submitted to the Agency and a supplemental written permit issued.

4. The permittee shall allow any duly authorized agent of the Agency upon the presentatiou of credentials, at reasonable times:

   a. to enter the permittee's property where actual or potential effluent, emission or noise sources are located or where any activity is to be conducted pursuant to this permit,

   b. to have access to and to copy any records required to be kept under the terms and conditions of this permit,

   c. to inspect, including during any hours of operation of equipment constructed or operated under this permit, such equipment and any equipment required to be kept, used, operated, calibrated and maintained under this permit,

   d. to obtain and remove samples of any discharge or emissions of pollutants, and

   e. to enter and utilize any photographic, recording, testing, monitoring or other equipment for the purpose of preserving, testing, monitoring, or recording any activity, discharge, or emission authorized by this permit.

5. The issuance of this permit:

   a. shall not be considered as in any manner affecting the title of the premises upon which the permitted facilities are to be located,

   b. does not release the permittee from any liability for damage to person or property caused by or resulting from the construction, maintenance, or operation of the proposed facilities,

   c. does not release the permittee from compliance with other applicable statutes and regulations of the United States, of the State of Illinois, or with applicable local laws, ordinances and regulations,

   d. does not take into consideration or attest to the structural stability of any units or parts of the project, and

BUREAU OF AIR

For assistance in preparing a permit application contact the Permit Section,

Illinois Environmental Protection Agency
Division of Air Pollution Control
Permit Section
1021 N. Grand Ave E.
P.O.Box 19506
Springfield, Illinois 62794-9506

r a regional office of the ield Operations Section. ie regional offices and their 'eas of responsibility are iown on the map. The ldresses and telephone mbers of the regional fices are as follows:

Illinois EPA
Region 1
Bureau of air, FOS
9511 West Harrison
Des Plaines, Illinois 60016
347/294-4000

Illinois EPA
egion 2
415 North University
eoria, Illinois 61614
09/693-5463

Illinois EPA
gion 3
09 Mall Street
llinsville, Illinois 62234
8/346-5120

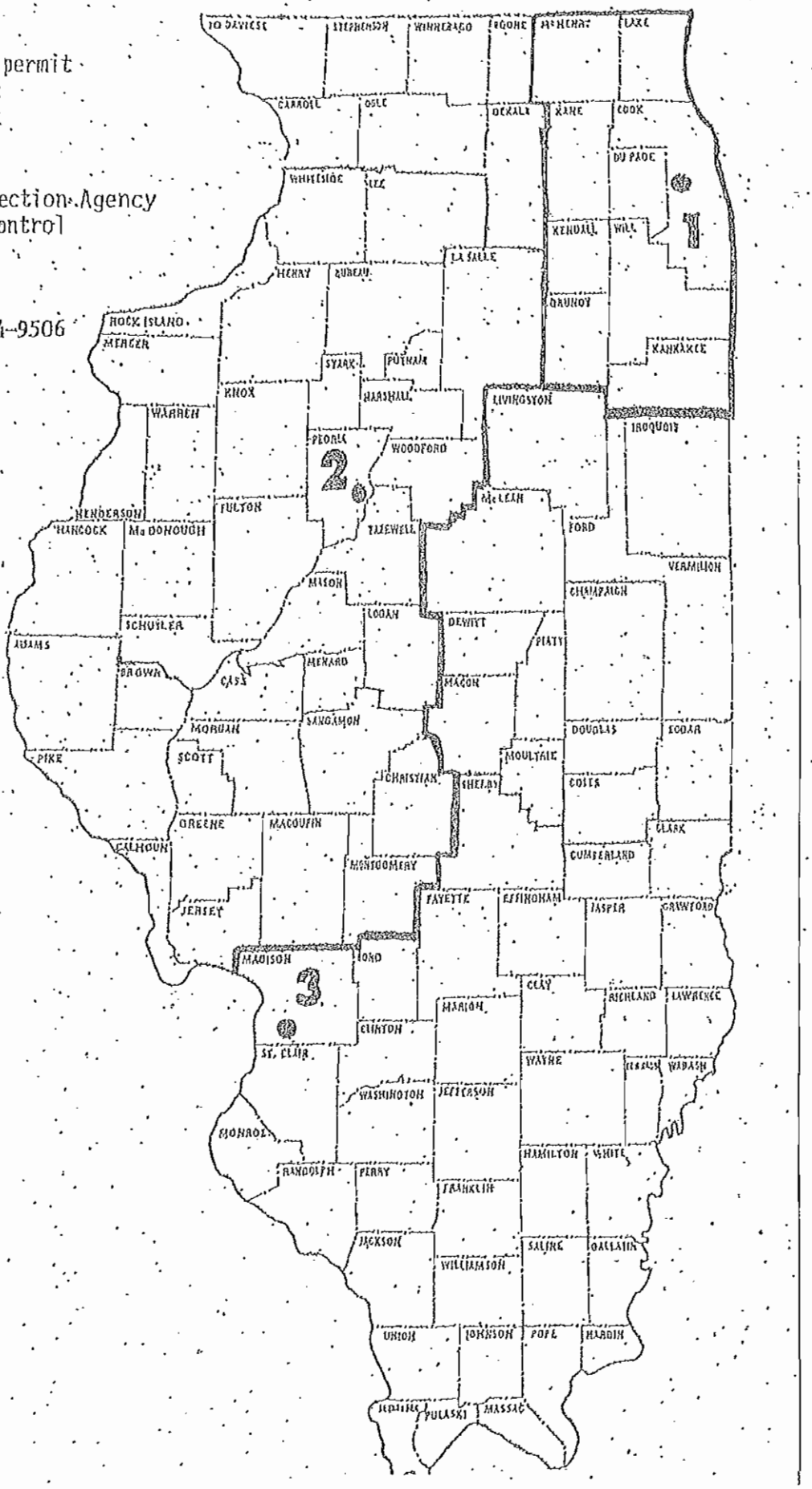


EXHIBIT 2

United States Steel Corporation
Granite City Works and
IEPA Memorandum of Understanding

The Memorandum of Understanding (MOU or Agreement) is entered into by and between United States Steel Corporation (U. S. Steel) and the Illinois Environmental Protection Agency (IEPA), and is dated and effective as of the last date of signature in the signature block.

U. S. Steel and IEPA have reached an Agreement that will achieve reductions in emissions of particulate matter from U. S. Steel's Granite City Works, with the specific intent of reducing the emissions of particulate matter$_{2.5}$ (PM2.5). This MOU sets forth the terms of the Agreement between U. S. Steel and IEPA and sets forth the intended regulatory uses for those emission reductions. This agreement does not relieve U.S. Steel from the continuing obligation to comply with requirements of applicable Federal and State regulations, construction or operating permits, and other applicable requirements to control emissions.

1. Enhancements to Compliance Procedures
    a. Within 2 months of the effective date of this agreement, U. S. Steel shall begin installation of an enhanced operational monitoring system for the capture systems for particulate matter emissions from the Basic Oxygen Furnaces (BOF), including installation, operation and maintenance of monitoring devices to verify the performance of each capture system during the various steps in the steelmaking process. This will include establishment of values of operating parameters that reliably indicate and ensure adequate capture of emissions by each existing hood.
    b. Within 3 months of beginning operation of any additional new pollution control equipment at the BOF, as prescribed in this MOU, U. S. Steel shall implement enhanced operational monitoring for such new capture system for particulate matter. Such implementation will include installation, operation and maintenance of appropriate monitoring devices. These devices will verify the performance of the new capture system. Such monitoring devices will be used to establish values of operating parameters that reliably indicate and ensure adequate capture of emissions by each new hood.
    c. Within 2 months of the effective date of this agreement, U. S. Steel shall conduct opacity readings of emissions escaping from any openings in the Basic Oxygen Process Furnace (BOPF) building in accordance with USEPA Method 9 in 40 CFR Part 60, Appendix A. These readings shall be performed for at least five (5) days out of every seven (7). A day is defined as any day when a BOF is in operation for a minimum of four hours during conditions that are acceptable for Method 9 readings. A minimum of 60 consecutive minutes of opacity readings must be obtained and must encompass at least one steel production cycle. A production

cycle is defined as the beginning of scrap charging to the completion of deslagging of the steelmaking vessel. Results of these readings shall be reduced to three (3) minute rolling averages. U.S. Steel shall maintain appropriate records for all opacity measurements and these records shall be made available upon request from the IEPA.

d. U.S. Steel may, at some later date, submit a formal request to IEPA to streamline the monitoring requirements. This request shall be submitted as an application for a significant modification to the CAAPP permit.

2. Emission Limits
   a. All particulate matter emission limits in this MOU are expressed in terms of particulate as would be measured by USEPA Methods 5, 5D or 17.
   b. As of January 1, 2012, U. S. Steel shall comply with the following requirements for particulate matter emissions:
      i. Particulate matter emissions from the basic oxygen process (BOP) that exit from the electrostatic precipitator stack must not exceed 0.01 gr/dscf.
      ii. Particulate matter emissions from hot metal desulfurization and reladling (BOF Hot Metal Transfer and Desulfurization Baghouse(s)) that exit from the baghouse must not exceed 0.005 gr/dscf.
      iii. Particulate matter emissions from slag skimming (BOF Slag Skimming Baghouse(s)) that exit from the baghouse stack must not exceed 0.005 gr/dscf.
      iv. Particulate matter emissions from ladle metallurgy operations (LMF Baghouse) that exit from the baghouse stack must not exceed 0.005 gr/dscf.
   c. As of March 31, 2013, or such later date established pursuant to paragraph 4(c)(v) below, U. S. Steel will comply with the following requirements for particulate matter emissions from tapping:
      i. Emissions shall be controlled by a new baghouse.
      ii. Emissions that exit from this baghouse stack must not exceed 0.005 gr/dscf.

3. Within 2 months of the effective date of this Agreement U. S. Steel shall submit an application for a federally enforceable permit or permits to incorporate the requirements of Sections 1 and 2 above. The federally enforceable permit or permits shall include the requirements imposed by Sections 1 and 2 and appropriate requirements for emission testing, monitoring, recordkeeping and reporting associated with these requirements.

4. Emission Reduction Projects
   a. Steam Rings for the Oxygen Lances
      i. Within 6 months of the effective date of the Agreement, U. S. Steel will complete basic engineering of steam rings for the oxygen lances in the BOP shop.

ii. U. S. Steel will submit a construction permit application and an installation schedule to IEPA within 30 days of completion of the basic engineering. In consideration of the need to begin operation of the steam rings by October 31, 2011, U. S. Steel shall commence construction of the steam rings within 40-days of issuance of a final construction permit, assuming that no appeal(s) or challenge(s) of the Permit or the requirements therein have been filed with the Pollution Control Board or Federal Court within that 40-day period.

b. U. S. Steel will complete the installation and begin operation of the steam rings no later than October 31, 2011 provided that the required construction permit is obtained in a reasonable time and not appealed.

c. Secondary Emission Control for Tapping

i. Within 9 months of the effective date of the Agreement, U. S. Steel will complete the basic engineering for the installation and operation of a dedicated tapping emission control system that includes a fabric filter control device (baghouse).

ii. The tapping emission control system will be designed for optimal capture to minimize emissions from tapping, which have the potential of escaping to the atmosphere from the BOPF building. The air pollution control device for the captured emissions will be designed to comply with a particulate matter emission rate of 0.005 grains per dry standard cubic feet exhaust, at the stack.

iii. Within 30 days of the completion of the basic engineering for the new control system, U. S. Steel will submit a construction permit application for the new system to the IEPA that contains a schedule for the design engineering, construction and initial start up of the new tapping emission control system.

iv. In consideration of the need to begin operation of the secondary emission controls for tapping by March 31, 2013, IEPA shall act on all required permit(s) within three months of receipt of permit application(s) from U. S. Steel. U. S. Steel shall commence construction of the secondary emission controls for tapping within 40-days of issuance of a final construction permit, assuming that no appeal(s) or challenge(s) of the Permit or the requirements therein have been filed with the Pollution Control Board or Federal Court within that 40-day period.

v. U. S. Steel will begin operation of the new tapping emission control system no later than March 31, 2013 provided that required permits are obtained in a reasonable time and not appealed.

d. Secondary Emission Control for Charging
   i. As part of the engineering for the new tapping emission control system, U. S. Steel will also evaluate the current emission control system for charging and potential projects to reduce particulate matter emissions from charging. As part of this evaluation, U. S. Steel will evaluate improvements to the capture efficiency achieved for charging emissions and ducting some or all of the captured charging emissions, which currently are controlled by the electrostatic precipitator, to the new control device for tapping or another new baghouse.
   ii. If the evaluation completed in paragraph 4(d)(i) does not support implementing additional projects to reduce particulate emission from charging, U. S. Steel will submit within 9 months of the effective date of the Agreement, an evaluation report that includes a summary of the evaluation, statement on decision criteria for potential projects, and incremental cost per ton of pollutant reduction analysis.
   iii. If the evaluation completed in paragraph 4(d)(i) does support implementing additional projects to reduce particulate emissions from charging, U. S. Steel will complete within 9 months of the effective date of the agreement the basic engineering for installation and operation of an upgrade to the existing charging control system. Future submittals will coincide with the tapping hood schedule identified in paragraph 4(c)(iii) – 4(c)(v).

5. Regulatory Uses of Emission Reductions
   a. For the Granite City BOP, the particulate emission reductions set forth in the MOU will be incorporated into the Illinois 1997 $PM_{2.5}$ National Ambient Air Quality Standard State Implementation Plan (NAAQS SIP) submitted to U. S. EPA in accordance with 40 CFR §51.1001, et seq., and §§ 110 and 172 of the Clean Air Act
   b. IEPA shall use its best efforts to support and represent that the requirements of this MOU satisfy U. S. Steel's obligations towards Illinois EPA's requirement to demonstrate compliance with the 1997 $PM_{2.5}$ NAAQS.

c. IEPA will provide U. S. Steel with an opportunity to review and provide comments on the 1997 $PM_{2.5}$ modeled attainment demonstration.
d. U. S. Steel and IEPA shall mutually support and use best efforts to obtain the appropriate permits and approvals incorporating the terms of this agreement to make the reductions federally enforceable so that they can be incorporated into the Illinois 1997 $PM_{2.5}$ SIP.
e. U. S. Steel's commitments and obligations under this MOU are subject to and conditioned upon: 1) the issuance and sustained validity of a federally enforceable permit or permits containing the particulate matter emission reductions requirements set forth in the MOU; 2) IEPA's approval that the particulate matter emission reductions satisfy U. S. Steel's requirement for the 1997 $PM_{2.5}$ NAAQS SIP; and 3) IEPA not pursuing a regulation pursuant to the 1997 PM2.5 NAAQS containing additional restrictions for the Granite City Works BOP. U. S. Steel and IEPA shall mutually support and use best efforts to obtain the appropriate permits and SIP approvals based on this agreement.
f. In developing rules, regulations, or state implementation plan revisions designed to comply with the $PM_{2.5}$ NAAQS, IEPA, taking into account all emission reduction efforts and other appropriate factors, will use best efforts to seek $PM_{2.5}$ reductions in regards to future NAAQS from other sources before seeking additional emission reductions from the U. S. Steel BOP.

6. Force Majeure

U. S. Steel shall not be liable for any failure or delay in performance under this MOU (other than for delay for submitting a permit application) to the extent said failures or delays are caused by extraordinary circumstances beyond U. S. Steel's reasonable control and occurring without its fault or negligence, provided that, U. S. Steel gives prompt written notice, with full details following the occurrence of the cause relied upon. Dates by which performance obligations are scheduled to be met will be extended for a period of time equal to the time lost due to any delay so caused.

For United States Steel Corporation	For Illinois EPA
MS Williams	Douglas P Scott
Michael S. Williams Senior Vice President – North American Flat Roll Operations	Douglas P. Scott Director, Illinois EPA
Date: 6 / 30 / 2010	Date: 7 / 1 / 2010

EXHIBIT 3

United States Steel Corporation
Pittsburgh, PA 15219

BNY Mellon, N.A.
Pittsburgh, PA

0001102060

60-160
433

DO NOT CASH UNLESS WARNING BAND AND CHECK BACKGROUND ARE BLUE. BACKGROUND AREA CHANGES GRADUALLY FROM TOP TO BOTTOM.

04/21/2011
VOID AFTER 90 DAYS

FIVE HUNDRED AND NO/100 DOLLARS

PAY ONLY 500 00 CTS

#BWNMFFK

TO THE ORDER OF

ILLINOIS STATE OF
ENVIRONMENTAL PROTECTION AGNCY
PERMIT SECTION
PO BOX 19506
SPRINGFIELD IL 62794-9506

0005

AUTHORIZED SIGNATURE REQUIRED

⑈0001102060⑈ ⑆043301601⑆ 000⑉3228⑈

LINE BELOW TOP WARNING BAND IS MICROPRINTED. WATERMARK ON BACK, HOLD AT ANGLE TO VIEW WHEN CHECKING ENDORSEMENTS.

April 29, 2011

CERTIFIED MAIL NO. 7009 2250 0004 2479 9853
RETURN RECEIPT REQUESTED

Mr. Edwin C. Bakowski, P.E.
Manager of Permit Section
Division of Air Pollution Control
Illinois Environmental Protection Agency
P.O. Box 19276
Springfield Illinois 62794

Subject: U.S. Steel - Granite City Works, Granite City, Ill
Facility ID No. 119813AAI
Construction Permit Application

United States Steel Corporation is submitting the attached Construction Permit application materials for a new baghouse and related equipment to employ better capture and control of particulate emissions from charging and tapping operations at the two basic oxygen furnaces (BOFs) at our Granite City steel production facility. The purpose of the project is to reduce emissions from the BOFs during tapping and charging by supplementing the existing ESPs that are currently used and will continue to be used for primary emission controls at the BOP Shop. This application is being submitted under the provisions of the Memorandum of Understanding (MOU) entered into between United States Steel Corporation and the Illinois Environmental Protection Agency, dated July 1, 2010. (Attachment A contains a copy of the MOU and Sections 2.c and 4.c and d of the MOU address the specific requirements that are related to this application).

Please find enclosed as Attachment B, a technical support document for the proposed baghouse project which includes: an updated process description; the specific design specifications for the new baghouse; a schedule for the implementation of the project consistent with the requirements of the MOU; emission calculations quantifying the reduction in filterable particulate emissions associated with the project; an assessment of regulatory requirements associated with the proposed project; and proposed amendments we believe are needed to accommodate the installation of the new baghouse and fulfill the requirements of the MOU. Attachment C contains application permit forms in support of this Construction permit application. We have also enclosed a Check for $500, based on the calculated permit fee on Form 197.

If you have any questions or require any additional information, please contact Jason Braxton at JKBraxton@uss.com or by phone at 412-433-6544 or contact Jill Foust at jafoust@uss.com or by phone at 618-451-3391.

Sincerely,

Richard Veitch
General Manager
Granite City Works
United States Steel Corp.
encl

Attachment A

July 1, 2010 Memorandum of Understanding

United States Steel Corporation
Granite City Works and
IEPA Memorandum of Understanding

The Memorandum of Understanding (MOU or Agreement) is entered into by and between United States Steel Corporation (U. S. Steel) and the Illinois Environmental Protection Agency (IEPA), and is dated and effective as of the last date of signature in the signature block.

U. S. Steel and IEPA have reached an Agreement that will achieve reductions in emissions of particulate matter from U. S. Steel's Granite City Works, with the specific intent of reducing the emissions of particulate matter$_{2.5}$ (PM2.5). This MOU sets forth the terms of the Agreement between U. S. Steel and IEPA and sets forth the intended regulatory uses for those emission reductions. This agreement does not relieve U.S. Steel from the continuing obligation to comply with requirements of applicable Federal and State regulations, construction or operating permits, and other applicable requirements to control emissions.

1. Enhancements to Compliance Procedures
    a. Within 2 months of the effective date of this agreement, U. S. Steel shall begin installation of an enhanced operational monitoring system for the capture systems for particulate matter emissions from the Basic Oxygen Furnaces (BOF), including installation, operation and maintenance of monitoring devices to verify the performance of each capture system during the various steps in the steelmaking process. This will include establishment of values of operating parameters that reliably indicate and ensure adequate capture of emissions by each existing hood.
    b. Within 3 months of beginning operation of any additional new pollution control equipment at the BOF, as prescribed in this MOU, U. S. Steel shall implement enhanced operational monitoring for such new capture system for particulate matter. Such implementation will include installation, operation and maintenance of appropriate monitoring devices. These devices will verify the performance of the new capture system. Such monitoring devices will be used to establish values of operating parameters that reliably indicate and ensure adequate capture of emissions by each new hood.
    c. Within 2 months of the effective date of this agreement, U. S. Steel shall conduct opacity readings of emissions escaping from any openings in the Basic Oxygen Process Furnace (BOPF) building in accordance with USEPA Method 9 in 40 CFR Part 60, Appendix A. These readings shall be performed for at least five (5) days out of every seven (7). A day is defined as any day when a BOF is in operation for a minimum of four hours during conditions that are acceptable for Method 9 readings. A minimum of 60 consecutive minutes of opacity readings must be obtained and must encompass at least one steel production cycle. A production

cycle is defined as the beginning of scrap charging to the completion of deslagging of the steelmaking vessel. Results of these readings shall be reduced to three (3) minute rolling averages. U.S. Steel shall maintain appropriate records for all opacity measurements and these records shall be made available upon request from the IEPA.

d. U.S. Steel may, at some later date, submit a formal request to IEPA to streamline the monitoring requirements. This request shall be submitted as an application for a significant modification to the CAAPP permit.

2. Emission Limits
   a. All particulate matter emission limits in this MOU are expressed in terms of particulate as would be measured by USEPA Methods 5, 5D or 17.
   b. As of January 1, 2012, U. S. Steel shall comply with the following requirements for particulate matter emissions:
      i. Particulate matter emissions from the basic oxygen process (BOP) that exit from the electrostatic precipitator stack must not exceed 0.01 gr/dscf.
      ii. Particulate matter emissions from hot metal desulfurization and reladling (BOF Hot Metal Transfer and Desulfurization Baghouse(s)) that exit from the baghouse must not exceed 0.005 gr/dscf.
      iii. Particulate matter emissions from slag skimming (BOF Slag Skimming Baghouse(s)) that exit from the baghouse stack must not exceed 0.005 gr/dscf.
      iv. Particulate matter emissions from ladle metallurgy operations (LMF Baghouse) that exit from the baghouse stack must not exceed 0.005 gr/dscf.
   c. As of March 31, 2013, or such later date established pursuant to paragraph 4(c)(v) below, U. S. Steel will comply with the following requirements for particulate matter emissions from tapping:
      i. Emissions shall be controlled by a new baghouse.
      ii. Emissions that exit from this baghouse stack must not exceed 0.005 gr/dscf.

3. Within 2 months of the effective date of this Agreement U. S. Steel shall submit an application for a federally enforceable permit or permits to incorporate the requirements of Sections 1 and 2 above. The federally enforceable permit or permits shall include the requirements imposed by Sections 1 and 2 and appropriate requirements for emission testing, monitoring, recordkeeping and reporting associated with these requirements.

4. Emission Reduction Projects
   a. Steam Rings for the Oxygen Lances
      i. Within 6 months of the effective date of the Agreement, U. S. Steel will complete basic engineering of steam rings for the oxygen lances in the BOP shop.

ii. U. S. Steel will submit a construction permit application and an installation schedule to IEPA within 30 days of completion of the basic engineering. In consideration of the need to begin operation of the steam rings by October 31, 2011, U. S. Steel shall commence construction of the steam rings within 40-days of issuance of a final construction permit, assuming that no appeal(s) or challenge(s) of the Permit or the requirements therein have been filed with the Pollution Control Board or Federal Court within that 40-day period.

b. U. S. Steel will complete the installation and begin operation of the steam rings no later than October 31, 2011 provided that the required construction permit is obtained in a reasonable time and not appealed.

c. Secondary Emission Control for Tapping

i. Within 9 months of the effective date of the Agreement, U. S. Steel will complete the basic engineering for the installation and operation of a dedicated tapping emission control system that includes a fabric filter control device (baghouse).

ii. The tapping emission control system will be designed for optimal capture to minimize emissions from tapping, which have the potential of escaping to the atmosphere from the BOPF building. The air pollution control device for the captured emissions will be designed to comply with a particulate matter emission rate of 0.005 grains per dry standard cubic feet exhaust, at the stack.

iii. Within 30 days of the completion of the basic engineering for the new control system, U. S. Steel will submit a construction permit application for the new system to the IEPA that contains a schedule for the design engineering, construction and initial start up of the new tapping emission control system.

iv. In consideration of the need to begin operation of the secondary emission controls for tapping by March 31, 2013, IEPA shall act on all required permit(s) within three months of receipt of permit application(s) from U. S. Steel. U. S. Steel shall commence construction of the secondary emission controls for tapping within 40-days of issuance of a final construction permit, assuming that no appeal(s) or challenge(s) of the Permit or the requirements therein have been filed with the Pollution Control Board or Federal Court within that 40-day period.

v. U. S. Steel will begin operation of the new tapping emission control system no later than March 31, 2013 provided that required permits are obtained in a reasonable time and not appealed.

d. Secondary Emission Control for Charging

i. As part of the engineering for the new tapping emission control system, U. S. Steel will also evaluate the current emission control system for charging and potential projects to reduce particulate matter emissions from charging. As part of this evaluation, U. S. Steel will evaluate improvements to the capture efficiency achieved for charging emissions and ducting some or all of the captured charging emissions, which currently are controlled by the electrostatic precipitator, to the new control device for tapping or another new baghouse.

ii. If the evaluation completed in paragraph 4(d)(i) does not support implementing additional projects to reduce particulate emission from charging, U. S. Steel will submit within 9 months of the effective date of the Agreement, an evaluation report that includes a summary of the evaluation, statement on decision criteria for potential projects, and incremental cost per ton of pollutant reduction analysis.

iii. If the evaluation completed in paragraph 4(d)(i) does support implementing additional projects to reduce particulate emissions from charging, U. S. Steel will complete within 9 months of the effective date of the agreement the basic engineering for installation and operation of an upgrade to the existing charging control system. Future submittals will coincide with the tapping hood schedule identified in paragraph 4(c)(iii) – 4(c)(v).

5. Regulatory Uses of Emission Reductions

a. For the Granite City BOP, the particulate emission reductions set forth in the MOU will be incorporated into the Illinois 1997 $PM_{2.5}$ National Ambient Air Quality Standard State Implementation Plan (NAAQS SIP) submitted to U. S. EPA in accordance with 40 CFR §51.1001, et seq., and §§ 110 and 172 of the Clean Air Act

b. IEPA shall use its best efforts to support and represent that the requirements of this MOU satisfy U. S. Steel's obligations towards Illinois EPA's requirement to demonstrate compliance with the 1997 $PM_{2.5}$ NAAQS.

c. IEPA will provide U. S. Steel with an opportunity to review and provide comments on the 1997 $PM_{2.5}$ modeled attainment demonstration.
d. U. S. Steel and IEPA shall mutually support and use best efforts to obtain the appropriate permits and approvals incorporating the terms of this agreement to make the reductions federally enforceable so that they can be incorporated into the Illinois 1997 $PM_{2.5}$ SIP.
e. U. S. Steel's commitments and obligations under this MOU are subject to and conditioned upon: 1) the issuance and sustained validity of a federally enforceable permit or permits containing the particulate matter emission reductions requirements set forth in the MOU; 2) IEPA's approval that the particulate matter emission reductions satisfy U. S. Steel's requirement for the 1997 $PM_{2.5}$ NAAQS SIP; and 3) IEPA not pursuing a regulation pursuant to the 1997 PM2.5 NAAQS containing additional restrictions for the Granite City Works BOP. U. S. Steel and IEPA shall mutually support and use best efforts to obtain the appropriate permits and SIP approvals based on this agreement.
f. In developing rules, regulations, or state implementation plan revisions designed to comply with the $PM_{2.5}$ NAAQS, IEPA, taking into account all emission reduction efforts and other appropriate factors, will use best efforts to seek $PM_{2.5}$ reductions in regards to future NAAQS from other sources before seeking additional emission reductions from the U. S. Steel BOP.

6. Force Majeure

U. S. Steel shall not be liable for any failure or delay in performance under this MOU (other than for delay for submitting a permit application) to the extent said failures or delays are caused by extraordinary circumstances beyond U. S. Steel's reasonable control and occurring without its fault or negligence, provided that, U. S. Steel gives prompt written notice, with full details following the occurrence of the cause relied upon. Dates by which performance obligations are scheduled to be met will be extended for a period of time equal to the time lost due to any delay so caused.

For United States Steel Corporation	For Illinois EPA
MS Williams	Douglas P Scott
Michael S. Williams Senior Vice President – North American Flat Roll Operations	Douglas P. Scott Director, Illinois EPA
Date: 6 / 30 / 2010	Date: 7 / 1 / 2010

Attachment B

Technical Support Document

Technical Support Document
For Construction Permit Application
BOF Shop Secondary Emission Control System

U.S. Steel - Granite City Works,
Granite City, Ill
Facility ID No. 119813AAI

April 29, 2011

1.0 Introduction

The United States Steel Corporation Granite City Works (the Facility) is herein making application for approval to construct a pollution control device consisting of a new baghouse at the Facility's existing Basic Oxygen Process Furnace Shop (BOF Shop). The Facility is an integrated iron and steel manufacturing plant located in Granite City, Illinois. The Facility is a major source as defined by 35 IAC 203.206.

The existing BOF Shop operation is operated under Illinois Permit No. 95010001 and 72080043 (Appendix C). This application is for construction of a new emission control system for collecting and capturing BOF hot metal charging and BOF tapping emissions and modification of the existing BOFP Shop permits. While the new emission control system will replace the current technology utilized for the control of emissions from charging and tapping, the new system will supplement operating controls and existing technological controls (electrostatic precipitators) that are permitted in the existing BOF Shop operating permits.

1.1. General Facility Description

The Facility is located in Madison County, Illinois. The largest city near the Facility is St. Louis, Missouri, which is located approximately 15 kilometers southwest of the Granite City Works. The latitude and longitude of the Facility are approximately 38:41:55 and 90:08:42. The Facility occupies approximately 1,100 acres of land in an area primarily used for industrial purposes with residential and agricultural properties nearby.

The Facility is owned and operated by United States Steel Corporation. The responsible official is Richard Veitch, General Manager Granite City Works.

The primary contact for question regarding this application is Jason Braxton, Environmental Engineer, Air. His telephone number is 412-433-6544. The secondary contact for questions regarding this application is Ms. Jill Foust who may be reached at 618-451-4026.

The street address for the Facility is:

United States Steel Corporation – Granite City Works
1951 State Street
Granite City, IL 62040

The Standard Industrial Classification (SIC) Code for the Facility is 3312

2.0 Process Description

2.1. Existing BOF Shop

Molten iron from the blast furnaces is transported to the BOF Shop by torpedo cars. The iron is then transferred to the charging ladles at the reladling station. Next the iron is desulfurized. In the desulfurization stations a combination of lime and magnesium is injected into the molten iron to remove the sulfur. The sulfur reacts with the lime and magnesium and forms a layer of slag on the surface of the iron. An existing collection system with a positive pressure baghouse is used to control emissions of particulate matter from these stations. After the molten iron is desulfurized in the ladle, it is moved to a slag skimming station where a mechanical arm is used to scrape slag from the surface of the iron. This slag is scraped from the iron ladles and into slag pots. An existing collection system with a baghouse is used to control emissions from this process. No modifications to these BOF processes are within the scope of the project.

Basic Oxygen Furnace (BOF):

A fresh BOF charge usually begins with scrap metal. The scrap is charged into the BOF vessel. Molten iron is then charged into the vessel. Currently, a secondary hood is utilized to capture emissions during the charge and direct such emissions to an electric static precipitator (ESP) for control. During periods of reduced molten iron availability scrap may be preheated with a natural gas fired lance to increase the temperature and reduce the amount of molten iron needed for a heat of steel. The BOF is then closed off and an oxygen lance is inserted to begin the melting and refining process. The oxygen lance openings on each BOF are equipped with steam rings that were permitted and installed in 2010, also consistent with the aforementioned MOU. The steam rings are control measures for emissions of particulate matter from the BOF during the "oxygen blow" or refining phase when oxygen is being fed into the furnaces. The steam rings inject steam in the area between the oxygen lance and the "lance hole" in the lid of the furnaces, suppressing the emissions of particulate through this area during the refining phase. In the BOF, the injected oxygen reacts exothermically with the carbon in the iron generating heat which melts the scrap and reduces the amount of carbon in the bath thus converting the iron to steel. When the refining process is completed, the molten steel is poured or tapped into a steel transfer ladle. Fume suppression and the ESP primary hood control the emissions generated during tapping. Materials such as aluminum, silica, and manganese are added, as required, depending upon the particular steel alloy being produced. After the molten steel is tapped, the remaining slag is then dumped into a slag ladle. Emissions from these operations are currently captured and controlled with an electrostatic precipitator (ESP).

2.2. Proposed Project

In this application, the Facility proposes to construct a new emission control system to control the emission generated during the BOF hot metal charging and BOF tapping operations at the BOF Shop. To control BOF charging and tapping emissions, a new emission control system will be installed. The new emission control system will include the following major components:

- Repaired and upgraded enclosure at each furnace,
- The existing charging hoods repaired and upgraded to improve flow,
- New Tapping collection hood located in the top of each furnace enclosure,
- Reuse of the existing charging ductwork to the roof of the melt shop,
- New ductwork connecting the new tapping collection hoods and the existing charge duct to the new baghouse system,
- A new shared 900,000 acfm baghouse system consisting of a spark box, multi-compartment pulse jet baghouse, material handling system, fans and motors, to control emissions from both tapping and hot metal charging operations.
- Control dampers, actuators and system automation to optimize collection efficiency.

To improve tapping emission capture, a new hood will be located in the sloped section of each of the two (2) furnace enclosures. The new hoods will be approximately 4'-6"-wide and 26' long and will be positioned so that the furnace enclosures can contain and direct the emissions towards the new hoods. Once collected by the hood, the emissions will be directed through new ductwork to a spark box and then to the baghouse. The new baghouse will include the installation of induce draft fans to provide necessary flow to the capture hoods. In this design, fume suppression and the use of the ESP primary hood during tapping to control emissions is being replaced by a more effective baghouse air pollution control system; therefore the use of fume suppression and the ESP primary hood is no longer appropriate or required since the new system will have better capture and control.

The existing local charging hoods will continue to be used to ventilate charging emissions. These hoods are located immediately in front of each vessel. Each hood has a single off take that travels towards the center of the melt shop. The cross-sectional area of the duct immediately adjacent to the charge hoods is severely restricted for the new design flow. To reduce the high velocity and resulting pressure drop that will occur with the new ventilation volume, the duct located immediately adjacent to both existing charge hoods will be replaced with larger duct. The remainder of the existing charging duct that travels vertically through the melt shop and combines into one duct on the roof of the melt shop will continue to be used. On the roof, the existing charge duct will connect to new ductwork at the point where the existing charge duct turns towards the west to connect into the ESP duct. From this point, the collected charging emissions will be directed through the new ductwork to the spark box and baghouse. In this design, the existing local charging hoods become an integral part of the new baghouse system and

the air pollution controls for charging and tapping become a separate system isolated from the ESP operations.

A spark box will be provided to combine the flow from all the system ductwork and to reduce sparks to prevent damage to the filter bags. After the spark box, the collected emissions will travel to the baghouse. The baghouse is expected to consist of ten (10) to twelve (12) compartments rated for a design volume of 900,000 acfm with one compartment down for maintenance and one down for cleaning during normal operations.

Particulate matter is collected on the outside surface of the filter bags; periodically a compartment will be isolated for cleaning. During cleaning a high pressure pulse of air will be forced into the bags causing the dust that is collected on the surface of the bags to be ejected from the bags and fall into the compartment hopper where it is then removed by a rotary valve and discharged into a large tote bag that will be located under each compartment. The cleaned gases will exit from each compartment and enter into a common header. From this common header the flow of the cleaned gases will be induced by the fans into the stack.

The flow from each hood will be controlled by dampers equipped with actuators. The position of these dampers will be determined based on the secondary emission control system furnace operating mode. The furnace operating mode will also be used to control the total flow through the system via either fan inlet damper position or fan motor speed.

3.0 Emission Estimates

The proposed baghouse project is designed to reduce emissions of filterable particulate matter and will result in both, better capture and better control, of tapping and charging emissions. The project will not result in an increase in production or any other change in method of operation of the BOF besides utilization of the new baghouse. Therefore, a decrease in filterable particulate matter is the only change in emissions that will result by implementation of this project.

Capture

Based on the design of the new system, modeling estimates that the overall capture of emissions from charging will increase from 95% to 97%, and the overall capture of emissions from tapping, with the new tapping hood, will increase from 70% to 97%. Currently, the charging and tapping emissions that are not captured at the BOF vessels either settle within the building or are emitted from the roof monitors. It is estimated that approximately 70% of the un-captured particulate matter (PM) emissions are controlled by the building. The use of a baghouse will provide an estimated control efficiency of 97% and meet a filterable particulate grain loading of 0.005 grains per dry standard cubic feet of gas exhausted at the new baghouse stack, as compared with the estimated control efficiency of 95% and higher grain loading of 0.01 grains per dry standard cubic feet for the ESP.

Control

The average uncontrolled filterable PM (filterable) emissions from charging and tapping the BOF vessel, based on AP-42, Table 12.5-1, are 0.6 lbs. per ton of metal charged (average) and 0.92 lbs/ton of steel produced (average) respectively. The ratio of steel produced to iron charged is approximately 1.15:1.0. As such, the overall average combined filterable PM emission rate for charging and tapping is:

$$\frac{0.6 \text{ lbs PM/ ton iron charged (average)}}{1.15 \text{ ton steel/ton iron}} + 0.92 \text{ lbs PM/ ton steel produced (average)} = 1.44 \text{ lbs PM/ ton Steel}$$

Based on the capture and control estimates stated above the average controlled emission rate from charging and tapping are estimated as follows for the current ESP control system. While the rates below are based upon averages used to determine expected net emission decreases from implementation of the project, in addition no short term (e.g., hourly) increases from current operations will occur, as relative, similar short term decreases are also projected:

Average Controlled Charging Emissions from the ESP:

0.6 lbs PM/ ton iron charged x (0.95) x (1-0.95) = 0.0285 lbs PM/ ton iron Charged

$$\frac{0.0285 \text{ lbs/ton iron charged}}{1.15 \text{ ton steel/ton iron}} = 0.0248 \text{ lbs PM/ton steel}$$

Average Uncontrolled Charging Emissions from the roof monitor:

0.6 lbs PM/ ton iron charged x (1-0.95)(1-0.7)] = 0.0090 lbs PM/ ton iron Charged

$$\frac{0.0090 \text{ lbs/ton iron charged}}{1.15 \text{ ton steel/ton iron}} = 0.00783 \text{ lbs PM/ton steel}$$

Average Controlled Tapping Emissions from the ESP:

0.92 lbs PM/ ton steel x [(0.70) x (1-0.95)] = 0.0322 lbs PM/ ton steel

Average Uncontrolled Tapping Emissions from the roof monitor:

0.92 lbs PM/ ton iron charged x (1-0.70)(1-0.70)] = 0.0828 lbs PM/ ton steel

The total average filterable PM emissions with current ESP controls:

= 0.0248 + 0.00783 + 0.0322 + 0.0828 = 0.1476 lbs PM/ton steel (average)

The proposed baghouse with improved capture will result in the following average PM filterable emission rates from charging and tapping:

Average Controlled Charging Emissions from the new baghouse:

0.6 lbs PM/ ton iron charged x [(0.97) x (1-0.97)] = 0.0175 lbs PM/ ton iron Charged

$$\frac{0.0175 \text{ lbs/ton iron charged}}{1.15 \text{ ton steel/ton iron}} = 0.0152 \text{ lbs PM/ton steel}$$

Average Uncontrolled Charging Emissions from the roof monitor:

0.6 lbs PM/ ton iron charged x (1-0.97)(1-0.7)] = 0.0054 lbs PM/ ton iron Charged

$$\frac{0.0054 \text{ lbs/ton iron charged}}{1.15 \text{ ton steel/ton iron}} = 0.00470 \text{ lbs PM/ton steel}$$

Average Controlled Tapping Emissions from the new baghouse:

0.92 lbs PM/ ton steel x [(0.97) x (1-0.97)] = 0.0268 lbs PM/ ton steel

Average Uncontrolled Tapping Emissions from the roof monitor:

0.92 lbs PM/ ton iron charged x (1-0.97)(1-0.70)] = 0.00828 lbs PM/ ton steel

The average filterable PM emissions with new baghouse controls:

= 0.0152 + 0.00470 + 0.0268 + 0.00828 = 0.0549 lbs PM/ton steel

Based on the assessment presented above there will be a 63% reduction in filterable PM emissions generated by hot metal charging and tapping as a result of proposed new baghouse control system per the following calculation:

$$\frac{0.1476 \text{ lbs PM /ton steel} - 0.0549 \text{ lbs PM /ton steel}}{0.1476 \text{ lbs PM/ ton Steel}} = 0.628 = 63\%$$

This assessment is presented not as a demonstration of the specific emission rates that may be measured at an exhaust point. The actual uncontrolled emission factors are estimates of averages for similar sources. The assumed building control rate and the estimated capture efficiencies are estimates that are likely to vary over time based on a number of operational variables. In any case no short term reductions in building control rates or capture efficiencies will result by implementation of the project. From a relative point of view, however, this is a reasonable estimate of the expected emission reductions of filterable PM. There will also be a similar beneficial reduction in PM_{10} and $PM_{2.5}$ emissions, pro rata, based on the improved capture and control system.

The proposed filterable $PM/PM_{10}/PM_{2.5}$ emission limit for the exhaust from the new baghouse is 0.005 gr/dscf (per the MOU), which is equivalent to an hourly limit of:

$$\frac{0.005 \text{ gr/dscf} \times 900{,}000 \text{ dscfm} \times 60 \text{ min/hour}}{7000 \text{ gr/lb}} = 38.6 \text{ lbs/hour}$$

4.0 Regulatory Analysis

The BOF Charging and Tapping Operations are subject to Federal Rule, 40 CFR Part 63, Subpart FFFFF: National Emission Standards for Hazardous Air Pollutants for Integrated Iron and Steel Manufacturing Facilities. These regulations include requirements that emissions from the operation are limited to 0.01 gr/dscf and opacity is limited to 20% (3-minute average). The baghouse is required to have a bag leak detector. In addition, the Facilitiy's Operation and Maintenacne Plan will require updating to incorporate the new controls.

The BOF Charging and Tapping Operations are also subject to the following state rules:

- ***35 212.123, Visible Emission Limitations for All Other Emission Units*** which limits opacity to 30%. The emission unit may have an opacity greater than 30 percent but not greater than 60 percent for a period or periods aggregating 8 minutes in any 60 minute period, the emission unit is located within a 1000 ft radius from the center point of any similar emission unit, and that the higher opacity value shall be limited to 3 times in any 24 hour period.

- ***35 IAC 212.322 , Process Emission Units For Which Construction Or Modification Commenced Prior To April 14, 1972*** which limits PM emissions based on the following equation:

  $E = C + A(P)^B$

  where:
  P = process weight rate; and
  E = allowable emission rate; and
  A = 55.0
  B = 0.11; and
  C = -40.0

- ***35 212.446, Basic Oxygen Furnaces*** requires that charging, refining and tapping. particulate matter emissions from all basic oxygen furnaces (BOF) be collected and ducted to pollution control equipment. Emissions from basic oxygen furnace operations during the entire cycle (operations from the beginning of the charging process through the end of the tapping process) shall not exceed the allowable emission rate specified by 212.322.

5.0 Project Schedule

The following table provides a schedule for the permitting, installation and operation of the proposed baghouse consistent with the MOU.

Task	Milestone Date
1. Submit permit application for tapping / charging emission control system	5/1/2011
2. IEPA issue final construction permit(s).	3 months of receipt of permit application. (8/1/2011)
3. Commence construction of emission control system.	40 days after issuance of final construction permit, assuming that no appeals) or challenge(s) of the permit or the requirements therein have been filed with the Pollution Control Board or Federal Court within that 40 day period.
4. Begin operations (initial start-up)	03/31/2013 provided that required permits are obtained in a reasonable time and not appealed, as provided in the MOU

6.0 Proposed Permit Modifications

Appendix A includes a table of existing permit conditions that will be superseded by this project or required to be modified or deleted as appropriate. In addition U. S. Steel has provided form 283 CAAPP in the event the Granite City Works CAAPP permit is issued during the review of this permit application. CAAPP permit conditions from the permit version that was noticed for public comment on March 16, 2011 are included in the table.

Attachment C

Application forms

ILLINOIS ENVIRONMENTAL PROTECTION AGENCY
DIVISION OF AIR POLLUTION CONTROL -- PERMIT SECTION
P.O. BOX 19506
SPRINGFIELD, ILLINOIS 62794-9506

FEE DETERMINATION FOR CONSTRUCTION PERMIT APPLICATION

FOR AGENCY USE ONLY	
ID NUMBER:	
PERMIT #:	
COMPLETE ☐ INCOMPLETE ☐	DATE COMPLETE:
CHECK #:	ACCOUNT NAME:

THIS FORM IS TO BE USED BY ALL SOURCES TO SUPPLY FEE INFORMATION THAT MUST ACCOMPANY ALL CONSTRUCTION PERMIT APPLICATIONS. ***THIS APPLICATION MUST INCLUDE PAYMENT IN FULL TO BE DEEMED COMPLETE***. MAKE CHECK OR MONEY ORDER PAYABLE TO THE ILLINOIS ENVIRONMENTAL PROTECTION AGENCY. SEND TO THE ADDRESS ABOVE. DO NOT SEND CASH. REFER TO INSTRUCTIONS (197-INST) FOR ASSISTANCE.

SOURCE INFORMATION

1) SOURCE NAME: U.S. Steel Granite City Works	
2) PROJECT NAME: BOF Secondary ECS	3) SOURCE ID NO. (IF APPLICABLE): 119813AAI
4) CONTACT NAME: Jill Foust	5) CONTACT PHONE NUMBER: (618) 451-3391

FEE DETERMINATION

6) FILL IN THE FOLLOWING THREE BOXES AS DETERMINED IN SECTIONS 1 THROUGH 4 BELOW:

$ 0	+	$ 500	=	$ 500
SECTION 1 SUBTOTAL		SECTION 2, 3 OR 4 SUBTOTAL		GRAND TOTAL

SECTION 1: STATUS OF SOURCE / PURPOSE OF SUBMITTAL

7) YOUR APPLICATION WILL FALL UNDER ONLY ONE OF THE FOLLOWING SIX CATEGORIES DESCRIBED BELOW. CHECK THE BOX THAT APPLIES, ENTER THE CORRESPONDING FEE IN THE BOX TO THE RIGHT AND COPY THIS FEE INTO THE SECTION 1 SUBTOTAL BOX ABOVE. PROCEED TO APPLICABLE SECTIONS.

FOR PURPOSES OF THIS FORM:

- ***MAJOR SOURCE*** IS A SOURCE THAT IS REQUIRED TO OBTAIN A CAAPP PERMIT.
- ***SYNTHETIC MINOR* SOURCE** IS A SOURCE THAT HAS TAKEN LIMITS ON POTENTIAL TO EMIT IN A PERMIT TO AVOID CAAPP PERMIT REQUIREMENTS (E.G., FESOP).
- ***NON-MAJOR* SOURCE** IS A SOURCE THAT IS NOT A MAJOR OR SYNTHETIC MINOR SOURCE.

☒ EXISTING SOURCE WITHOUT STATUS CHANGE OR WITH STATUS CHANGE FROM SYNTHETIC MINOR TO MAJOR SOURCE OR VICE VERSA. ENTER $0 AND PROCEED TO SECTION 2.	$ 0 SECTION 1 SUBTOTAL
☐ EXISTING NON-MAJOR SOURCE THAT WILL BECOME SYNTHETIC MINOR OR MAJOR SOURCE. ENTER $5,000 AND PROCEED TO SECTION 4.	
☐ EXISTING MAJOR OR SYNTHETIC MINOR SOURCE THAT WILL BECOME NON-MAJOR SOURCE. ENTER $4,000 AND PROCEED TO SECTION 3.	
☐ NEW MAJOR OR SYNTHETIC MINOR SOURCE. ENTER $5,000 AND PROCEED TO SECTION 4.	
☐ NEW NON-MAJOR SOURCE. ENTER $500 AND PROCEED TO SECTION 3.	
☐ AGENCY ERROR. IF THIS IS A TIMELY REQUEST TO CORRECT AN ISSUED PERMIT THAT INVOLVES ONLY AN AGENCY ERROR AND IF THE REQUEST IS RECEIVED WITHIN THE DEADLINE FOR A PERMIT APPEAL TO THE POLLUTION CONTROL BOARD, THEN ENTER $0. SKIP SECTIONS 2, 3 AND 4. PROCEED DIRECTLY TO SECTION 5.	

SECTION 2: SPECIAL CASE FILING FEE

8) FILING FEE. IF THE APPLICATION ONLY ADDRESSES ONE OR MORE OF THE FOLLOWING, CHECK THE APPROPRIATE BOXES, ENTER $500 IN THE SECOND BOX UNDER FEE DETERMINATION ABOVE, SKIP SECTIONS 3 AND 4 AND PROCEED DIRECTLY TO SECTION 5. OTHERWISE, PROCEED TO SECTION 3 OR 4, AS APPROPRIATE.

- ☒ ADDITION OR REPLACEMENT OF CONTROL DEVICES ON PERMITTED UNITS
- ☐ PILOT PROJECTS/TRIAL BURNS BY A PERMITTED UNIT
- ☐ APPLICATIONS ONLY INVOLVING INSIGNIFICANT ACTIVITIES UNDER 35 IAC 201.210 (MAJOR SOURCES ONLY)
- ☐ LAND REMEDIATION PROJECTS
- ☐ REVISIONS RELATED TO METHODOLOGY OR TIMING FOR EMISSION TESTING
- ☐ MINOR ADMINISTRATIVE-TYPE CHANGE TO A PERMIT

THIS AGENCY IS AUTHORIZED TO REQUIRE AND YOU MUST DISCLOSE THIS INFORMATION UNDER 415 ILCS 5/39. FAILURE TO DO SO COULD RESULT IN THE APPLICATION BEING DENIED AND PENALTIES UNDER 415 ILCS 5 ET SEQ. IT IS NOT NECESSARY TO USE THIS FORM IN PROVIDING THIS INFORMATION. THIS FORM HAS BEEN APPROVED BY THE FORMS MANAGEMENT CENTER.

SECTION 3: FEES FOR CURRENT OR PROJECTED NON-MAJOR SOURCES	
9) IF THIS APPLICATION CONSISTS OF A SINGLE NEW EMISSION UNIT OR NO MORE THAN TWO MODIFIED EMISSION UNITS, ENTER $500.	9)
10) IF THIS APPLICATION CONSISTS OF MORE THAN ONE NEW EMISSION UNIT OR MORE THAN TWO MODIFIED UNITS, ENTER $1,000.	10)
11) IF THIS APPLICATION CONSISTS OF A NEW SOURCE OR EMISSION UNIT SUBJECT TO SECTION 39.2 OF THE ACT (I.E., LOCAL SITING REVIEW); A COMMERCIAL INCINERATOR OR A MUNICIPAL WASTE, HAZARDOUS WASTE, OR WASTE TIRE INCINERATOR; A COMMERCIAL POWER GENERATOR; OR AN EMISSION UNIT DESIGNATED AS A COMPLEX SOURCE BY AGENCY RULEMAKING, ENTER $15,000.	11)
12) IF A PUBLIC HEARING IS HELD (SEE INSTRUCTIONS), ENTER $10,000.	12)
13) SECTION 3 SUBTOTAL (ADD LINES 9 THROUGH 12) TO BE ENTERED ON PAGE 1.	13)

SECTION 4: FEES FOR CURRENT OR PROJECTED MAJOR OR SYNTHETIC MINOR SOURCES			
Application Contains Modified Emission Units Only	14) FOR THE FIRST MODIFIED EMISSION UNIT, ENTER $2,000.	14)	
	15) NUMBER OF ADDITIONAL MODIFIED EMISSION UNITS = _____ X $1,000.	15)	
	16) LINE 14 PLUS LINE 15, OR $5,000, WHICHEVER IS LESS.		16)
Application Contains New And/Or Modified Emission Units	17) FOR THE FIRST NEW EMISSION UNIT, ENTER $4,000.	17)	
	18) NUMBER OF ADDITIONAL NEW AND/OR MODIFIED EMISSION UNITS = _____ X $1,000.	18)	
	19) LINE 17 PLUS LINE 18, OR $10,000, WHICHEVER IS LESS.		19)
Application Contains Netting Exercise	20) NUMBER OF INDIVIDUAL POLLUTANTS THAT RELY ON A NETTING EXERCISE OR CONTEMPORANEOUS EMISSIONS DECREASE TO AVOID APPLICATION OF PSD OR NONATTAINMENT NSR = _____ X $3,000.		20)
Additional Supplemental Fees	21) IF THE NEW SOURCE OR EMISSION UNIT IS SUBJECT TO SECTION 39.2 OF THE ACT (I.E., SITING); A COMMERCIAL INCINERATOR OR OTHER MUNICIPAL WASTE, HAZARDOUS WASTE, OR WASTE TIRE INCINERATOR; A COMMERCIAL POWER GENERATOR; OR ONE OR MORE OTHER EMISSION UNITS DESIGNATED AS A COMPLEX SOURCE BY AGENCY RULEMAKING, ENTER $25,000.		21)
	22) IF THE SOURCE IS A NEW MAJOR SOURCE SUBJECT TO PSD, ENTER $12,000.		22)
	23) IF THE PROJECT IS A MAJOR MODIFICATION SUBJECT TO PSD, ENTER $6,000.		23)
	24) IF THIS IS A NEW MAJOR SOURCE SUBJECT TO NONATTAINMENT (NAA) NSR, ENTER $20,000.		24)
	25) IF THIS IS A MAJOR MODIFICATION SUBJECT TO NAA NSR, ENTER $12,000.		25)
	26) IF APPLICATION INVOLVES A DETERMINATION OF CLEAN UNIT STATUS AND THEREFORE IS NOT SUBJECT TO BACT OR LAER, ENTER $5,000 PER UNIT FOR WHICH A DETERMINATION IS REQUESTED OR OTHERWISE REQUIRED. _____ X $5,000.		26)
	27) IF APPLICATION INVOLVES A DETERMINATION OF MACT FOR A POLLUTANT AND THE PROJECT IS NOT SUBJECT TO BACT OR LAER FOR THE RELATED POLLUTANT UNDER PSD OR NSR (E.G., VOM FOR ORGANIC HAP), ENTER $5,000 PER UNIT FOR WHICH A DETERMINATION IS REQUESTED OR OTHERWISE REQUIRED. _____ X $5,000.		27)
	28) IF A PUBLIC HEARING IS HELD (SEE INSTRUCTIONS), ENTER $10,000.		28)
29) SECTION 4 SUBTOTAL (ADD LINES 16 AND LINES 19 THROUGH 28) TO BE ENTERED ON PAGE 1.			29)

SECTION 5: CERTIFICATION

NOTE: APPLICATIONS WITHOUT A SIGNED CERTIFICATION WILL BE DEEMED INCOMPLETE.

30) I CERTIFY UNDER PENALTY OF LAW THAT, BASED ON INFORMATION AND BELIEF FORMED AFTER REASONABLE INQUIRY, THE INFORMATION CONTAINED IN THIS FEE APPLICATION FORM IS TRUE, ACCURATE AND COMPLETE.

BY: Richard E Veitch
SIGNATURE

General Manager
TITLE OF SIGNATORY

Richard Veitch
TYPED OR PRINTED NAME OF SIGNATORY

4 , 29 , 2011
DATE

Illinois Environmental Protection Agency
Division Of Air Pollution Control -- Permit Section
P.O. Box 19506
Springfield, Illinois 62794-9506

Construction Permit Application for a Proposed Project at a CAAPP Source	For Illinois EPA use only
	ID No.:
	Appl. No.:
	Date Rec'd:
	Chk No./Amt:

This form is to be used to supply general information to obtain a construction permit for a proposed project involving a Clean Air Act Permit Program (CAAPP) source, including construction of a new CAAPP source. Detailed information about the project must also be included in a construction permit application, as addressed in the "General Instructions For Permit Applications," Form APC-201.

Proposed Project

1. Working Name of Proposed Project:
U.S. Steel Granite City Works BOF Secondary Emissions Control System

2. Is the project occurring at a source that already has a permit from the Bureau of Air (BOA)?
☐ No ☒ Yes If Yes, provide BOA ID Number: 119813AA1

3. Does this application request a revision to an existing construction permit issued by the BOA?
☐ No ☒ Yes If Yes, provide Permit Number: 95010001 and 72080043

4. Brief Description of Proposed Project:
Application to construct a pollution control device consisting of a new baghouse at the facility's existing Basic Oxygen Process (BOP) Shop

Source Information

1. Source name:* United States Steel Corporation - Granite City Works

2. Source street address:* 1951 State Street

3. City: Granite City	4. County: Madison	5. Zip code:* 62040

ONLY COMPLETE THE FOLLOWING FOR A SOURCE WITHOUT AN ID NUMBER.

6. Is the source located within city limits? ☒ Yes ☐ No
If no, provide Township Name: Granite City

7. Description of source and product(s) produced:	8. Primary Classification Code of source:
Integrated Iron and Steel Making Facility	SIC: 3312 or NAICS:

9. Latitude (DD:MM:SS.SSSS):	10. Longitude (DD:MM:SS.SSSS):
38 42' 1.2241"	90 8' 56.4272"

* Is information different than previous information? ☐ Yes ☒ No
If yes, then complete Form CAAPP 273 to apply for an Administrative Change to the CAAPP Permit for the source.

Identification of Permit Applicant

1. Who is the applicant?	2. All correspondence to: (check one)
☒ Owner ☐ Operator	☒ Source ☐ Owner ☐ Operator
3. Applicant's FEIN:	4. Attention name and/or title for written correspondence:
25-1897152	Jill Foust/Environmental Director

This Agency is authorized to require and you must disclose this information under 415 ILCS 5/39. Failure to do so could result in the application being denied and penalties under 415 ILCS 5 et seq. It is not necessary to use this form in providing this information. This form has been approved by the forms management center.

Owner Information*		
1. Name: United States Steel Corporation		
2. Address: 600 Grant Street		
3. City: Pittsburgh	4. State: PA	5. Zip code: 15219

* Is this information idifferent than previous information? ☐ Yes ☒ No
If yes, then complete Form CAAPP 273 to apply for an Administrative Change to the CAAPP Permit for the source.

Operator Information (if different from owner)*		
1. Name United States Steel Corporation - Granite City Works		
2. Address: 1951 State Street		
3. City: Granite City	4. State: IL	5. Zip code: 62040

* Is this information different than previous information? ☐ Yes ☒ No
If yes, then complete Form CAAPP 273 to apply for an Administrative Change to the CAAPP Permit for the source.

Technical Contacts for Application	
1. Preferred technical contact: (check one) ☒ Applicant's contact ☐ Consultant	
2. Applicant's technical contact person for application: Jason Braxton, Environmental Engineer	
3. Contact person's telephone number(s) 412-433-6544	4. Contact person's e-mail address: jkbraxton@uss.com
5. Consultant for application: None	
6. Consultant's telephone number(s): N/A	7. Consultant's e-mail address: N/A

Other Addresses for the Permit Applicant	
ONLY COMPLETE THE FOLLOWING FOR A SOURCE WITHOUT AN ID NUMBER.	
1. Address for billing Site Fees for the source: ☒ Source ☐ Other (provide below):	
2. Contact person for Site Fees: Jill Foust	3. Contact person's telephone number: 618-451-3391
4. Address for Annual Emission Report for the source: ☒ Source ☐ Other (provide below):	
5. Contact person for Annual Emission Report: Jill Foust	6. Contact person's telephone number: 618-451-3391

Review Of Contents of the Application	
NOTE: ANSWERING "NO" TO THESE ITEMS MAY RESULT IN THE APPLICATION BEING DEEMED INCOMPLETE	
1. Does the application include a narrative description of the proposed project?	☒ Yes ☐ No
2. Does the application clearly identify the emission units and air pollution control equipment that are part of the project?	☒ Yes ☐ No
3. Does the application include process flow diagram(s) for the project showing new and modified emission units and control equipment, along with associated existing equipment and their relationships?	☒ Yes ☐ No
4. Does the application include a general description of the source, a plot plan for the source and a site map for its location?	☐ Yes ☐ No ☒ N/A* * Material previously provided
5. Does the application include relevant technical information for the proposed project as requested on CAAPP application forms (or otherwise contain all relevant technical information)?	☒ Yes ☐ No
6. Does the application include relevant supporting data and information for the proposed project as provided on CAAPP forms?	☒ Yes ☐ No
7. Does the application identify and address all applicable emission standards for the proposed project, including: State emission standards (35 IAC Chapter I, Subtitle B); Federal New Source Performance Standards (40 CFR Part 60)?	☒ Yes ☐ No
8. Does the application address whether the project would be a major project for Prevention of Significant Deterioration, 40 CFR 52.21?	☐ Yes ☐ No ☒ N/A
9. Does the application address whether the project would be a major project for "Nonattainment New Source Review," 35 IAC Part 203?	☐ Yes ☐ No ☒ N/A
10. Does the application address whether the proposed project would potentially be subject to federal regulations for Hazardous Air Pollutants (40 CFR Part 63) and address any emissions standards for hazardous air pollutants that would be applicable?	☐ Yes ☐ No ☒ N/A* * Source not major ☐ Project not major ☒
11. Does the application include a summary of annual emission data for different pollutants for the proposed project (tons/year), including: 1) The requested permitted emissions for individual new, modified and affected existing units*, 2) The past actual emissions and change in emissions for individual modified units* and affected existing units*, and 3) Total emissions consequences of the proposed project? (* Or groups of related units)	☐ Yes ☐ No ☒ N/A * The project does not involve an increase in emissions from new or modified emission units.
12. Does the application include a summary of the current and requested potential emissions of the source (tons/year)?	☐ Yes ☐ No ☒ N/A* * Applicability of PSD, NA NSR or 40 CFR 63 to the project is not related to the source's emissions.
13. Does the application address the relationships and implications of the proposed project on the CAAPP Permit for the source?	☒ Yes ☐ No ☐ N/A* * CAAPP Permit not issued
14. If the application contains information that is considered a TRADE SECRET, has it been properly marked and claimed and all requirements to properly support the claim pursuant to 35 IAC Part 130 been met? Note: "Claimed" information will not be legally protected from disclosure to the public if it is not properly claimed or does not qualify as trade secret information.	☐ Yes ☐ No ☐ N/A* * No information in the application is claimed to be a TRADE SECRET
15. Are the correct number of copies of the application provided? (See Instructions for Permit Applications, Form 201)	☒ Yes ☐ No
16. Does the application include a completed "FEE DETERMINATION FOR CONSTRUCTION PERMIT APPLICATION," Form 197-FEE, a check in the amount indicated on this form, and any supporting material needed to explain how the fee was determined?	☒ Yes ☐ No

Signature Block

Authorized Signature:

I certify under penalty of law that, based on information and belief formed after reasonable inquiry, the statements and information contained in this application are true, accurate and complete and that I am a responsible official for the source, as defined by Section 39.5(1) of the Environmental Protection Act.

BY: Richard Veitch
AUTHORIZED SIGNATURE

General Manager
TITLE OF SIGNATORY

Richard Veitch
TYPED OR PRINTED NAME OF SIGNATORY

4 29 2011
DATE

ILLINOIS ENVIRONMENTAL PROTECTION AGENCY
DIVISION OF AIR POLLUTION CONTROL -- PERMIT SECTION
P.O. BOX 19506
SPRINGFIELD, ILLINOIS 62794-9506

FOR APPLICANT'S USE
Revision #: _____
Date: _____ / _____ / _____
Page _____ of _____
Source Designation: _____

REQUEST TO OPERATE DURING STARTUP OF EQUIPMENT	***FOR AGENCY USE ONLY***
	ID NUMBER:
	EMISSION POINT #:
	DATE:

NOTE: THIS FORM MUST BE COMPLETED WHEN THE EMISSIONS DURING STARTUP WOULD EXCEED EITHER THE ALLOWABLE LIMIT PURSUANT TO AN APPLICABLE REQUIREMENT, OR THE ALLOWABLE LIMIT AS ESTABLISHED BY A PROPOSED PERMIT CONDITION.

SOURCE INFORMATION

1) SOURCE NAME:
U.S. Steel Corporation-Granite City Works

2) DATE FORM PREPARED: 4/28/2011	3) SOURCE ID NO. (IF KNOWN): 119813AAI

GENERAL INFORMATION

4a) IDENTIFY THE EMISSION UNIT(S) OR PROCESS FOR WHICH OPERATION DURING STARTUP IS BEING REQUESTED:
Secondary Emission Control System Baghouse

b) PROVIDE THE FLOW DIAGRAM DESIGNATION OF THE UNIT(S) OR PROCESS:
Secondary Emission Control System Baghouse

5) DESCRIBE THE STARTUP PROCEDURE:
New control device, procedureTBD after construction

6) DESCRIBE MEASURES TAKEN TO MINIMIZE STARTUP EMISSIONS:
New control device, measures TBD after construction

7) DESCRIBE MEASURES TAKEN TO MINIMIZE THE DURATION OF STARTUPS:
New control device, measures TBD after construction

8) DESCRIBE MEASURES TAKEN TO MINIMIZE THE FREQUENCY OF STARTUPS:
New control device, measures TBD after construction

THIS AGENCY IS AUTHORIZED TO REQUIRE THIS INFORMATION UNDER ILLINOIS REVISED STATUTES, 1991, AS AMENDED 1992, CHAPTER 111 1/2, PAR. 1039.5. DISCLOSURE OF THIS INFORMATION IS REQUIRED UNDER THAT SECTION. FAILURE TO DO SO MAY PREVENT THIS FORM FROM BEING PROCESSED AND COULD RESULT IN THE APPLICATION BEING DENIED. THIS FORM HAS BEEN APPROVED BY THE FORMS MANAGEMENT CENTER.

FOR APPLICANT'S USE

9) IF THE ITEM OF EQUIPMENT IS CONTROL EQUIPMENT, THEN LIST ALL EMISSION UNITS AND OTHER CONTROL EQUIPMENT DUCTING EMISSIONS TO THIS CONTROL EQUIPMENT (IF ADDITIONAL SPACE IS NEEDED, ATTACH AND LABEL AS EXHIBIT 203-1):

	NAME	FLOW DIAGRAM DESIGNATION
a)	BOP furnaces	
b)		
c)		

APPLICABLE RULES

10) IDENTIFY THE SPECIFIC RULE(S) WHICH WOULD ALLOW THE AFFECTED EMISSION UNIT(S) OR PROCESS TO CONTINUE TO OPERATE IN EXCESS OF ALLOWABLE EMISSION LIMITS DURING STARTUP:

35-IAC-201.261

35-IAC-201.262

11) IDENTIFY THE RULE(S) AND REQUIREMENT(S) WHICH MAY BE VIOLATED DURING CONTINUED OPERATION DURING STARTUP AND THE ASSOCIATED REGULATED AIR POLLUTANT(S):

Opacity 40 CFR 63.7790(a)

35-IAC 212.123-opacity-30%

MOU-0.005 gr/dscf

35-IAC 212.123-process weight

35-IAC 212.446(a)-Charging, refining and tapping emissions

35-IAC 212.446(c)-20% opacity at the BOF shop roof

EMISSIONS INFORMATION

12a) PROVIDE THE MAXIMUM AND TYPICAL DURATION OF A STARTUP (E.G., 2 HOURS):

MAXIMUM	TYPICAL
Unk	Unk

b) ARE EMISSIONS OCCURRING 100% OF THE TIME DURING THE STARTUP? ☐ YES ☒ NO

IF NO, EXPLAIN AND PROVIDE THE MAXIMUM AND TYPICAL PERCENTAGE OF TIME DURING STARTUP THAT EMISSIONS WILL OCCUR:

Unknown

MAXIMUM	TYPICAL
(%)	(%)

c) EXPLAIN WHICH FACTORS DETERMINE THE LENGTH OF TIME NEEDED FOR STARTUP:

Unknown

13) PROVIDE THE FREQUENCY OF STARTUPS (E.G., TWICE A YEAR):

unknown

14) IN THE FOLLOWING TABLE, PROVIDE THE AFFECTED REGULATED AIR POLLUTANT(S), THE EMISSION RATES WHICH WOULD OCCUR DURING THE REQUESTED STARTUP, THE ALLOWABLE EMISSIONS DURING NORMAL OPERATION, AND THE METHOD USED TO DETERMINE THESE RATES. ATTACH CALCULATIONS USED TO DETERMINE THE EMISSION RATES WHICH WOULD OCCUR DURING THE REQUESTED STARTUP AND LABEL AS EXHIBIT 203-2.

REGULATED AIR POLLUTANT	STARTUP	(LB/HR)	(TON/YR)	ALLOWABLE	(LB/HR)	(TON/YR)	DM*
See section 11	MAX:	unk	unk	section		11	4
	TYPICAL:	<max	<max	<max		<max	
	MAX:						
	TYPICAL:						
	MAX:						
	TYPICAL:						

*NOTE: DM = DETERMINATION METHOD -- 1)STACK TEST; 2)MATERIAL BALANCE; 3)STANDARD EMISSION FACTOR; 4) ENGINEERING ESTIMATE; AND 5)SPECIAL EMISSION FACTOR

EXHAUST POINT INFORMATION		
COMPLETE THE FOLLOWING ITEMS ONLY IF EMISSIONS ARE EXHAUSTED THROUGH A DIFFERENT POINT DURING STARTUP RELATIVE TO NORMAL OPERATION..		
15) EXPLAIN THE DIFFERENCE IN EXHAUSTED EMISSIONS DURING STARTUP RELATIVE TO NORMAL OPERATION:		
16) FLOW DIAGRAM DESIGNATION OF EXHAUST POINT:		
17) DESCRIPTION OF EXHAUST POINT (STACK, VENT, ROOF MONITOR, INDOORS, ETC.): IF THE EXHAUST POINT DISCHARGES INDOORS, DO NOT COMPLETE THE REMAINING ITEMS.		
18) DISTANCE TO NEAREST PLANT BOUNDARY FROM EXHAUST POINT DISCHARGE (FT):		
19) DISCHARGE HEIGHT ABOVE GRADE (FT):		
20) GOOD ENGINEERING PRACTICE (GEP) HEIGHT, IF KNOWN (FT):		
21) DIAMETER OF EXHAUST POINT (FT): NOTE: FOR A NONCIRCULAR EXHAUST POINT, THE DIAMETER IS 1.128 TIMES THE SQUARE ROOT OF THE AREA.		
22) EXIT GAS FLOW RATE:	a) MAXIMUM (ACFM):	b) AVERAGE (ACFM):
23) EXIT GAS TEMPERATURE:	a) MAXIMUM (°F):	b) AVERAGE (°F):
24) DIRECTION OF EXHAUST (VERTICAL, LATERAL, DOWNWARD):		

25) LIST ALL EMISSION UNITS AND CONTROL DEVICES SERVED BY THIS EXHAUST POINT:

NAME	FLOW DIAGRAM DESIGNATION
a)	
b)	
c)	
d)	

THE FOLLOWING INFORMATION NEED ONLY BE SUPPLIED IF READILY AVAILABLE.		
26a) LATITUDE:	b) LONGITUDE:	
27a) UTM ZONE:	b) UTM VERTICAL:	c) UTM HORIZONTAL:

ILLINOIS ENVIRONMENTAL PROTECTION AGENCY
DIVISION OF AIR POLLUTION CONTROL -- PERMIT SECTION
P.O. BOX 19506
SPRINGFIELD, ILLINOIS 62794-9506

FOR APPLICANT'S USE
Revision #: _____
Date: _____ / _____ / _____
Page _____ of _____
Source Designation: Granite City Works

REQUEST TO CONTINUE TO OPERATE DURING MALFUNCTION OR BREAKDOWN	***FOR AGENCY USE ONLY***
	ID NUMBER:
	EMISSION POINT #:
	DATE:

NOTE: THIS FORM MUST BE COMPLETED WHEN THE EMISSIONS DURING SUCH PERIOD WOULD EXCEED THE ALLOWABLE LIMIT PURSUANT TO AN APPLICABLE REQUIREMENT, OR THE ALLOWABLE LIMIT AS ESTABLISHED BY A PROPOSED PERMIT CONDITION.

SOURCE INFORMATION

1) SOURCE NAME: Granite City Works 4/28/2011

2) DATE FORM PREPARED: Granite City Works 4/28/2011	3) SOURCE ID NO. (IF KNOWN): 119813AAI

GENERAL INFORMATION

4a) IDENTIFY THE EMISSION UNIT(S) OR PROCESS FOR WHICH CONTINUED OPERATION DURING A MALFUNCTION OR BREAKDOWN IS BEING REQUESTED:
Two BOP Furnaces

b) PROVIDE THE FLOW DIAGRAM DESIGNATION OF THE UNIT(S) OR PROCESS:
BOP Vessels

5a) WHAT ITEM OF EQUIPMENT(S) IS ANTICIPATED TO MALFUNCTION OR BREAKDOWN?
Secondary Emissions Control System

b) PROVIDE THE FLOW DIAGRAM DESIGNATION OF THIS EQUIPMENT(S):
Secondary emissions control system including baghouse, fans, ducts and essential components

6) EXPLAIN THE NATURE (I.E., TYPE AND CAUSE) OF ANTICIPATED MALFUNCTIONS OR BREAKDOWNS:
Force majeure, loss of power to fans, obstructed ducts, damage to equipment necessary for optimum efficiency, others not known.

7) EXPLAIN WHAT MEASURES ARE TAKEN TO PREVENT SUCH MALFUNCTIONS OR BREAKDOWNS FROM OCCURRING:
Proper operation and maintenance and best management practices.

THIS AGENCY IS AUTHORIZED TO REQUIRE THIS INFORMATION UNDER ILLINOIS REVISED STATUTES, 1991, AS AMENDED 1992, CHAPTER 111 1/2, PAR. 1039.5. DISCLOSURE OF THIS INFORMATION IS REQUIRED UNDER THAT SECTION. FAILURE TO DO SO MAY PREVENT THIS FORM FROM BEING PROCESSED AND COULD RESULT IN THE APPLICATION BEING DENIED. THIS FORM HAS BEEN APPROVED BY THE FORMS MANAGEMENT CENTER.

FOR APPLICANT'S USE
GCMOU steam ring

APPLICATION PAGE 1

8) DESCRIBE ALL MEASURES TAKEN TO MINIMIZE THE DURATION OF A MALFUNCTION OR BREAKDOWN:

O&M and SSM procedures on file with IEPA. Procedures to be updated prior to startup of new equip.

9) DESCRIBE ALL MEASURES TAKEN TO MINIMIZE THE QUANTITY OF EMISSIONS DURING MALFUNCTION OR BREAKDOWN:

Operation of emission units in an efficient manner to minimize emissions during steelmaking process.

10a) WOULD DISCONTINUED OPERATION OF THE EMISSION UNIT(S) OR PROCESS DURING SUCH MALFUNCTION OR BREAKDOWN CAUSE OR TEND TO CAUSE INJURY TO PERSONS OR SEVERE DAMAGE TO EQUIPMENT? ☒ YES ☐ NO

IF YES, EXPLAIN:

If the process is stopped, molten metal could solidify in the vessel, or transfer ladles. Molten metal diverted away from the normal process flow could result in bodily injury.

b) WOULD DISCONTINUED OPERATION OF THE EMISSION UNIT(S) OR PROCESS DURING SUCH MALFUNCTION OR BREAKDOWN PREVENT THE APPLICANT FROM PROVIDING AN ESSENTIAL SERVICE TO THE PUBLIC? ☐ YES ☒ NO

IF YES, EXPLAIN:

c) DESCRIBE ANY OTHER REASONS WHY CONTINUED OPERATION OF THE EMISSION UNIT(S) OR PROCESS DURING MALFUNCTION OR BREAKDOWN IS NECESSARY:

Necessary to avoid iron beaching and to prevent hot metal from solidifying in vessels or transfer ladles. Also time is needed to bring the Blast Furnaces down in a controlled manner to prevent a wreck in the furnaces before iron production can be stopped.

Iron supply from Blast Furnaces cannot be stopped on short notice in the event the BOF has a malfunction. If the BOP furnaces cannot continue to process the iron it will have to be beached, resulting in uncontrolled emissions.

11a) IF THE ITEM OF EQUIPMENT ANTICIPATED TO MALFUNCTION OR BREAKDOWN IS CONTROL EQUIPMENT, THEN LIST ALL EMISSION UNITS AND OTHER CONTROL EQUIPMENT DUCTING EMISSIONS TO THIS CONTROL EQUIPMENT:

	NAME	FLOW DIAGRAM DESIGNATION
i)	BOP Furnaces	BOP furnaces
ii)		

b) HAS A REQUEST TO OPERATE THESE OTHER EMISSION UNITS AND OTHER CONTROL EQUIPMENT DUCTING EMISSIONS TO THIS CONTROL EQUIPMENT DURING MALFUNCTION AND BREAKDOWN ALSO BEEN INCLUDED IN THIS APPLICATION?

☐ YES ☒ NO

IF NO, EXPLAIN:

Information provided in previous applications.

12) IF READILY AVAILABLE, PROVIDE AN ESTMATE OF THE NUMBER OF SIMILAR MALFUNCTIONS OR BREAKDOWNS WHICH HAVE OCCURRED OVER THE PREVIOUS 3 YEARS (EXCLUDING THOSE ASSOCIATED WITH OPACITY MONITORS). INCLUDE THE CAUSE, DURATION, AND MEASURES TAKEN TO PREVENT REOCCURRENCE:

New installation, no such recorded incidents.

APPLICABLE RULES

13) IDENTIFY THE SPECIFIC RULE(S) WHICH WOULD ALLOW THE AFFECTED EMISSION UNIT(S) OR PROCESS TO CONTINUE TO OPERATE IN EXCESS OF ALLOWABLE EMISSION LIMITS DURING A MALFUNCTION OR BREAKDOWN:

35-IAC-201.261
35-IAC-201.262

14) IDENTIFY THE RULE(S) AND REQUIREMENT(S) WHICH MAY BE VIOLATED DURING CONTINUED OPERATION DURING MALFUNCTION OR BREAKDOWN AND THE ASSOCIATED REGULATED AIR POLLUTANT(S):

Opacity 40 CFR 63.7790(a)
35-IAC 212.123-opacity-30%
MOU-0.005 gr/dscf
35-IAC 212.123-process weight
35-IAC 212.446(a)-Charging, refining and tapping emissions
35-IAC 212.446(c)-20% opacity at the BOF shop roof

EMISSIONS INFORMATION

15a) PROVIDE THE MAXIMUM AND TYPICAL LENGTH OF TIME THAT THE EMISSION UNIT(S) OR PROCESS WILL CONTINUE TO OPERATE DURING MALFUNCTION OR BREAKDOWN:

MAXIMUM	TYPICAL
Unk	Unk

b) EXPLAIN WHICH FACTORS DETERMINE THE LENGTH OF TIME REQUIRED FOR CONTINUED OPERATION:

The type of breakdown or malfunction will determine the time needed to complete the repair.

16) IN THE FOLLOWING TABLE, PROVIDE THE AFFECTED REGULATED AIR POLLUTANT(S), THE EMISSION RATES WHICH WOULD OCCUR DURING THE REQUESTED MALFUNCTION OR BREAKDOWN (M&B), THE ALLOWABLE EMISSIONS DURING NORMAL OPERATION, AND THE METHOD USED TO DETERMINE THESE RATES. ATTACH ALL CALCULATIONS USED TO DETERMINE THE EMISSION RATES WHICH WOULD OCCUR DURING THE REQUESTED M&B AND LABEL AS EXHIBIT 204-1.

EMISSION RATES

REGULATED AIR POLLUTANT		M&B (LB/HR)	M&B (TON/YR)	ALLOWABLE (LB/HR)	ALLOWABLE (TON/YR)	DM*
see section 14	MAX:	unk	unk	section	11	4
	TYPICAL:	<max	<max	<max	<max	
	MAX:					
	TYPICAL:					
	MAX:					
	TYPICAL:					

*NOTE: DM = DETERMINATION METHOD – 1)STACK TEST; 2)MATERIAL BALANCE; 3)STANDARD EMISSION FACTOR; 4) ENGINEERING ESTIMATE; AND 5)SPECIAL EMISSION FACTOR

EXHAUST POINT INFORMATION

COMPLETE THE FOLLOWING ITEMS ONLY IF EMISSIONS ARE EXHAUSTED THROUGH A DIFFERENT POINT DURING MALFUNCTION OR BREAKDOWN RELATIVE TO NORMAL OPERATION.

17) EXPLAIN THE DIFFERENCE IN EXHAUSTED EMISSIONS DURING MALFUNCTION OR BREAKDOWN RELATIVE TO NORMAL OPERATION:

N/A

18) FLOW DIAGRAM DESIGNATION OF EXHAUST POINT:

N/A

19) DESCRIPTION OF EXHAUST POINT (STACK, VENT, ROOF MONITOR, INDOORS, ETC.): IF THE EXHAUST POINT DISCHARGES INDOORS, DO NOT COMPLETE THE REMAINING ITEMS.

N/A

20) DISTANCE TO NEAREST PLANT BOUNDARY FROM EXHAUST POINT DISCHARGE (FT):

N/A

21) DISCHARGE HEIGHT ABOVE GRADE (FT):

N/A

22) GOOD ENGINEERING PRACTICE (GEP) HEIGHT, IF KNOWN (FT):

N/A

23) DIAMETER OF EXHAUST POINT (FT): NOTE: FOR A NONCIRCULAR EXHAUST POINT, THE DIAMETER IS 1.128 TIMES THE SQUARE ROOT OF THE AREA.

N/A

24) EXIT GAS FLOW RATE:	a) MAXIMUM (ACFM):	b) AVERAGE (ACFM):
N/A	N/A	N/A
25) EXIT GAS TEMPERATURE:	**a) MAXIMUM (°F):**	**b) AVERAGE (°F):**
N/A	N/A	N/A

26) DIRECTION OF EXHAUST (VERTICAL, LATERAL, DOWNWARD): N/A

27) LIST ALL EMISSION UNITS AND CONTROL EQUIPMENT SERVED BY THIS EXHAUST POINT:

NAME	FLOW DIAGRAM DESIGNATION
a) N/A	
b) N/A	
c) N/A	
d) N/A	

THE FOLLOWING INFORMATION NEED ONLY BE SUPPLIED IF READILY AVAILABLE.

28a) LATITUDE:	b) LONGITUDE:	
29a) UTM ZONE:	b) UTM VERTICAL:	c) UTM HORIZONTAL:

ILLINOIS ENVIRONMENTAL PROTECTION AGENCY
DIVISION OF AIR POLLUTION CONTROL -- PERMIT SECTION
P.O. BOX 19506
SPRINGFIELD, ILLINOIS 62794-9506

FOR APPLICANT'S USE
Revision #: _____
Date: _____ / _____ / _____
Page _____ of _____
Source Designation: _____

AIR POLLUTION CONTROL EQUIPMENT DATA AND INFORMATION

FOR AGENCY USE ONLY
ID NUMBER:
CONTROL EQUIPMENT #:
DATE:

THIS FORM MUST BE COMPLETED FOR EACH AIR POLLUTION CONTROL EQUIPMENT. COMPLETE AND PROVIDE THIS FORM IN ADDITION TO THE APPLICABLE ADDENDUM FORM 260-A THROUGH 260-K. A SEPARATE FORM MUST BE COMPLETED FOR EACH MODE OF OPERATION OF AIR POLLUTION CONTROL EQUIPMENT FOR WHICH A PERMIT IS BEING SOUGHT.

SOURCE INFORMATION

1) SOURCE NAME: United States Steel Corporation-Granite City Works

2) DATE FORM PREPARED: 04/29/11

3) SOURCE ID NO. (IF KNOWN): 119813AA1

GENERAL INFORMATION

4) NAME OF AIR POLLUTION CONTROL EQUIPMENT AND/OR CONTROL SYSTEM:
BOF Secondary Emission Control System

5) FLOW DIAGRAM DESIGNATION OF CONTROL EQUIPMENT AND/OR CONTROL SYSTEM:
BOF Baghouse

6) MANUFACTURER OF CONTROL EQUIPMENT (IF KNOWN):
TBD

7) MODEL NUMBER (IF KNOWN):
TBD

8) SERIAL NUMBER (IF KNOWN):
TBD

9) DATES OF COMMENCING CONSTRUCTION, OPERATION AND/OR MOST RECENT MODIFICATION OF THIS EQUIPMENT (ACTUAL OR PLANNED)

a) CONSTRUCTION (MONTH/YEAR): 10/11

b) OPERATION (MONTH/YEAR): 03/13

c) LATEST MODIFICATION (MONTH/YEAR):

10) BRIEFLY DESCRIBE MODIFICATION (IF APPLICABLE):

Constructio of a new emission control system to control emissions generated during the Basic Oxygen Furnace (BOF) charging and tapping operations at the Basic Oxygen Process (BOP) shop. The new control system will be a 900,000 acfm baghouse.

THIS AGENCY IS AUTHORIZED TO REQUIRE THIS INFORMATION UNDER ILLINOIS REVISED STATUTES, 1991, AS AMENDED 1992, CHAPTER 111 1/2, PAR. 1039.5. DISCLOSURE OF THIS INFORMATION IS REQUIRED UNDER THAT SECTION. FAILURE TO DO SO MAY PREVENT THIS FORM FROM BEING PROCESSED AND COULD RESULT IN THE APPLICATION BEING DENIED. THIS FORM HAS BEEN APPROVED BY THE FORMS MANAGEMENT CENTER.

FOR APPLICANT'S USE
_____

11) LIST ALL EMISSION UNITS AND OTHER CONTROL EQUIPMENT DUCTING EMISSIONS TO THIS CONTROL EQUIPMENT:

NAME	DESIGNATION OR CODE NUMBER
BOF charging	
BOF Tapping	

12) DOES THE CONTROL EQUIPMENT HAVE MORE THAN ONE MODE OF OPERATION? ☐ YES ☒ NO

IF YES, EXPLAIN AND IDENTIFY WHICH MODE IS COVERED BY THIS FORM (NOTE: A SEPARATE AIR POLLUTION CONTROL EQUIPMENT FORM 260-CAAPP MUST BE COMPLETED FOR EACH MODE):

13) IDENTIFY ALL ATTACHMENTS TO THIS FORM RELATED TO THIS AIR POLLUTION CONTROL EQUIPMENT(E.G., TECHNICAL DRAWINGS):

Flow Diagram

OPERATING SCHEDULE

14) IDENTIFY ANY PERIOD WHEN THE CONTROL EQUIPMENT WILL NOT BE OPERATING DUE TO SCHEDULED MAINTENANCE AND/OR REPAIRS WHEN THE FEEDING EMISSION UNIT(S) TO THIS CONTROL EQUIPMENT IS/ARE IN OPERATION:

None

15a) IDENTIFY ANY PERIODS DURING OPERATION OF THE FEEDING EMISSION UNIT(S) WHEN THE CONTROL EQUIPMENT IS/ARE NOT USED:

None

b) IS THIS CONTROL EQUIPMENT IN OPERATION AT ALL OTHER TIMES THAT THE FEEDING EMISSION UNIT(S) IS/ARE IN OPERATION? ☒ YES ☐ NO

IF NO, EXPLAIN AND PROVIDE THE DURATION OF THE CONTROL EQUIPMENT DOWNTIME:

APPLICABLE RULES

16) PROVIDE ANY SPECIFIC EMISSION STANDARD(S) AND LIMITATION(S) SET BY RULE(S) WHICH ARE APPLICABLE TO THIS EMISSION UNIT (E.G., VOM, IAC 218.207(b)(1), 81% OVERALL & 90% CONTROL DEVICE EFF.):

REGULATED AIR POLLUTANT(S)	EMISSION STANDARD(S)	REQUIREMENT(S)
PM, Opacity	40 CFR 63.7790 Table 1	0.01 gr/dscf; 20% Opacity (3-min. average)
PM	35 IC 212.322	Process Weight Rate
Opacity	35 IC 212.123(a)	30% Opacity (1 hr-average)

17) PROVIDE ANY SPECIFIC RECORDKEEPING RULE(S) WHICH ARE APPLICABLE TO THIS EMISSION UNIT:

REGULATED AIR POLLUTANT(S)	RECORDKEEPING RULE(S)	REQUIREMENT(S)
PM, Opacity	40 CFR 63.7842(a)	Notifications, SSM Records, Performance Tests, VE Obs.
Opacity	40 CFR 63.7842(c)	VE Observations
PM	40 CFR 63.7842(d)	O&M Records of the Bag Leak Detection System

18) PROVIDE ANY SPECIFIC REPORTING RULE(S) WHICH ARE APPLICABLE TO THIS EMISSION UNIT:

REGULATED AIR PQLLUTANT(S)	REPORTING RULE(S)	REQUIREMENT(S)
PM, Opacity	40 CFR 63.7841(a)	Semiannual Compliance Reports
Opacity	40 CFR 63.7841(c)	Immediate SSM Report
All	35 IC Part 254	AER, ACC

19) PROVIDE ANY SPECIFIC MONITORING RULE(S) WHICH ARE APPLICABLE TO THIS EMISSION UNIT:

REGULATED AIR POLLUTANT(S)	MONITORING RULE(S)	REQUIREMENT(S)
PM	40 CFR 63.7830(b)(1)	Bag Leak Detection Monitoring
PM	40 CFR 63.7830(a)	CPMS

20) PROVIDE ANY SPECIFIC TESTING RULES AND/OR PROCEDURES WHICH ARE APPLICABLE TO THIS EMISSION UNIT :

REGULATED AIR POLLUTANT(S)	TESTING RULE(S)	REQUIREMENT(S)
PM/PM10	40 CFR 63.7821(c)	Once Every 60 Months
Opacity	40 CFR 63.7823(b)	Opacity Observations During Stack Test

APPLICABLE RULES

16) PROVIDE ANY SPECIFIC EMISSION STANDARD(S) AND LIMITATION(S) SET BY RULE(S) WHICH ARE APPLICABLE TO THIS EMISSION UNIT (E.G., VOM, IAC 218.207(b)(1), 81% OVERALL & 90% CONTROL DEVICE EFF.):

REGULATED AIR POLLUTANT(S)	EMISSION STANDARD(S)	REQUIREMENT(S)
PM	212.446 (a)	Charging, refining and tapping emissions capture
PM	212.446 (c)	20% opacity at the BOF shop roof

17) PROVIDE ANY SPECIFIC RECORDKEEPING RULE(S) WHICH ARE APPLICABLE TO THIS EMISSION UNIT:

REGULATED AIR POLLUTANT(S)	RECORDKEEPING RULE(S)	REQUIREMENT(S)

18) PROVIDE ANY SPECIFIC REPORTING RULE(S) WHICH ARE APPLICABLE TO THIS EMISSION UNIT:

REGULATED AIR POLLUTANT(S)	REPORTING RULE(S)	REQUIREMENT(S)

19) PROVIDE ANY SPECIFIC MONITORING RULE(S) WHICH ARE APPLICABLE TO THIS EMISSION UNIT:

REGULATED AIR POLLUTANT(S)	MONITORING RULE(S)	REQUIREMENT(S)

20) PROVIDE ANY SPECIFIC TESTING RULES AND/OR PROCEDURES WHICH ARE APPLICABLE TO THIS EMISSION UNIT :

REGULATED AIR POLLUTANT(S)	TESTING RULE(S)	REQUIREMENT(S)

COMPLIANCE INFORMATION

21) IS THE CONTROL SYSTEM IN COMPLIANCE WITH ALL APPLICABLE REQUIREMENTS? ☒ YES ☐ NO

IF NO, THEN FORM 294-CAAPP "COMPLIANCE PLAN/SCHEDULE OF COMPLIANCE – ADDENDUM FOR NON COMPLYING EMISSION UNITS" MUST BE COMPLETED AND SUBMITTED WITH THIS APPLICATION.

22) EXPLANATION OF HOW INITIAL COMPLIANCE IS TO BE, OR WAS PREVIOUSLY, DEMONSTRATED:

Performance tests to demonstrate initial compliance witheach emission limit and opacity will be conducted no later than 180 days after startup of the new baghouse. A capture system operation and maintenance plan will be developed.

23) EXPLANATION OF HOW ONGOING COMPLIANCE WILL BE DEMONSTRATED:

Performance tests will be conducted every 60 months. Good work practices will be followed to minimize emissions. The bag leak detection system will be operated according to 40 CFR 63.7831(f) and records of all information necessary to document compliance with the requirements of 40 CFR 63.7831(f) will be maintained.

Th captutre and control system will be inspected on a monthly basis and any required preventative maintenance or corrective actuion required will be performed according to 40 CFR 63.7800.

TESTING, MONITORING, RECORDKEEPING AND REPORTING

24a) LIST THE PARAMETERS THAT RELATE TO AIR EMISSIONS FOR WHICH RECORDS ARE BEING MAINTAINED TO DETERMINE FEES, RULE APPLICABILITY OR COMPLIANCE. INCLUDE THE UNIT OF MEASUREMENT, THE METHOD OF MEASUREMENT, AND THE FREQUENCY OF SUCH RECORDS (E.G., HOURLY, DAILY, WEEKLY):

PARAMETER	UNIT OF MEASUREMENT	METHOD OF MEASUREMENT	FREQUENCY
PM	gr/dscf	stack test	every 60 mos
Opacity	%	VE observation	every 60 mos
PM	lb/hr	throughput records	Daily
baghouse insp	TBD	recordkeeping	TBD

24b) BRIEFLY DESCRIBE THE METHOD BY WHICH RECORDS WILL BE CREATED AND MAINTAINED. FOR EACH RECORDED PARAMETER INCLUDE THE METHOD OF RECORDKEEPING, TITLE OF PERSON RESPONSIBLE FOR RECORDKEEPING, AND TITLE OF PERSON TO CONTACT FOR REVIEW OF RECORDS:

PARAMETER	METHOD OF RECORDKEEPING	TITLE OF PERSON RESPONSIBLE	TITLE OF CONTACT PERSON
bag leak detect.	TBD	TBD	Jill Foust
dp	TBD	TBD	Jill Foust
pressure	TBD	TBD	Jill Foust
compressed air	TBD	TBD	Jill Foust

c) IS COMPLIANCE OF THE CONTROL EQUIPMENT READILY DEMONSTRATED BY REVIEW OF THE RECORDS? ☒ YES ☐ NO

IF NO, EXPLAIN:

d) ARE ALL RECORDS READILY AVAILABLE FOR INSPECTION, COPYING AND/OR SUBMITTAL TO THE AGENCY UPON REQUEST? ☒ YES ☐ NO

IF NO, EXPLAIN:

25a) DESCRIBE ANY MONITORS OR MONITORING ACTIVITIES USED TO DETERMINE FEES, RULE APPLICABILITY OR COMPLIANCE:

Bag leak detector

b) WHAT OPERATING PARAMETER(S) IS(ARE) BEING MONITORED (E.G., COMBUSTION CHAMBER TEMPERATURE)?

Baghouse inspections, dp, fan amps, pressure, compressed air..etc

c) DESCRIBE THE LOCATION OF EACH MONITOR (E.G., EXIT OF COMBUSTION CHAMBER):

Duct work downstream of the fabric filter housing.

25d) IS EACH MONITOR EQUIPPED WITH A RECORDING DEVICE? ☒ YES ☐ NO

IF NO, LIST ALL MONITORS WITHOUT A RECORDING DEVICE:

e) IS EACH MONITOR REVIEWED FOR ACCURACY ON AT LEAST A QUARTERLY BASIS? ☒ YES ☐ NO

IF NO, EXPLAIN:

f) IS EACH MONITOR OPERATED AT ALL TIMES THE CONTROL EQUIPMENT IS IN OPERATION? ☒ YES ☐ NO

IF NO, EXPLAIN:

26) PROVIDE INFORMATION ON THE MOST RECENT TESTS, IF ANY, IN WHICH THE RESULTS ARE USED FOR PURPOSES OF THE DETERMINATION OF FEES, RULE APPLICABILITY OR COMPLIANCE. INCLUDE THE TEST DATE, TEST METHOD USED, TESTING COMPANY, OPERATING CONDITIONS EXISTING DURING THE TEST AND A SUMMARY OF RESULTS. IF ADDITIONAL SPACE IS NEEDED, ATTACH AND LABEL AS EXHIBIT 260-1:

TEST DATE	TEST METHOD	TESTING COMPANY	OPERATING CONDITIONS	SUMMARY OF RESULTS

27) DESCRIBE ALL REPORTING REQUIREMENTS AND PROVIDE THE TITLE AND FREQUENCY OF REPORT SUBMITTALS TO THE AGENCY:

REPORTING REQUIREMENTS	TITLE OF REPORT	FREQUENCY

CAPTURE AND CONTROL

28) DESCRIBE THE CAPTURE SYSTEM USED TO CONTAIN, COLLECT AND TRANSPORT EMISSIONS TO THE CONTROL EQUIPMENT. INCLUDE ALL HOODS, DUCTS, FANS, ETC. ALSO INCLUDE THE METHOD OF CAPTURE USED AT EACH EMISSION POINT. (IF ADDITIONAL SPACE IS NEEDED, ATTACH AND LABEL AS EXHIBIT 260-2):

A collection system with a negative pressure baghouse will be used to control particulate matter emissions form BOF hot metal charging and tapping operations. For further detail, see section 2.2 of the project narrative.

29) ARE FEATURES OF THE CAPTURE SYSTEM ACCURATELY DEPICTED IN THE FLOW DIAGRAM CONTAINED IN THIS APPLICATION? ☒ YES ☐ NO

IF NO, A SKETCH SHOWING THE FEATURES OF THE CAPTURE SYSTEM SHOULD BE ATTACHED AND LABELED AS EXHIBIT 260-3:

30) PROVIDE THE ACTUAL (MINIMUM AND TYPICAL) CAPTURE SYSTEM EFFICIENCY, CONTROL EQUIPMENT DESTRUCTION/REMOVAL EFFICIENCY, AND THE OVERALL REDUCTION EFFICIENCY PROVIDED BY THE COMBINATION OF THE CAPTURE SYSTEM AND CONTROL EQUIPMENT FOR EACH REGULATED AIR POLLUTANT TO BE CONTROLLED. ATTACH THE CALCULATIONS, TO THE EXTENT THEY ARE AIR EMISSIONS RELATED, ON WHICH THESE EFFICIENCIES WERE BASED AND LABEL AS EXHIBIT 260-4:

a) CONTROL PERFORMANCE:

	REGULATED AIR POLLUTANT	CAPTURE SYSTEM EFFICIENCY (%)		CONTROL EQUIPMENT EFFICIENCY (%)		OVERALL REDUCTION EFFICIENCY (%)	
		(MIN)	(TYP)	(MIN)	(TYP)	(MIN)	(TYP)
i	Particulate matter	97	97	95	95	92	92
ii							
iii							

iv. EXPLAIN ANY OTHER REQUIRED LIMITS ON CONTROL EQUIPMENT PERFORMANCE SUCH AS OUTLET CONCENTRATION, COOLANT TEMPERATURE, ETC.:

Baghouse is required to meet 0.01 gr/dscf pursuant to 40 CFR 63.779, Table 1. In addition, 0.005 gr/dscf per MOU between IEPA and U.S. Steel.

b) METHOD USED TO DETERMINE EACH OF THE ABOVE EFFICIENCIES (E.G., STACK TEST, MATERIAL BALANCE, MANUFACTURER'S GUARANTEE, ETC.) AND THE DATE LAST TESTED, IF APPLICABLE:

	EFFICIENCY DETERMINATION METHOD	DATE LAST TESTED
CAPTURE:	Engineering Estimate	
CONTROL:	Engineering Estimate	
OVERALL:	Calculated	

c) REQUIRED PERFORMANCE:

	REGULATED AIR POLLUTANT	CAPTURE SYSTEM EFFICIENCY (%)	CONTROL EQUIPMENT EFFICIENCY (%)	OVERALL REDUCTION EFFICIENCY (%)	APPLICABLE RULE
i					
ii					
iii					

iv EXPLAIN ANY OTHER REQUIRED LIMITS ON CONTROL EQUIPMENT PERFORMANCE SUCH AS OUTLET CONCENTRATION, COOLANT TEMPERATURE, ETC.:

Baghouse is required to meet 0.01 gr/dscf pursuant to 40 CFR 63.779, Table 1. In addition, 0.005 gr/dscf per MOU between IEPA and U.S. Steel.

(31)EMISSION INFORMATION

REGULATED AIR POLLUTANT		[1]ACTUAL EMISSION RATE					ALLOWABLE BY RULE EMISSION RATE			[2]PERMITTED EMISSION RATE	
		LBS PER HOUR (LBS/HR)	TONS PER YEAR (TONS/YR)	[3]OTHER TERMS	[3]OTHER TERMS	[4]DM	[5]RATE (UNITS)	APPLICABLE RULES	TONS PER YEAR (TONS/YR)	RATE (UNITS)	TONS PER YEAR (TONS/YR)
CARBON MONOXIDE (CO)	MAXIMUM:						( )				
	TYPICAL:						( )				
LEAD	MAXIMUM:						( )				
	TYPICAL:						( )				
NITROGEN OXIDES (NOx)	MAXIMUM:						( )				
	TYPICAL:						( )				
PARTICULATE MATTER (PART)	MAXIMUM:	38.6				3	60.28 (lb/hr)	212.321			
	TYPICAL:						0.01 (gr/dscf)	63.7790			
PARTICULATE MATTER <= 10 MICROMETERS (PM10)	MAXIMUM:	38.6				3	( )				
	TYPICAL:						( )				
SULFUR DIOXIDE (SO2)	MAXIMUM:						( )				
	TYPICAL:						( )				
VOLATILE ORGANIC MATERIAL (VOM)	MAXIMUM:						( )				
	TYPICAL:						( )				
OTHER, SPECIFY: _____	MAXIMUM:						( )				
	TYPICAL:						( )				
EXAMPLE: PARTICULATE MATTER	MAXIMUM:	*5.00*	*21.9*	*0.3 GR/DSCF*		*1*	*6.0 (LBS/HR)*	*212.321*	*26.28*	*5.5 LBS/HR*	*22*
	TYPICAL:	*4.00*	*14.4*	*0.24 GR/DSCF*		*4*	*5.5 (LBS/HR)*	*212.321*	*19.80*		

IMPORTANT: ATTACH CALCULATIONS, TO THE EXTENT THEY ARE AIR EMISSIONS RELATED, ON WHICH EMISSIONS WERE DETERMINED AND LABEL AS EXHIBIT 260-5.

[1]PROVIDE CONTROLLED EMISSIONS (E.G., THE EMISSIONS THAT WOULD RESULT AFTER ALL CONTROL AND CAPTURE EFFICIENCIES ARE ACCOUNTED FOR).
[2]PROVIDE THE EMISSION RATE THAT WILL BE USED AS A PERMIT SPECIAL CONDITION. THIS LIMIT WILL BE USED TO DETERMINE THE PERMIT FEE.
[3]PLEASE PROVIDE ANY OTHER EMISSION RATE WHICH IS COMMONLY USED, REQUIRED BY A SPECIFIC LIMITATION OR THAT WAS MEASURED (E.G. PPM, GR/DSCF, ETC.)
[4]DM - DETERMINATION METHOD: 1) STACK TEST, 2) MATERIAL BALANCE, 3) STANDARD EMISSION FACTOR (AP-42 OR AIRS), 4) ENGINEERING ESTIMATE, 5) SPECIAL EMISSION FACTOR (NOT AP-42 OR AIRS)
[5]RATE - ALLOWABLE EMISSION RATE SPECIFIED BY MOST STRINGENT APPLICABLE RULE.

(32) HAZARDOUS AIR POLLUTANT EMISSION INFORMATION

HAP INFORMATION		[1]ACTUAL EMISSION RATE					ALLOWABLE BY RULE	
NAME OF HAP EMITTED	[2]CAS NUMBER		POUNDS PER HOUR (LBS/HR)	TONS PER YEAR (TONS/YR)	[3]OTHER TERMS	[4]DM	[5]RATE OR STANDARD	APPLICABLE RULE
PM is surrogate for HAPs.		MAXIMUM:						
		TYPICAL:						
		MAXIMUM:						
		TYPICAL:						
		MAXIMUM:						
		TYPICAL:						
		MAXIMUM:						
		TYPICAL:						
		MAXIMUM:						
		TYPICAL:						
		MAXIMUM:						
		TYPICAL:						
		MAXIMUM:						
		TYPICAL:						
		MAXIMUM:						
		TYPICAL:						
EXAMPLE:		MAXIMUM:	*10.0*	*1.2*		*2*	*98% by wt control device*	*CFR 61*
Benzene	*71432*	TYPICAL:	*8.0*	*0.8*		*2*	*leak-tight trucks*	*61.302(b),(d)*

IMPORTANT: ATTACH CALCULATIONS, TO THE EXTENT THEY ARE AIR EMISSIONS RELATED, ON WHICH EMISSIONS WERE DETERMINED AND LABEL AS EXHIBIT 260-6.

[1]PROVIDE CONTROLLED EMISSIONS (E.G., THE EMISSIONS THAT WOULD RESULT AFTER ALL CONTROL AND CAPTURE EFFICIENCIES ARE ACCOUNTED FOR).
[2]CAS - CHEMICAL ABSTRACT SERVICE NUMBER.
[3]PLEASE PROVIDE ANY OTHER EMISSION RATE WHICH IS COMMONLY USED, REQUIRED BY A SPECIFIC LIMITATION OR THAT WAS MEASURED (E.G., PPM, GR/DSCF, ETC.).
[4]DM - DETERMINATION METHOD: 1) STACK TEST, 2) MATERIAL BALANCE, 3) STANDARD EMISSION FACTOR (AP-42 OR AIRS, 4) ENGINEERING ESTIMATE, 5) SPECIAL EMISSION FACTOR (NOT AP-42 OR AIRS).
[5]RATE - ALLOWABLE EMISSION RATE OR STANDARD SPECIFIED BY MOST STRINGENT APPLICABLE RULE.

EXHAUST POINT INFORMATION

33) DESCRIPTION OF EXHAUST POINT (STACK, VENT, ROOF MONITOR, INDOORS, ETC.). IF THE EXHAUST POINT DISCHARGES INDOORS, DO NOT COMPLETE THE REMAINING ITEMS.

Stack

34) DISTANCE TO NEAREST PLANT BOUNDARY FROM EXHAUST POINT DISCHARGE (FT):

TBD

35) DISCHARGE HEIGHT ABOVE GRADE (FT):

160

36) GOOD ENGINEERING PRACTICE (GEP) HEIGHT, IF KNOWN (FT):

unknown

37) DIAMETER OF EXHAUST POINT (FT): NOTE: FOR A NON CIRCULAR EXHAUST POINT, THE DIAMETER IS 1.128 TIMES THE SQUARE ROOT OF THE AREA. 17

38) EXIT GAS FLOW RATE	a) MAXIMUM (ACFM): 900,000	b) TYPICAL (ACFM): 900,000
39) EXIT GAS TEMPERATURE	a) MAXIMUM (°F): 275	b) TYPICAL (°F): 275

40) DIRECTION OF EXHAUST (VERTICAL, LATERAL, DOWNWARD):

41) LIST ALL EMISSION UNITS AND CONTROL DEVICES SERVED BY THIS EXHAUST POINT:

	NAME	FLOW DIAGRAM DESIGNATION
a)	BOF Charging	
b)	BOF Tapping	
c)		
d)		
e)		
f)		
g)		

42) WHAT PERCENTAGE OF THE CONTROL EQUIPMENT EMISSIONS ARE BEING DUCTED TO THIS EXHAUST POINT (%)?

97

43) IF THE PERCENTAGE OF THE CONTROL EQUIPMENT EMISSIONS BEING DUCTED TO THE EXHAUST POINT IS NOT 100%, THEN EXPLAIN WHERE THE REMAINING EMISSIONS ARE BEING EXHAUSTED TO:

THE FOLLOWING INFORMATION NEED ONLY BE SUPPLIED IF READILY AVAILABLE.

44a) LATITUDE:	b) LONGITUDE:	
45) UTM ZONE:	b) UTM VERTICAL (KM):	c) UTM HORIZONTAL (KM):

ILLINOIS ENVIRONMENTAL PROTECTION AGENCY
DIVISION OF AIR POLLUTION CONTROL -- PERMIT SECTION
P.O. BOX 19506
SPRINGFIELD, ILLINOIS 62794-9506

FOR APPLICANT'S USE
Revision #: _____
Date: _____ / _____ / _____
Page _____ of _____
Source Designation:
_____

SUPPLEMENTAL FORM AIR POLLUTION CONTROL EQUIPMENT FILTER (260C)

FOR AGENCY USE ONLY
ID NUMBER:
CONTROL EQUIPMENT #:
DATE:

DATA AND INFORMATION

1) FLOW DIAGRAM DESIGNATION OF FILTER:
BOF Baghouse

2) FILTER CONFIGURATION (CHECK ONE):
☐ OPEN PRESSURE ☐ CLOSED PRESSURE ☐ CLOSED SUCTION
☒ OTHER, SPECIFY: Negative Pressure

3) DESCRIBE FILTER MATERIAL:
Polyester

4) FILTERING AREA (SQUARE FEET): TBD

5) AIR TO CLOTH RATIO (FEET/MIN): 4.5-1

6) CLEANING METHOD
☐ SHAKER ☐ REVERSE AIR ☐ PULSE AIR ☒ PULSE JET
☐ OTHER, SPECIFY:

7) NORMAL RANGE OF PRESSURE DROP: TBD TO (INCH H_20)

8a) INLET EMISSION STREAM PARAMETERS:

	MAX	TYPICAL
MOISTURE CONTENT (% BY VOLUME):	Unknown	Unknown
PARTICULATE INLET LOADING (GRAINS/SCF):	Unknown	Unknown

b) MEAN PARTICLE DIAMETER (MICRONS):
Unknown

THIS AGENCY IS AUTHORIZED TO REQUIRE THIS INFORMATION UNDER ILLINOIS REVISED STATUTES, 1991, AS AMENDED 1992, CHAPTER 111 1/2, PAR. 1039.5. DISCLOSURE OF THIS INFORMATION IS REQUIRED UNDER THAT SECTION. FAILURE TO DO SO MAY PREVENT THIS FORM FROM BEING PROCESSED AND COULD RESULT IN THE APPLICATION BEING DENIED. THIS FORM HAS BEEN APPROVED BY THE FORMS MANAGEMENT CENTER.

FOR APPLICANT'S USE
_____

APPLICATION PAGE 1

9) FILTER OPERATING PARAMETERS:

	DURING MAXIMUM OPERATION OF FEEDING UNIT(S)	DURING TYPICAL OPERATION OF FEEDING UNIT(S)
INLET FLOW RATE (SCFM):	900,000	900,000
INLET GAS TEMPERATURE (DEGREES FAHRENHEIT):	275	275
EFFICIENCY (PM REDUCTION):	(%) 95	(%) 95
EFFICIENCY (PM10 REDUCTION):	(%) 95	(%) 95

10) HOW IS FILTER MONITORED FOR INDICATIONS OF DETERIORATION (E.G., BROKEN BAGS)?

☐ CONTINUOUS OPACITY ☐ PRESSURE DROP ☐ ALARMS-AUDIBLE TO PROCESS OPERATOR

☐ VISUAL OPACITY READINGS, FREQUENCY: _____

☒ OTHER, SPECIFY: Bag Leak Detection System

11) DESCRIBE ANY RECORDING DEVICE AND FREQUENCY OF LOG ENTRIES:

N/A

12) DESCRIBE ANY FILTER SEEDING BEING PERFORMED:

N/A

ILLINOIS ENVIRONMENTAL PROTECTION AGENCY
DIVISION OF AIR POLLUTION CONTROL -- PERMIT SECTION
P.O. BOX 19506
SPRINGFIELD, ILLINOIS 62794-9506

FOR APPLICANT'S USE
Revision #: _____
Date: ____ / ____ / ____
Page _____ of _____
Source Designation: _____

REQUEST FOR A TITLE 1 INCORPORATION INTO THE CAAPP: T1, T1 REVISED (T1R), T1 NEW (T1N)	*FOR AGENCY USE ONLY*
	ID NO.:
	PERMIT NO.:
	DATE:

SECTION ONE *SOURCE INFORMATION*

1) SOURCE NAME: United States Steel Corporation-Granite City Works

2) SOURCE ID NO.: 119813AA1

3) DATE FORM PREPARED: 04/27/2011

SECTION TWO *INSTRUCTIONS IN BRIEF*

1) COMPLETE THE FOLLOWING FORM WHEN REQUESTING TO INCORPORATE EXISTING TITLE 1 REQUIREMENTS INTO THE CAAPP PERMIT, TO REVISE EXISTING TITLE 1 REQUIREMENTS IN THE CAAPP PERMIT, OR TO ESTABLISH NEW TITLE 1 REQUIREMENTS IN THE CAAPP PERMIT.

2) ATTACH A COPY OF THE PERMIT THAT IS REQUESTED TO BE INCORPORATED.

3) REFER TO 283-CAAPP INSTRUCTIONS FOR FURTHER GUIDANCE ON COMPLETING THIS FORM.

SECTION THREE *PERMITEE'S REQUESTS*

WHAT ARE YOU REQUESTING TO INCORPORATE INTO THE CAAPP PERMIT:

CURRENT TITLE I REQUIREMENTS *(NO CHANGES IN THE CURRENTLY ESTABLISHED T1 PERMIT CONDITIONS)*.	☐
TO REVISE EXISTING TITLE 1 CONDITIONS IN THE CURRENT CAAPP PERMIT *(T1R REQUEST)*.	☐
TO ESTABLISH NEW TITLE 1 CONDITIONS IN THE CURRENT CAAPP PERMIT *(T1N REQUEST)*. (E.G., CAN BE USED FOR EMISSION UNITS THAT DID NOT PREVIOUSLY RECEIVE A CONSTRUCTION PERMIT)	☐

CERTIFICATION STATEMENT

BY THIS FORM, THE AUTHORIZED REPRESENTATIVE OF THE ABOVE REFERENCED SOURCE REQUESTS THAT THE ILLINOIS EPA CONSIDER THE PENDING CAAPP APPLICATION TO BE A JOINT TITLE I/TITLE V CAAPP PERMIT APPLICATION. THE INFORMATION CONTAINED IN THE CAAPP APPLICATION IS THE CURRENT AND ACCURATE INFORMATION FOR THE SOURCE.

IN CASES WHERE THE REQUEST FOR A NEW EMISSION LIMIT OR AN EMISSION LIMIT GREATER THAN THAT IN AN EXISTING PERMIT, A COMPLETED APPLICABLE RULES ANALYSIS HAS BEEN COMPLETED ON PAGE 3 WHICH ADDRESSES THE APPLICABILITY, AND COMPLIANCE WHERE DETERMINED APPLICABLE, OF RELEVANT TITLE I PROVISION. SPECIAL EXPLANATORY EMPHASIS SHALL BE PLACED ON 40 CFR 52.21 - FEDERAL PREVENTION OF SIGNIFICANT DETERIORATION (PSD) AND 35 ILL. ADM. CODE PART 203 - MAJOR STATIONARY SOURCES CONSTRUCTION AND MODIFICATION.

IN ADDITION, WE THE PERMITTEE AGREE TO WAIVE THE TIME FRAMES CONTAINED IN SECTION 39 OF THE ILLINOIS ENVIRONMENTAL PROTECTION ACT FOR PROCESSING OF THE TITLE I PERMIT, AND AGREE THAT ILLINOIS EPA MAY PROCESS THIS REQUEST FOR A COMBINED TITLE I/TITLE V CAAPP PERMIT WITHIN THE TIME FRAMES REQUIRED FOR CAAPP PERMIT ISSUANCE.

SIGNATURE BLOCK

NOTE: THIS CERTIFICATION MUST BE SIGNED BY A RESPONSIBLE OFFICIAL. APPLICATIONS WITHOUT A SIGNED CERTIFICATION WILL BE RETURNED AS INCOMPLETE.

I CERTIFY UNDER PENALTY OF LAW THAT, BASED ON INFORMATION AND BELIEF FORMED AFTER REASONABLE INQUIRY, THE STATEMENTS AND INFORMATION CONTAINED IN THIS APPLICATION ARE TRUE, ACCURATE AND COMPLETE.

AUTHORIZED SIGNATURE:

BY: Richard Veitch
AUTHORIZED SIGNATURE

General Manager
TITLE OF SIGNATORY

Richard Veitch
TYPED OR PRINTED NAME OF SIGNATORY

4 / 29 / 2011
DATE

THIS AGENCY IS AUTHORIZED TO REQUIRE THIS INFORMATION UNDER 39.5 OF THE ILLINOIS ENVIRONMENTAL PROTECTION ACT, 415 ILCS 5/39.5. FURTHER DISCLOSURE OF THIS INFORMATION IS REQUIRED UNDER THAT SECTION, MOREOVER AS ALSO PROVIDED IN THAT SECTION, FAILURE TO PROVIDE THIS INFORMATION MAY PREVENT THIS APPLICATION FROM BEING PROCESSED AND COULD RESULT IN THE APPLICATION BEING DENIED.

SECTION FOUR — **TITLE 1 (T1) INCORPORATION LISTING**

REQUEST NO.	PERMIT NO.	INCORPORATE ALL OF THE REQUIREMENTS FOR THIS PERMIT NO. IN THE CAAPP	INCORPORATE INTO THE CAAPP ALL OF THE REQUIREMENTS FROM THIS PERMIT NO. EXCEPT THE FOLLOWING SPECIFIC CONDITIONS.				PROVIDE RATIONALE FOR NOT REQUESTING THE INCORPORATION OF THE SPECIFIC CONDITIONS
				CONDITION: / PAGE:	CONDITION: / PAGE:	CONDITION: / PAGE:	
1		☐ YES ☐ NO	☐ YES ☐ NO				
2		☐ YES ☐ NO	☐ YES ☐ NO				
3		☐ YES ☐ NO	☐ YES ☐ NO				
4		☐ YES ☐ NO	☐ YES ☐ NO				

SECTION FIVE — **TITLE 1 REVISED (T1R) OR TITLE 1 NEW (T1N) INCORPORATION REQUEST LISTING**

REQUEST NO.	PERMIT NO.	CONDITION NO. AND PAGE NO.	T1R OR T1N	CONDITION TYPE [A]	REQUESTED CHANGE OR ADDITION. BE SPECIFIC, ATTACHING ADDITIONAL PAGES AS NECESSARY.	REASON [B]	FURTHER EXPLANATION FOR REQUEST IF NECESSARY
1	95010001	CONDITION: See Attached / PAGE:	☒ T1R ☐ T1N	☐ 1 ☐ 2 ☒ 3	See Attached Table	3	
2	72080043	CONDITION: See Attached	☒ T1R ☐ T1N	☐ 1 ☐ 2 ☒ 3	See Attached Table	3	

A CHOOSE ONE OF THE FOLLOWING: 1) NATURAL MINOR, 2) PSD/NSR AVOIDANCE, 3) PSD/NSR.

B CHOOSE OF THE FOLLOWING REASONS AND BRIEFLY EXPLAIN IF NECESSARY: 1) BUSINESS DECISION (OPERATING NEEDS, ETC.); 2) REMOVAL OR ADDITION OF PROCESSES AT THE SOURCE; 3) INCLUSION OR REMOVAL OF A CONTROL DEVICE; 4) CHEMICAL REFORMULATION (E.G., SWITCHING A PETROLEUM BASED TO A WATER BASED COATING); 5) FUEL SWITCHING (E.G., COAL TO NATURAL GAS, ETC.); 6) METHODOLOGY CHANGE (E.G., SWITCHING A PETOLEUM SOLVENT TO AQUEOUS SOLUTION); 7) CHANGES IN THE EMISSION FACTOR(S) USED FOR CALCULATIONS, OR 8) OTHER (EXPLAIN)

SECTION SIX — APPLICABLE RULES REVIEW FOR T1R OR T1N REQUESTS (COMPLETE FOR EACH T1R OR T1N)

EMISSION UNIT DESIGNATION AFFECTED BY T1R OR T1N REQUEST:

1) PROVIDE ANY SPECIFIC EMISSION STANDARD(S) AND LIMITATION(S) SET BY RULE(S) WHICH ARE APPLICABLE TO THIS EMISSION UNIT

REGULATED AIR POLLUTANT(S)	EMISSION STANDARD(S)	REQUIREMENT(S)
NONE	NONE	Permit changes do not impact any applicable regulations

2) PROVIDE ANY SPECIFIC RECORDKEEPING RULE(S) WHICH ARE APPLICABLE TO THIS EMISSION UNIT:

REGULATED AIR POLLUTANT(S)	RECORDKEEPING RULE(S)	REQUIREMENT(S)
NONE	NONE	Permit changes do not impact any applicable regulations

3) PROVIDE ANY SPECIFIC REPORTING RULE(S) WHICH ARE APPLICABLE TO THIS EMISSION UNIT:

REGULATED AIR POLLUTANT(S)	REPORTING RULE(S)	REQUIREMENT(S)
NONE	NONE	Permit changes do not impact any applicable regulations

4) PROVIDE ANY SPECIFIC MONITORING RULE(S) WHICH ARE APPLICABLE TO THIS EMISSION UNIT:

REGULATED AIR POLLUTANT(S)	MONITORING RULE(S)	REQUIREMENT(S)
NONE	NONE	Permit changes do not impact any applicable regulations

NOTE: THE SOURCE WILL ALSO NEED TO PROVIDE A "REQUEST FOR PERIODIC MONITORING" FORM CAAPP-281.

5) PROVIDE ANY SPECIFIC TESTING RULES AND/OR PROCEDURES WHICH ARE APPLICABLE TO THIS EMISSION UNIT:

REGULATED AIR POLLUTANT(S)	TESTING RULE(S)	REQUIREMENT(S)
NONE	NONE	Permit changes do not impact any applicable regulations

Appendix A

Proposed Permit Modifications

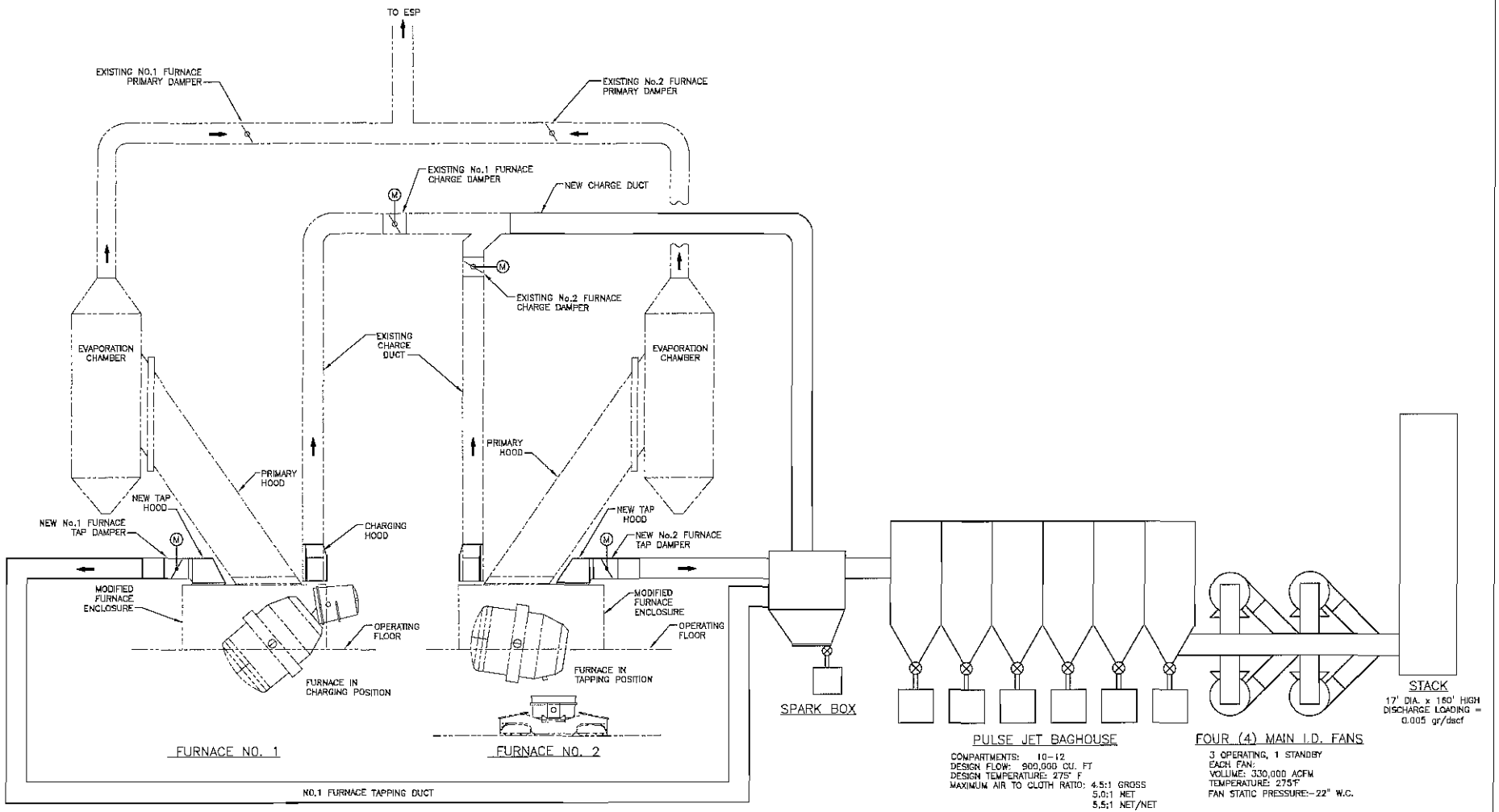
Title 1 Conditions and related Operating Permit Conditions to be revised in the CAAPP permit to reflect Charging and Tapping Baghouse

Condition as identified in the Revised CAAPP Permit (3-16-2011 public comment version)	Condition as Identified in the Production Increase Construction Permit 95010001	Condition as Identified in the Basic Oxygen Furnace Shop Permit 72080043	Requested Change	Explanation
7.5.5-3(a)(i)-(a)(ii) Pgs. 184-185 Work Practices Overlapping Operations of BOF vessels	Condition 11 Pg. 2 Fume Suppression During Tapping	2(a)-(2)(b) Pg.1-2 Overlapping operations and Fume suppression during tapping	Remove	Charging and tapping emissions will be captured by a baghouse instead of ESP. ESP capture draft will not change by charging, tapping, or alloy addition operations. The Fume suppression system will be replaced by the baghouse for capturing and controlling tapping emissions.
7.5.5-3(b), 7.5.5-6(h) Pg.185, 186 Minimum set points Work Practices	12(a) thru 12(c) and 12(e) Pg. 2-4 ESP control system set points, Overlapping Operations, Stack gas flow rate measurement	5(a) Pg.2 Stack gas pulpit set point.	Revise	Minimum set points for the ESP control system will be re-established for optimum capture and control efficiency after secondary emissions are routed to the charging and tapping baghouse and the new baghouse is fully operational.

Appendix B

Project Drawings and Flow Diagram

335874-F-001



SPECIFICATIONS SUBJECT TO CHANGE PENDING FINAL DESIGN

HATCH — Hatch Associates Consultants, Inc., Pittsburgh, PA 15238-1631

REVISION	SCALE: N.T.S.	DATE
	DESIGNED BY	
	DRAWN BY TWG	1/11/10
	CHECKED BY	
	APPROVED BY	

PROJECT NO. [redacted] 335874 REVISION B

REV.	DESCRIPTION	DATE	BY	CHK.
B	FEL-2 SUBMISSION FOR CLIENT APPROVAL	4/26/11	MJS	
A	PERMIT SUBMISSION	3/16/11	TWG	

INFORMATION CONFIDENTIAL: ALL PLANS, DRAWINGS, SPECIFICATIONS AND/OR INFORMATION FURNISHED HEREWITH ARE AND SHALL REMAIN CONFIDENTIAL AND SHALL NOT BE USED FOR ANY PURPOSE NOT PREPARED FOR IN ACCORDANCE WITH HATCH ASSOCIATES CONSULTANTS, INC.

REFERENCE DWG'S.

BOF MELT SHOP
SECONDARY EMISSION CONTROL SYSTEM
PROCESS FLOW DIAGRAM OPTION 1

USS Granite City Works
United States Steel

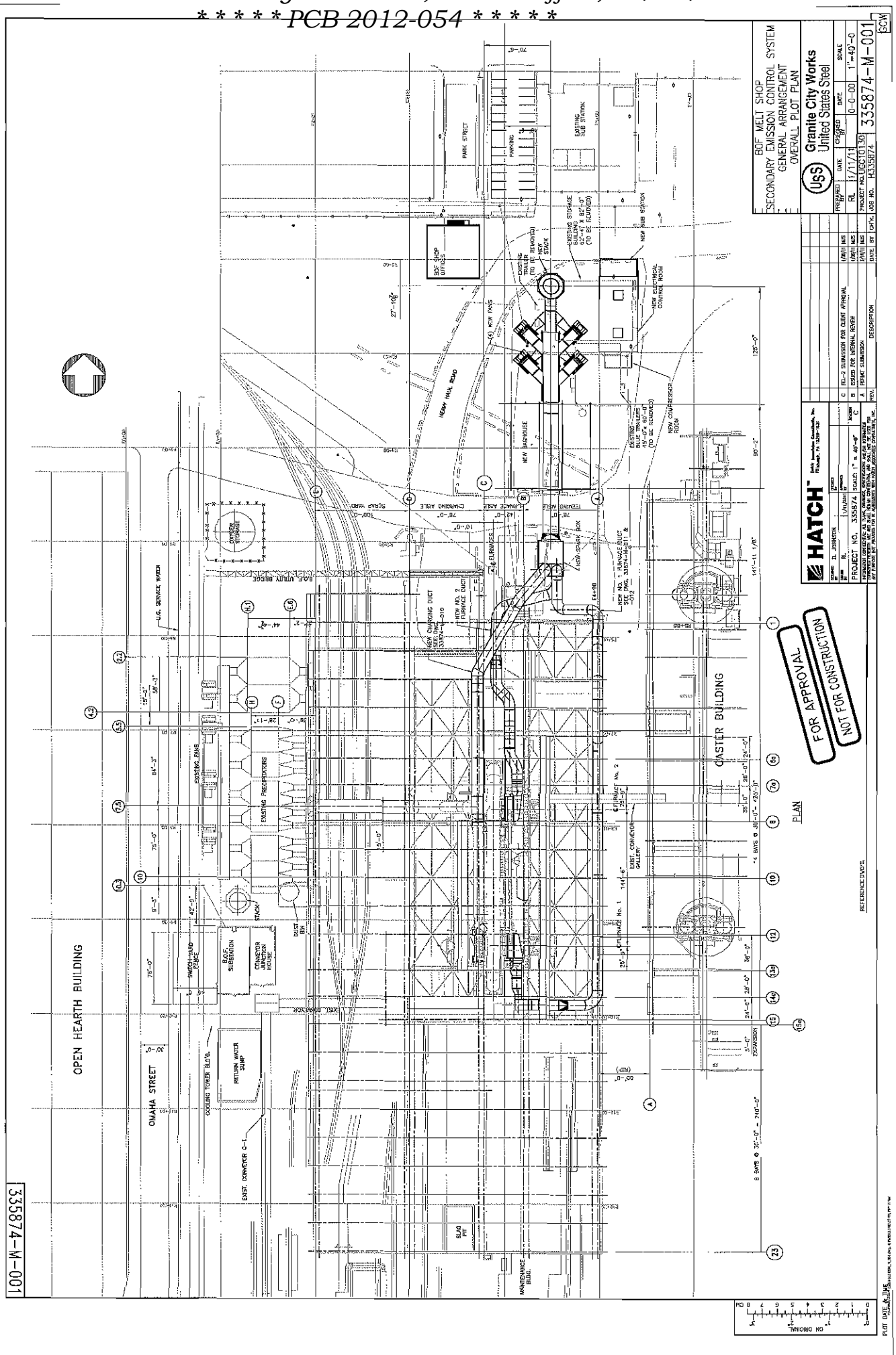
PREPARED BY	DATE	CHECKED BY	DATE	SCALE
TWG	1-19-11			NONE

PROJECT NO. 335874-F-001
JOB NO. H335874

GCW

PLOT DATE & TIME

ON ORIGINAL


BOF MELT SHOP
SECONDARY EMISSION CONTROL SYSTEM
GENERAL ARRANGEMENT
OVERALL PLOT PLAN
Granite City Works
United States Steel
HATCH
335874-M-001
OPEN HEARTH BUILDING
OMAHA STREET
CASTER BUILDING
FOR APPROVAL
NOT FOR CONSTRUCTION
PLAN

Appendix C

Previously Issued Permits

ILLINOIS ENVIRONMENTAL PROTECTION AGENCY

P.O. BOX 19506, SPRINGFIELD, ILLINOIS 62794-9506

RENEE CIPRIANO, DIRECTOR

217/782-2113

OPERATING PERMIT

PERMITTEE

U.S. Steel Granite City
Attn: Larry Siebenberger
Route 203 and 20th Street
Granite City, Illinois 62040

Application No.: 72080043
Applicant's Designation: BOF1187360
Subject: Basic Oxygen Furnace Shop
Date Issued: July 28, 2004
Location: 20th and Omaha Streets, Granite City

I.D. No.: 119813AAI
Date Received: April 19, 2004
Expiration Date: July 28, 2009

This Permit is hereby granted to the above-designated Permittee to OPERATE emission source(s) and/or air pollution control equipment consisting of 2 BOF Vessels and an ESP, reloading station, track hopper and baghouse, flux bins and baghouse and 5 ladle dryers/pre-heaters as described in the above-referenced application. This Permit is subject to standard conditions attached hereto and the following special condition(s):

1a. Combined total production of steel from basic oxygen furnaces 1 and 2 shall not exceed 7,600 net tons per day, as averaged over any month.

b. This permit is issued based upon the above permitted production increase not constituting a modification under either 35 Ill. Adm. Code Part 203 or 40 CFR 52.21 - PSD. The permitted production increase does not constitute a modification because it does not entail a physical change and a change in the method of operation is not occurring because the previous levels of production of the BFs and the BOFs were not set by a federally enforceable permit condition(s).

2. Overlapping operations of the BOF Vessels is allowed only under the following conditions:

a. i. The charge and/or blow on one vessel shall not begin until sufficient draft has been established at the associated ESP capture system (a.k.a., doghouse) and the alloy addition at the vessel tapping has been completed for at least 1 minute.

ii. Sufficient draft at the ESP capture system of the vessel being tapped shall be maintained for at least 1 minute after alloy addition has been completed. After such period, the capture system draft may be transferred over to the other vessel in order to satisfy condition (i) above.

iii. Only overlapping of tapping, after alloy addition, at one vessel and the charge and/or blow on the other vessel is allowed.

iv. Conditions (i) and (ii) above shall be part of standard operating procedure (SOP) of the BOF vessels.

b. Each BOF vessel shall be equipped with a Fume Suppression System which shall be in use at all times that tapping is occurring during overlapping operations.

3. This permit allows the operation of the melt shop vessels and associated control equipment during malfunction and breakdown under the following conditions:

a. Operation of the ESP with more than 4 fields not functioning shall be considered a malfunction for reporting, logging and recordkeeping purposes.

b. Operation of a melt shop vessel shall not be continued for longer than the time needed to finish the heat in process at the time of the malfunction.

c. In the event of a malfunction the Permittee shall immediately repair the cause of the malfunction and take all necessary steps to prevent a repeat of the malfunction.

4. The Permittee shall implement an operating program to reduce malfunction emissions during an ESP outage of 5 or more ESP fields. Such program shall include but not be limited to maintaining an inventory of spare parts, daily inspections and performing scheduled maintenance.

5a. During operation of the BOF ESP with one of the 6 passageways dampered off, the stack gas pulpit set point shall not exceed 650,000 cfm.

b. The pulpit stack gas flow meter shall be calibrated on at least a quarterly basis.

c. i. The Permittee shall keep a continuous strip chart record of the stack gas flow rate during ESP use.

ii. This record shall be maintained for three years and be available for inspection by the Illinois EPA upon request.

6. The Illinois EPA Regional Office at 2200 Mall Street, Collinsville shall be notified by 10:00 a.m. of the next work day, of any malfunction or breakdown which results in emissions in excess of the Illinois EPA Rules or the provisions of the federal consent decree.

7. A log shall be kept of all malfunctions and breakdowns at the basic oxygen furnace and reported quarterly to the regional office recording the following:

a. Date and time of malfunction or breakdown;

b. Length of time that operation is continued during malfunction and breakdown to the nearest quarter hour;

c. Quantity of emissions emitted during malfunction or breakdown, and the method by which the quantity was determined;

d. Cause of malfunction or breakdown;

e. Actions taken to correct malfunction or breakdown; and

f. Actions taken to mitigate emissions as far as practicable during malfunction or breakdown.

Special Conditions #6 and #7 supersede standard condition #9.

8. The facility shall comply with all applicable conditions of the federal consent decree and of the Amendments which were agreed to by National Steel Corporation and the Illinois Environmental Protection Agency on May 18, 1981 and September 17, 1984.

9. A copy of the monthly opacity exceedance report of the BOF ESP shall be sent to the Illinois EPA Regional Office. Henceforth these reports shall contain all opacity measurements which exceed 30 percent, averaged over a six minute period. These "excess opacity" reports shall provide, for each such incident, the percent opacity measured as well as the date and span of such incident. These reports shall state the reasons for the excess opacity. The report shall also specify the date of those periods during which the continuous monitoring system was not in operation.

10. Vessels #1 and #2 may only be operated as top oxygen-injected vessels. However, for purposes of checkout and stack testing only, Vessels #1 and #2 may be operated during the time of this permit as peripheral and bottom oxygen injected vessels for a maximum of 120 days. Any further operation of the vessels as other than top oxygen-injected vessels shall be pursuant to a permit granted for such additional operation.

11. Permittee shall use large covers or an alternative control method so as to reduce lance hole emissions to the lowest practicable level. Proof that an alternative control method is equivalent to lance hole covers is the responsibility of the Permittee.

12a. The Permittee shall keep records of the following items and such other items which may be appropriate to allow the Illinois EPA to review compliance:

i. Total production of hot metal at the BFs (daily, monthly, and annual production in tons)

ii. Total production of molten steel at the BOFs (daily, monthly, and annual production in tons)

b. These records shall be retained for three years and shall be made available for inspection and copying by the Illinois EPA upon request.

c. A summary of the above records shall be submitted every 6 months beginning with the initial month that the BFs and BOFs are operated at the increased production rates. This report shall be submitted to both the Regional Office and Permit Section.

Illinois Environmental Protection Agency
Division of Air Pollution Control
2009 Mall Street
Collinsville, Illinois 62234

Illinois Environmental Protection Agency
Division of Air Pollution Control
Attn: Permit Section
1340 North Ninth Street
Springfield, Illinois 62702

13a. This permit incorporates by reference the conditions of Construction Permit 94090026.

b. The conditions of Operation Permit 95010001 for the emission unit(s) covered by this permit supersede the conditions of this permit where a conflict exists.

It should be noted that a detailed review of the emission unit(s) covered by this permit will be performed during the review of the pending CAAPP application.

If you have any questions on this, please call Kevin Smith at 217/782-2113.

Donald E. Sutton, P.E.
Manager, Permit Section
Division of Air Pollution Control

DES:KLS:jar

cc: Region 3

STATE OF ILLINOIS
ENVIRONMENTAL PROTECTION AGENCY
DIVISION OF AIR POLLUTION CONTROL
P.O. BOX 19506
SPRINGFIELD, ILLINOIS 62794-9506

STANDARD CONDITIONS FOR OPERATING PERMITS

May, 1993

The Illinois Environmental Protection Act (Illinois Revised Statutes, Chapter 111-1/2, Section 1039) grants the Environmental Protection Agency authority to impose conditions on permits which it issues.

The following conditions are applicable unless superseded by special permit conditions(s).

1. The issuance of this permit does not release the Permittee from compliance with state and federal regulations which are part of the Illinois State Implementation Plan, as well as with other applicable statues and regulations of the United States or the State of Illinois or with applicable local laws, ordinances and regulations.

2. The Illinois EPA has issued this permit based upon the information submitted by the Permittee in the permit application. Any misinformation, false statement or misrepresentation in the application shall be ground for revocation under 35 Ill. Adm. Code 201.166.

3. a. The Permittee shall not authorize, cause, direct or allow any modification, as defined in 35 Ill. Adm. Code 201.102, of equipment, operations or practices which are reflected in the permit application as submitted unless a new application or request for revision of the existing permit is filed with the Illinois EPA and unless a new permit or revision of the existing permit(s) is issued for such modification.

   b. This permit only covers emission sources and control equipment while physically present at the indicated plant location(s). Unless the permit specifically provides for equipment relocation, this permit is void for an item of equipment on the day it is removed from the permitted location(s) or if all equipment is removed, notwithstanding the expiration date specified on the permit.

4. The Permittee shall allow any duly authorized agent of the Illinois EPA, upon the presentation of credentials, at reasonable times:

   a. To enter the Permittee's property where actual or potential effluent, emission or noise sources are located or where any activity is to be conducted pursuant to this permit;

   b. To have access to and to copy any records required to be kept under the terms and conditions of this permit;

   c. To inspect, including during any hours of operation of equipment constructed or operated under this permit, such equipment and any equipment required to be kept, used, operated, calibrated and maintained under this permit;

   d. To obtain and remove samples of any discharge or emission of pollutants; and

   e. To enter and utilize any photographic, recording, testing, monitoring or other equipment for the purpose of preserving, testing, monitoring or recording any activity, discharge or emission authorized by this permit.

5. The issuance of this permit:

   a. Shall not be considered as in any manner affecting the title of the premises upon which the permitted facilities are located;

Directory
Environmental Protection Agency
Bureau of Air

May 22, 2003

For assistance in preparing a permit application, contact the Permit Section:

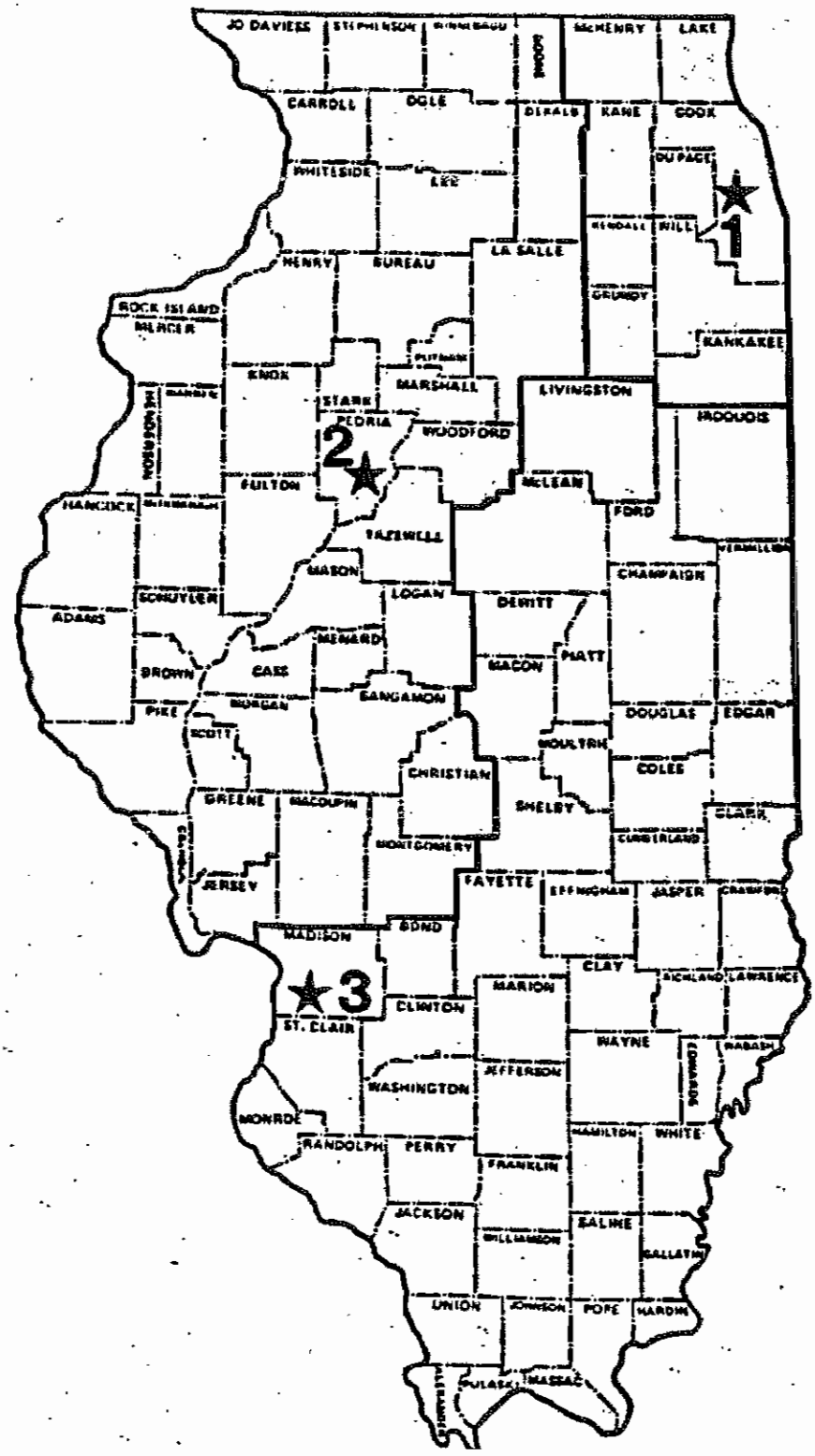
Illinois EPA
Division of Air Pollution Control
Permit Section
1021 N. Grand Ave E.
P.O. Box 19506
Springfield, Illinois 62794-9506
217/782-2113

Or contact a regional office of the Field Operations Section. The regional offices and their areas of responsibility are shown on the map. The addresses and telephone numbers of the regional offices are as follows:

Illinois EPA
Region 1
Bureau of Air, FOS
9511 West Harrison
Des Plaines, Illinois 60016
847/294-4000

Illinois EPA
Region 2
5415 North Univiversity
Peoria, Illinois 61614
309/693-5461

Illinois EPA
Region 3
2009 Mall Street
Collinsville, Illinois 62234
618/346-5120



ILLINOIS ENVIRONMENTAL PROTECTION AGENCY

P.O. BOX 19506, SPRINGFIELD, ILLINOIS 62794-9506

RENEE CIPRIANO, DIRECTOR

217/782-2113

REVISED
OPERATING PERMIT

PERMITTEE

U.S. Steel Granite City
Attn: Larry Siebenberger
Route 203 and 20th Street
Granite City, Illinois 62040

Application No.: 95010001
Applicant's Designation:
Subject: Production Increase, Renewal
Date Issued: June 25, 2002
Location: Southeastern Granite City

I.D. No.: 119813AAI
Date Received: April 29, 2002

Expiration Date: June 25, 2007

Permit is hereby granted to the above-designated Permittee for an increase in the allowable production rate of iron (from 2,372,500 to 3,165,000 net tons per year) and steel (from 2,774,000 to 3,580,000 net tons per year) as described in the above-referenced application. This permit is subject to standard conditions attached hereto and the following special conditions:

1. Prior to issuance of this permit, a draft of this permit has undergone a public notice and comment period, and a public hearing was held.

BLAST FURNACE OPERATIONS

2a. Total combined production of hot metal (a.k.a., iron) from blast furnaces A and B shall not exceed 9,849 net tons per day, averaged over any calendar month, and;

b. Total combined production of hot metal from blast furnaces A and B shall not exceed 3,165,000 net tons per year.

3a. Particulate emissions from the blast furnace casthouse baghouse and iron spout baghouse shall not exceed 0.010 gr/dscf, pursuant to 35 Ill. Adm. Code 212.445(b)(1).

b. The opacity of emissions from the blast furnace casthouse baghouse and the iron spout baghouse shall not exceed 10% on a 6 minute rolling average basis, pursuant to 35 Ill. Adm. Code 212.445(b)(1).

4a. Emissions of particulate matter from any opening in the blast furnace casthouse shall not exceed 20% opacity on a 6-minute rolling average basis beginning from initiation of the opening of the tap hole up to the point where iron and slag stops flowing in the troughs, pursuant to 35 Ill. Adm. Code 212.445(a)(2).

5. Emissions from Blast Furnace operations shall not exceed the limits in attached Tables 1 and 5.

BASIC OXYGEN FURNACE SHOP

6a. Total combined production of liquid steel from the Basic Oxygen Furnaces (BOF's) shall not exceed 11,000 net tons per day, averaged over any calendar month, and;

b. Total combined production of liquid steel from the BOF's shall not exceed 3,580,000 net tons per year.

7. The emissions of PM-10 from the BOF ESP stack for the total of all BOF processes (i.e., operations from the beginning of the charging process through the end of the tapping process) shall not exceed 60.0 lbs/hr and 0.225 lbs per ton of steel in process, pursuant to 35 Ill. Adm. Code 212.458(b)(23).

8. Visible emissions from any opening in the BOF shop (e.g., roof monitor) shall not exceed 20% on a 3 minute rolling average basis.

9a. The Permittee shall determine the opacity from the openings BOF shop on at least a weekly basis. Observations shall be conducted for at least an hour or the entire BOF cycle, whichever is greater.

b. The Permittee shall determine the opacity from the BOF ESP stack for at least one hour on any normal work day (i.e., Monday through Friday) that the continuous opacity monitor on the BOF ESP stack has an outage that exceeds two consecutive hours and is still down. The readings shall commence as soon as possible after the opacity monitor has been down for two consecutive hours. If meteorological conditions or lack of visibility preclude these observations from being conducted, then this shall be noted in the log book.

c. The opacity shall be determined in accordance with the observation procedures set out in 40 CFR Part 60, Appendix A, Method 9 including the requirement that readings be taken by a certified observer.

d. These determinations shall be recorded in a log book, which at a minimum shall include the date and time of observations, name and title of observer, individual opacity readings, calculated opacity so as to determine compliance with Section 212.123, and calculated opacity relative to 20% opacity on a three minute rolling average basis.

10. The Permittee shall follow the BOF operating procedures and requirements specified in attachment A. These requirements are designed to ensure proper operation of the BOF control system. These procedures shall be posted in the BOF pulpit (a.k.a., control room).

11. Flame suppression shall be used and maintained during the entire tapping process.

12a. The stack gas pulpit set point of the BOF ESP control system shall be set in accordance with the following, so as to establish sufficient particulate matter capture efficiency of the charging and primary hoods:

i. Set point requirements while only a single BOF vessel is in operation;

A. Minimum set point during charging process: 550,000 cfm;

B. Minimum set point during refining process: 650,000 cfm;

C. Minimum set point during tapping process: 200,000 cfm (until one minute after completing alloy addition);

b. i. During dual operation of BOF vessels (a.k.a., overlapping BOF operation) the minimum set point shall be 700,000 cfm.

iii. Overlapping operations of the BOF vessels is allowed under the following conditions:

A. The hot metal charge of the second vessel shall be initiated and completed during the time between completion of the blow and start of tap on the first vessel while sufficient draft at the ESP capture system is established and maintained for both vessels.

B. The charge and/or blow on one vessel shall not begin until sufficient draft has been established at the associated ESP capture system (a.k.a., doghouse) and the alloy addition at the vessel tapping has been completed for a least 1 minute.

C. Sufficient draft at the ESP capture system of the vessel being tapped shall be maintained for at least 1 minute after alloy addition has been completed. After such period, the capture system draft may be transferred over to the other vessel in order to satisfy condition (A) above.

D. Only overlapping of the hot metal charge of the second vessel after the end of blow and prior to onset of tap of the first vessel and overlapping of tapping of the first vessel, after alloy addition, and the hot metal charge and/or blow on the second vessel are allowed.

E. Condition B and C above shall be part of the Standard Operating Procedure (SOP) of the BOF vessels.

c. The BOF capture system shall be operated at the above minimum set points until and unless the Agency approves a lower minimum set point based on a demonstration that a better level of particulate

matter control will occur, except for purposes of emissions testing as related to the set point.

d. The Permittee shall calibrate, operate, and maintain a continuous strip chart recorder of the ESP stack gas flow rate as measured by the stack gas flow meter during ESP use.

e. The Permittee shall record for each steel production cycle the various stack gas flow rates for each process (i.e., for each charge, each refine, each tap) of each steel production cycle. That is, the Permittee shall be able to distinguish the measured flow rate of stack gas during each production cycle.

f. The stack gas flow meter shall be calibrated on at least a quarterly basis.

13a. The Permittee shall operate and maintain the waste gas suction monitor system that continually measures and records for each process (i.e., for each charge, each refine, each tap) of each steel production cycle the static pressure in the main downcommer duct of the ESP emissions capture and transport system.

b. The waste gas suction monitoring system shall be used as a mechanism to ensure sufficient draft is maintained in the emissions capture hoods and transport ducts so as to maximize emissions capture and transport and minimize uncaptured emissions and emission leaks.

c. The monitoring system shall be operated and maintained to ensure accurate and useful data.

d. The Permittee shall continuously record the static pressure in the main downcommer duct of the ESP emissions capture and transport system.

14a. The Permittee shall visually inspect at least monthly all visible BOF vessel enclosures, hooding and ducts used to capture and transport emissions for the BOF ESP control system.

b. A log shall maintained of these inspections which includes observations of the physical appearance of the capture system and any noted deficiencies (e.g., the presence of any holes in ductwork or hoods, flow constrictions caused by dents or accumulated dust in ductwork, and fan erosion).

c. Any leaks or areas otherwise noted to be in need of repair, shall be repaired as soon as practicable.

15a. The Permittee shall operate, maintain, and repair the BOF ESP in a manner that assures compliance with the conditions of this permit.

b. An adequate inventory of spare parts for the BOF ESP shall be maintained.

16. Written operating procedures for the BOF ESP shall be maintained and updated describing proper normal process and equipment operating parameters, monitoring and instrumentation for measuring control equipment operating parameters, control equipment inspection and maintenance practices, and the availability of spare parts from inventory, local suppliers and other sources.

17. The Permittee shall keep operating records, a maintenance log, and inspection log for the BOF ESP and associated control systems which includes the following:

    a. Operating time of the BOF;

    b. Operating time of the capture systems and performance parameters, including air flow and fan amperage through the fan motors, gas temperature at inlet to ESP, damper settings, and steam injection rate;

    c. Operating time of the ESP and performance parameters, including voltage and amperage of each transformer/rectifier set, number of sections in use;

    d. All routine and nonroutine maintenance performed, including dates and duration of outages, inspection schedule and findings, leaks detected, repair actions, and replacements.

18. Emissions from the BOF Shop shall not exceed the limits in attached Tables 2 and 5.

Note: For purposes of this permit, a BOF cycle is defined as the period from the beginning of the charging process through the end of the tapping process. The cycle is comprised of three main processes which are charging, refining, and tapping.

CONTINUOUS CASTING OPERATIONS

19. The continuous casting operations shall comply with 35 Ill. Adm. Code 212.450 and 212.458(b)(8).

20. Emissions from the continuous casting operations shall not exceed the limits in Tables 3 and 5.

FUEL COMBUSTION

21. Total fuel usage for blast furnace stoves (A and B), boiler house boilers (1-10), blast furnace boilers (11 and 12), ladle drying preheaters and blast furnace gas flares shall not exceed the following limits:

    a. Natural Gas usage: 225 million ft^3 per month and 1,346 million ft^3 per year;

b. Blast Furnace Gas (BFG) usage: 30,800 million ft^3 per month and 185,030 million ft^3 per year;

c. Fuel Oil usage: 60 thousand gallons per month and 365 thousand gallons per year.

22. Emissions from the fuel combustion units listed above shall not exceed the limits in Tables 4 and 5.

ON-SITE FUGITIVE DUST CONTROL

(Refer to Attachment B for a table which summarizes the required on-site fugitive dust roadway control measures and maps indicating the referred to road segments)

23. The Permittee shall immediately initiate and maintain the on-site fugitive dust control measures specified in this permit so as eliminate dust spillage on in-plant and out-of-plant roadways.

24a. The Permittee shall sweep or flush at least every day the paved access area below the BOF ESP where ESP dust collection bags are used, stored and transported.

b. The Permittee shall implement a housekeeping program for the non-roadway areas below and around the BOF ESP. This program shall, at a minimum, contain the following:

i. The ground and other accessible areas where dust may gather shall be swept or cleaned at least every day;

ii. Cleaning shall be performed in such a manner as to minimize the escape of dust into the atmosphere;

iii. Dust collection bags shall be inspected at least daily for rips, tears, or insecure connection to the discharge chutes of the ESP hoppers;

iv. Dust collection bags shall be inspected after removal from, and connection to, the discharge chutes of the ESP hoppers;

v. Ripped or torn bags shall be taken out of service and transported as soon as practicable in a covered truck.

25. Fugitive emissions of particulate matter from any roadway or parking area shall not exceed an opacity of 5%, pursuant to 35 Ill. Adm. code 212.316(e)(1).

26a. UNPAVED ROADS: On unpaved roads that are part of normal traffic patterns as identified in attachment B (including roads B, C, E, N, F-F, and CS(2)) the Permittee shall apply a chemical dust suppressant at least three times a month, with the following exceptions:

i. Road segment G-G, which shall be sprayed at least quarterly;

ii. Road segments P, V, Z, D-D, E-E, and H, which shall be sprayed at least 4 times per month until paving is completed. Paving shall be completed on these roads no later than July 31, 1996;

iii. Road segment L, which shall be sprayed at least 4 times per month.

b. All other unpaved roads shall be treated as necessary.

c. Applications of suppressant may be less frequent than specified above if weather conditions, i.e., precipitation or temperature, interfere with the schedule for spraying, provided each such instance shall be recorded in accordance with the daily records for on-site fugitive dust control required by this permit.

27a. PAVED ROADWAYS AND AREAS: Paved roadways and areas shall be maintained in good condition.

b. On paved roadways and other areas, the Permittee shall sweep or flush as follows:

i. Road segments D, K, M, F, G, J, R, and O shall be swept or flushed at least daily;

ii. Road segments P, V, W, X, Z, D-D, E-E, and CS(1) shall be swept or flushed at least five days per week;

iii. Road segments S and T shall be swept or flushed at least every other day;

iv. Road segments A and H shall be swept or flushed at least once per month;

v. All gate areas leading from the Steelworks area shall be swept or flushed at least daily;

vi. All gate areas leading from the iron making area shall be swept or flushed at least five times per week.

28. The above on-site dust control measures shall be conducted to maximize their effectiveness by performing said measures when the roads or areas are not normally obstructed by parked vehicles and by preferentially using filter sweeping (e.g., Enviro-Whirl sweeper) for the gate areas, the roads and areas surrounding the BOF and BOF ESP, and other key areas.

29. The Permittee shall maintain daily records relative to the on-site fugitive dust control program which includes the following information as a minimum:

a. The date (and time for the gate areas) each road or area was treated;

b. The manner in which the road or area was treated (i.e., filter sweep, conventional sweep, suppressant spray or flush);

c. Detailed information for use of dust suppressant, including but not limited to the application rate, dilution ratio, type of suppressant used, and the number of gallons of suppressant applied;

d. Observations, if any, concerning the condition of the roadway, e.g., presence of parked vehicles, detection of potholes;

e. The amount of precipitation and temperature recorded for each day, and if determination was made to suspend application of suppressant, include name and title of person who made determination to suspend application and explanation;

f. Any and all suspensions or deviations from the designated control procedures, with date, description, and explanation for suspension of application.

OFF-SITE FUGITIVE DUST CONTROL

30. The Permittee or the Permittee's Agent shall sweep or flush the following Granite City street road areas:

a. At least weekly, the quarter mile segment of Madison Avenue in front of the 16th street gate (i.e., 1/8 of a mile in either direction);

b. At least weekly, segment of 20th street between Lee and Quincy roads;

c. At least monthly, segment of 20th street between Madison and Route 203 (a.k.a. Edwardsville Road).

PM-10 CONTINGENCY MEASURES

31. The Permittee shall comply with the additional control measures (e.g., PM-10 contingency plan) required by 35 Ill Adm. Code Part 212 Subpart U.

COMPLIANCE DETERMINATIONS

32a. Compliance with the daily limits of this permit shall be determined from a monthly total of the relevant daily data divided by the number of days in the month.

b. Compliance with the monthly limits of this permit (e.g., fuel usage) shall be determined by direct comparison of monthly data to the applicable limit.

c. i. Compliance with the annual limits of this permit shall be determined based on a calendar year.

ii. A. Compliance with the production limits in conditions 2(b) and 6(b) shall also be determined on a month by month basis by showing that the actual production of iron and steel from the plant did not exceed the scheduled rate of production for a month given in the most recent production schedule provided to the Agency that shows compliance with the following requirements.

B. If no production schedule is submitted to the Agency by the Permittee for a particular year, the scheduled monthly production of iron and steel shall be set at one twelfth of the annual production limits in conditions 2(b) and 6(b).

C. 1. The Permittee may submit a schedule for iron and steel production for each month of the calendar year. Such schedule shall provide the scheduled monthly iron and steel production for each month and the total of such scheduled production shall not exceed the annual production limits in conditions 2(b) and 6(b). This schedule shall be submitted each year no later than December 15th of the preceding year.

2. During the course of the year, the Permittee may submit a revised production schedule which accounts for actual production levels which were below that scheduled for the previous months, provided that in no case shall the scheduled production for prior months in such a revised schedule be lowered to less than actual production levels or raised. Such revised schedule shall be submitted to the Agency no later than 15 days after the first day of the month for which scheduled production has been raised. Such schedule shall be accompanied by data on actual production in preceding months.

33a. Compliance with opacity limits and measurements of opacity shall be made by opacity readings taken in accordance with the observation procedures set out in 40 CFR Part 60, Appendix A, Method 9.

b. The Permittee shall have at least two employees or agents experienced in making opacity readings to the extent that it is reasonably possible to do so, who shall be able to make the opacity readings required by this permit.

34a. Blast furnace hot metal production shall be measured at the BOF hot metal transfer station, and adjusted by documented slag and iron losses.

b. BOF liquid steel production shall be initially measured by a scale equipped crane and adjusted based upon documented steel production analysis of the continuous casters.

c. BFG usage shall be calculated based on the total BFG produced per net ton hot metal (NTHM) derived by the following formula and adjusted per analysis of documented BFG consumptions:

$$\text{mmft}^3 \text{ BFG per month} = \frac{(4.585277 \text{ NTHM/day} + 498.191)}{80} \times \begin{pmatrix} \text{Number of} \\ \text{days in} \\ \text{that month.} \end{pmatrix}$$

d. Natural gas usage shall be determined by metered volumes.

e. Fuel oil usage shall be determined by tank height differentials.

RECORD KEEPING

35. The Permittee shall keep records of the following items and such other items which may be appropriate to allow the Agency to review compliance:

a. Blast Furnace hot metal production (total combined daily, monthly and annual in tons), including documentation on iron and slag losses;

b. BOF liquid steel production (total combined daily, monthly and annual in tons), including documentation on adjustments made due to production analysis and losses;

c. Fuel usage as follows; Usage of natural gas and BFG (total combined million ft^3 per month and year, each) and fuel oil (total combined gallons/month and year) for the blast furnace stoves (A and B), boiler house boilers (1-10), blast furnace boilers (11 and 12), ladle drying preheaters and blast furnace gas flares.

36. All records and logs required by this permit shall be retained at a readily accessible location at the source for at least three years from the date of entry and shall be made available for inspection and copying by the Agency and USEPA upon request. Any records retained in a computer shall be capable of being retrieved and printed on paper during normal source office hours so as to be able to respond to an Agency request for records during the course of a source inspection.

TESTING

37. The special conditions of this permit supplement the special conditions of any existing operating permits for this source, and supersede such conditions in cases where a conflict exists.

38a. The following tests shall be performed by no later than August 6, 1997 to demonstrate compliance with the conditions of this permit.

i. Fuel Combustion Units testing: The emissions of particulate matter from boiler #12 while burning blast furnace gas shall be measured. This test shall be designed to verify compliance with the requirements of this permit and the emission factor used (i.e., 2.9 lbs particulate emitted per mmcf BFG burned);

b. The test shall be performed by an approved independent testing service during conditions which are representative of maximum emissions and at the maximum production rates allowed, or as close to such rates as reasonable if the Permittee demonstrates to the Agency prior to testing that testing at such production rates within the time constraints of an Agency request to test is not practicable.

c. i. The following methods and procedures shall be used for the testing, unless another method is approved by the Agency: Refer to 40 CFR 60, Appendix A for USEPA test methods;

Location of sample points	USEPA Method 1
Gas flow and velocity	USEPA Method 2
Particulate Matter	USEPA Method 5

ii. All particulate measured shall be considered PM-10 unless emissions are tested by an appropriate USEPA test method for measurement of PM-10, as specified in 35 Ill. Adm. Code 212.110(e).

d. At least 30 days prior to the actual date of testing, a written test plan shall be submitted to the Agency for review and approval. This plan shall be describe the specific procedures for testing, including as a minimum:

i. The persons who will be performing sampling and analysis and their experience with similar tests;

ii. The specific conditions under which testing will be performed including a discussion of why these conditions will be representative of maximum emissions and the means by which operating parameters for the source and the emissions capture and control system will be determined;

iii. The specific determinations of emissions and operation which are intended to be made, including sampling and monitoring locations;

iv. The test methods which will be used, with the specific analysis methods;

v. Any proposed use of an alternative test method, with detailed justification;

vii. The format and content of the Source Test Report.

e. The Agency shall be notified before these tests to enable the Agency to observe these tests. Notification for the expected date of testing shall be submitted a minimum of thirty (30) days prior to the expected date. Notification of the actual and expected time of testing shall be submitted a minimum of five (5) working days prior to the actual date of the test. The Agency may at its discretion accept notifications with shorter advance notice provided that the Agency will not accept such notifications if it interferes with the Agency's ability to observe testing.

f. The Final Report of these tests shall include as a minimum:

i. A tabular summary of results which includes:

- process weight rate and/or fuel usage rate
- production rate
- allowable emission limit
- measured emission rate
- determined emission factor
- compliance demonstrated - Yes/No
- any other pertinent information

ii. Description of test methods and procedures used, including description of sampling train, analysis equipment, and test schedule;

iii. Detailed description of test conditions, including,

- pertinent process information (e.g. fuel or raw material consumption)
- control equipment information, i.e. equipment condition and operating parameters during testing;

iv. Data and calculations, including copies of all raw data sheets and records of laboratory analyses, sample calculations, and data on equipment calibration;

g. Copies of the Final Report for these tests shall be submitted to the Agency within 14 days after the test results are compiled and finalized.

h. Submittals of information shall be made as follows:

i. Notice of Test - one copy to Source Emission Test Specialist, one copy to Regional Office, and one copy to Permit Section;

ii. Final Report - one copy to Source Emission Test Specialist, one copy to Regional Office, and one copy to Permit Section.

Pertinent Addresses are:

Illinois Environmental Protection Agency
Division of Air Pollution Control
9511 West Harrison
Des Plaines, Illinois 60016

Illinois Environmental Protection Agency
Division of Air Pollution Control
Regional Office
2009 Mall Street
Collinsville, Illinois 62234

Illinois Environmental Protection Agency
Division of Air Pollution Control
Attn: Permit Section
P.O. Box 19506
Springfield, Illinois 62794-9506

REPORTING

39. If there is an exceedance of the requirements of this permit as determined by the records required by this permit, the Permittee shall submit a report to the Agency's Compliance Unit in Springfield, Illinois within 30 days after the exceedance. The report shall include the emissions released in accordance with the record keeping requirements, a copy of the relevant records, and a description of the exceedance or violation, cause of the exceedance, and efforts to reduce emissions and future occurrences. This report shall be sent to:

Illinois EPA
Bureau of Air
Compliance Section (#40)
P.O. Box 19276
Springfield, Illinois 62794-9276

40. The Permittee shall submit the following additional information from the prior calendar year with the Annual Emissions Report, due May 1st of each year:

a. Iron and steel production (tons/month and tons/yr, each);

b. Natural gas and BFG usage ($mmft^3$/month and $mmft^3$/yr, each);

c. Fuel oil usage (thousand gallons/month and thousand gallons/yr, for each type of oil).

APPLICABILITY OF MAJOR SOURCE RULES

41a. As a consequence of the above conditions, this permit is issued based upon the following changes in emissions, as further described in Table 6, accompanying increased production as allowed by this permit:

i. The increases in emissions of lead and VOM are not significant under 35 Ill. Adm. Code Part 203 or 40 CFR 52.21 - Prevention of Significant Deterioration;

ii. The increase in emissions of NO_x are being accompanied by contemporaneous emission decreases provided by the shutdown of equipment and operations such that the net emissions change is not significant under 35 Ill. Adm. Code Part 203 or 40 CFR 52.21 - Prevention of Significant Deterioration.

iii. The increase in emissions of PM and PM-10 are being accompanied by contemporaneous emission decreases provided by additional road dust control and BOF capture and control such that the net emissions change is not significant under 35 Ill. Adm. Code Part 203 or 40 CFR 52.21 - Prevention of Significant Deterioration.

Also, the Permittee has agreed to provide further additional dust control consisting of the sweeping of Granite City public streets and housekeeping measures in the area below and surrounding the BOF ESP. Attachment C is a listing of the emission reductions provided by these control measures.

b. The increases in emissions of SO_2 and CO are significant under 40 CFR 52.21 - Prevention of Significant Deterioration (PSD). Accordingly, the project is considered a major modification and must comply with the requirements of PSD. These requirements include a demonstration of best available control requirements for affected SO2 and CO emission units, an analysis of air quality impacts, an analysis of the impacts of the project on visibility, vegetation's and soils, and the application and proposed permit must undergo a public participation. The Agency has determined that these additional requirements have been met.

c. The changes in emissions pertinent to this project are summarized as follows:

Units = tons/year

- Emission increases which could occur from the project:

PM-10	PM	NO_x	SO_2	CO	VOM	Lead
51.6	- 52.0	238.8	476.0	5,685	59.3	0.54

- Creditable contemporaneous actual emission decreases:

PM-10	PM	NO_x	SO_2	CO	VOM	Lead
58.0	58.0	226.5	0.38	23.31	32.8	0.0

- Other contemporaneous emission increases:

PM-10	PM	NO_x	SO_2	CO	VOM	Lead
20.7	20.3	26.0	0.25	11.8	1.6	0.0

- Net emission changes:

PM-10	PM	NO_x	SO_2	CO	VOM	Lead
+14.3	-89.2	+38.3	+475.9	+5,673	+28.1	+0.54

- Significant Levels:

PM-10	PM	NO_x	SO_2	CO	VOM	Lead
15	25	40	40	100	40	0.6

d. This revised operating permit issued January 5, 1999 is issued such that the net increase in emissions of PM, PM_{10}, SO_2, NO_x and VOM resulting from increased natural gas combustion are not significant under 35 Ill. Adm. Code Part 203 or 40 CFR 52.21 - Prevention of significant Deterioration. The accounting of the increases in emissions are shown in Tables 7, 8 and 9 of the attachments.

e. The changes in emissions pertinent to the revised operating permit issued January 5, 1999 are summarized as follows:

- Emission increase from increased natural gas combustion:

PM-10	PM	NO_x	SO_2	CO	VOM
3.43	3.43	205.94	0.40	26.92	1.88

- Natural gas combustion baseline emissions (average of 1996 and 1997 actuals):

PM-10	PM	NO_x	SO_2	CO	VOM
2.9	2.9	174.11	0.34	22.76	1.59

- Net emission changes:

PM-10	PM	NO_x	SO_2	CO	VOM
0.53	0.53	31.83	0.06	4.16	0.29

- Significant levels:

PM-10	PM	NO_x	SO_2	CO	VOM
15	25	40	40	100	40

Explanatory Note:

PM	=	particulate matter = particulate;
PM-10	=	particulate matter less than or equal to 10 micrometers in size;
SO_2	=	sulfur dioxide;
NO_x	=	nitrogen oxides;
VOM	=	volatile organic material;
CO	=	carbon monoxide;
mm	=	million;
gr/dscf	=	grains per dry standard cubic foot;
acfm	=	actual cubic feet per minute;
mmcf	=	million cubic feet;
Mgal	=	thousands of gallons.

If you have any questions on this permit, please call Kevin Smith at 217/782-2113.

Donald E Sutton

Donald E. Sutton, P.E.
Manager, Permit Section
Division of Air Pollution Control

DES:KLS:jar

cc: IEPA, FOS Region 3

Permit Application #95010001

TABLE 1

BLAST FURNACE OPERATIONS

Maximum Hot Metal Production = 3,165,000 net tons per year

1. Casthouse Baghouse (furnace tapping)- captured emissions ducted to baghouse, uncaptured emissions emitted through roof, other openings, etc.

	Pollutant	Emission Factor (Lbs/Ton)	Maximum Emissions (Tons/Yr)
a	PM	0.0703	111.19
b	PM-10	0.0703	111.19
c	SO_2	0.2006	422.0
d	NO_x	0.0144	22.79
e	VOM	0.0946	149.68

2. Blast Furnace - uncaptured fugitives

	Pollutant	Emission Factor (Lbs/Ton)	Maximum Emissions (Tons/Yr)
2.a	PM	0.031	49.06
2.b	PM-10	0.0155	24.53
	SO_2	0.0104	21.94
	NO_x	0.0007	1.14
	VOM	0.0047	7.42

3. Blast Furnace Charging
Maximum pellets charged = 4,308,581 tons/yr

Pollutant	Emission Factor (Lbs/Ton)	Maximum Emissions (Tons/Yr)
PM	0.0024	5.17
PM-10	0.0024	5.17

4. Slag Pits

Pollutant	Emission Factor (Lbs/Ton)	Maximum Emissions (Tons/Yr)
PM	0.00417	6.60
PM-10	0.00417	6.60
SO_2	0.0100	15.83

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TABLE 1 (cont.)

5. Iron Spout Baghouse- captured emissions controlled by iron spout baghouse.

Pollutant	Emission Factor (Lbs/Ton)	Maximum Emissions (Tons/Yr)
PM	0.02548	40.32
PM-10	0.02548	40.32
SO_2	0.0073	13.89

6. Iron Pellet Screen
Maximum pellets charged = 4,308,581 tons/yr

Pollutant	Emission Factor (Lbs/Ton)	Maximum Emissions (Tons/Yr)
PM	0.00279	6.01
PM-10	0.00279	6.01

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TABLE 2

BOF SHOP

Maximum Liquid Steel Production = 3,580,000 net tons per year

1. BOF ESP Stack (charge, refine, tap)

Pollutant	Emission Factor (Lbs/Ton)	Maximum Emissions (Tons/Yr)
PM	0.16	262.80
PM-10	0.16	262.80
NO_x	0.0389	69.63
VOM	0.0060	10.74
CO	8.993	16,097.47
Lead	0.1934 lbs/hr	1.26 tons/yr

2. BOF Roof Monitor

Pollutant	Emission Factor (Lbs/Ton)	Maximum Emissions (Tons/Yr)
PM	0.0987	176.71
PM-10	0.06614	118.40
Lead	0.0129 lbs/hr	0.08 tons/yr

3. Desulfurization and Reladling - Hot Metal Transfer

Pollutant	Emission Factor (Lbs/Ton)	Maximum Emissions (Tons/Yr)
PM	0.03721	58.88
PM-10	0.03721	58.88
VOM	0.0010	1.58
Lead	0.0133 lbs/hr	0.09 tons/yr

4. BOF Additive System (i.e., fluxes) with Baghouse, a.k.a., BOF hopper baghouse

Pollutant	Emission Factor (Lbs/Ton)	Maximum Emissions (Tons/Yr)
PM	0.00032	0.57
PM-10	0.00032	0.57

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TABLE 2 (cont.)

5. Flux conveyor & transfer pits, bin floor

Pollutant	Emission Factor (Lbs/Ton)	Maximum Emissions (Tons/Yr)
PM	0.0016	2.86
PM-10	0.0016	2.86

6. Hot metal charging ladle slag skimmer

Pollutant	Emission Factor (Lbs/Ton)	Maximum Emissions (Tons/Yr)
PM	0.0050	7.94
PM-10	0.0050	7.94

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TABLE 3

CONTINUOUS CASTING OPERATIONS

Maximum Liquid Steel Throughput = 3,580,000 net tons per year

1. Argon Stirring Station and Material Handling Tripper (Ladle Metallurgy)

Pollutant	Emission Factor (Lbs/Ton)	Maximum Emissions (Tons/Yr)
PM	0.00715	12.80
PM-10	0.00715	12.80

2. Deslagging Station and Material HS.

Pollutant	Emission Factor (Lbs/Ton)	Maximum Emissions (Tons/Yr)
PM	0.00355	6.35
PM-10	0.00355	6.35

3. Caster Molds - Casting

Pollutant	Emission Factor (Lbs/Ton)	Maximum Emissions (Tons/Yr)
PM	0.006	10.74
PM-10	0.006	10.74
NO_x	0.050	89.50

4. Casters Spray Chambers

Pollutant	Emission Factor (Lbs/Ton)	Maximum Emissions (Tons/Yr)
PM	0.00852	15.25
PM-10	0.00852	15.25

5. Slab Cut-off

Pollutant	Emission Factor (Lbs/Ton)	Maximum Emissions (Tons/Yr)
PM	0.0071	12.71
PM-10	0.0071	12.71

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TABLE 3 (cont.)

6. Slab Ripping

Pollutant	Emission Factor (Lbs/Ton)	Maximum Emissions (Tons/Yr)
PM	0.00722	12.92
PM-10	0.00722	12.92

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TABLE 4

CERTAIN FUEL COMBUSTION UNITS

1. 10 boilers (#'s 1 - 10)
2. 2 boilers (#'s 11 - 12)
3. Blast Furnace Stoves A & B.
4. BFG Flares
5. Ladle Drying Preheaters (5 heaters).

Total combined fuel usage from affected units (i.e., Boilers, BF stoves, BF Flares, ladle drying preheaters)

	Maximum Usage ($mmft^3/Yr$)
NATURAL Gas (Total)	1,346
BFG	185,030

Fuel Oil 365 thousand gallons/yr

1. Natural Gas

Pollutant	Emission Factor (Lbs/mmcf)		Maximum Emissions (Tons/Yr)
PM	5.1		3.43
PM-10	5.1		3.43
SO_2	0.6	0.40	
NO_x	306		205.94
VOM	2.8		1.88
CO	40		26.92

2. BFG

Pollutant	Emission Factor (Lbs/mmcf)		Maximum Emissions (Tons/Yr)
PM	2.9		268.29
PM-10	2.9		268.29
SO_2	6.65	615.22	
NO_x	5.28	488.48	
CO	13.7		1,267.46

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TABLE 4 (cont.)

3. Fuel Oil

Pollutant	Emission Factor (Lbs/Mgal)	Maximum Emissions (Tons/Yr)
PM	9.72	1.77
PM-10	9.72	1.77
SO_2	141.3	25.79
NO_x	55	10.04
VOM	0.28	0.05
CO	5.0	0.91
Lead	0.336	0.06 (waste oil)

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TABLE 5

LIMITS ON EMISSIONS FROM MAJOR PROCESSES AND ACTIVITIES

Units = tons/year

	PM	PM-10	SO_2	NO_x	VOM	CO	Lead
a Blast Furnace Operations	218	194	474	24	157	--	--
b BOF Shop	510	451	--	70	12	16,097	1.43
c Continuous Casting Operations	71	71	--	90	--	--	--
d Certain Fuel Combustion Units[A]	274	274	641	706	2	1,295	0.06
e Roadways	27	27	--	--	--	--	--
f Material Handling	2	2	--	--	--	--	--
	PM	PM-10	SO_2	NO_x	VOM	CO	Lead
g TOTAL	1,102	1,019	1,115	890	171	17,392	1.49

[A] Blast furnace stoves (A and B), boiler house boilers (1-10), blast furnace boilers (11 and 12), ladle drying preheaters and blast furnace gas flares.

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TABLE 6

EMISSIONS SUMMARY

Units = tons/year

- Emission increases which could occur from the project:

PM-10	PM	NO_x	SO_2	CO	VOM	Lead
51.6	-52.0	238.8	476.0	5,685	59.3	0.54

- Creditable contemporaneous actual emission decreases:

PM-10	PM	NO_x	SO_2	CO	VOM	Lead
58.0	58.0	226.5	0.38	23.31	32.8	0.0

- Other contemporaneous emission increases:

PM-10	PM	NO_x	SO_2	CO	VOM	Lead
20.7	20.3	26.0	0.25	11.8	1.6	0.0

- Net emission changes:

PM-10	PM	NO_x	SO_2	CO	VOM	Lead
+14.3	-89.2	+38.3	+475.9	+5,673	+28.1	+0.54

- Significant Levels:

PM-10	PM	NO_x	SO_2	CO	VOM	Lead
15	25	40	40	100	40	0.6

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TABLE 7

Change in Emissions from Increased Natural Gas Combustion

Baseline Emissions (Average of 1996 and 1997 Actuals)

Pollutant	Emissions (Tons/Yr)
PM	2.9
PM-10	2.9
SO_2	0.34
NO_x	174.11
VOM	1.59
CO	22.76

Potential Emissions from Natural Gas Usage of 1,346 $mmft^3/Yr$

Pollutant	Emissions (Tons/Yr)
PM	3.43
PM-10	3.43
SO_2	0.40
NO_x	205.94
VOM	1.88
CO	26.92

Net Emission Change

Pollutant	Emissions (Ton/Yr)	Significant Emissions Level (Tons/Yr)
PM	0.53	25
PM-10	0.53	15
SO_2	0.06	40
NO_x	31.83	40
VOM	0.29	40
CO	4.16	100

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TABLE 8

1996 Actual Emissions from Natural Gas Usage of 1,131 $mmft^3/Yr$

Pollutant	Emissions (Tons/Yr)
PM	2.88
PM-10	2.88
SO_2	0.34
NO_x	173.04
VOM	1.58
CO	22.62

TABLE 9

1997 Emissions from an Allowable Natural Gas Usage of 1,145 $mmft^3/Yr$

Pollutant	Emissions (Tons/Yr)
PM	2.92
PM-10	2.92
SO_2	0.34
NO_x	175.19
VOM	1.60
CO	22.9

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ATTACHMENT A

PROCEDURES TO ENSURE PROPER OPERATION
OF BOF ESP CONTROL SYSTEM

1. The emissions control operator shall:

   a. Check on a regular basis and report to the emissions control foreman or melter:

      i. Any ESP fields down;

      ii. Any ESP fields in which the meter readings are showing no current or a fault;

   b. Check on a regular basis that doors on all hopper screws are closed;

   c. Inspect on a regular basis the fans and motors for unusual sounds and/or visual problems. Any abnormalities will be immediately reported to the melter or maintenance foreman for investigation.

2. The melter shall:

   a. Check on a regular basis and report to the emissions control foreman or the area electrician any fields which the pulpit precipitator field short indicators shows as having a short and is able to reset;

   b. Check on a regular basis and report to the emissions control foreman or the maintenance foreman any draft or fan problems;

   c. Check the ESP stack opacity monitor on a regular basis and initiate the following in the event that the stack opacity level, as determined by the opacity monitor, exceeds 30% opacity on a six minute average:

      i. Check the pulpit indicators for proper operation of the steam and spray water system. Report any problems to emission control foreman or maintenance foreman;

      ii. Check the stack gas pulpit set point for proper setting;

      iii. Call the emissions control operator who shall perform the following steps;

         A. Check the AVC operation and power level. Report any problems to electrical maintenance foreman or area electrician;

         B. Check to ensure that doors on all hopper screws are closed;

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ATTACHMENT A (cont.)

d. Check oxygen blow rates and adjust, if necessary;

e. Check hot metal chemistry;

f. A log shall be maintained of the above checks and any actions taken as a result.

3. The emission control foreman shall:

   a. Check on a regular basis the opacity monitor exceedances and trends. The control specialist shall be contacted to correct any problems;

   b. Check on a regular basis the draft rate set points;

   c. Check on a regular basis primary and secondary damper settings;

   d. Check on a regular basis ESP operation, including the following:

      i. Fields down;

      ii. Fields indicating shorts and unable to reset;

      iii. Hopper screw doors are closed;

   e. Check on a regular basis blow rates;

   f. Check on a regular basis spray water system operation;

   g. Check on a regular basis steam injection rate;

   h. Contact the area manager regarding electrical maintenance and to schedule the ESP repair work;

   i. Contact the area manger for mechanical maintenance to schedule the isolation of the ESP channel by closing the inlet and outlet gates of that chamber and opening the top hatches for entry into the chamber;

   j. Notify the emissions control operator and melter when isolation work begins;

   k. A log shall be maintained of the above checks and any actions taken as a result.

4. The crane operator shall use the following procedures, as appropriate, to minimize emissions and maximize emissions capture by the hoods:

   a. Use controlled pouring of the hot metal into the BOF vessel;

Permit Application #95010001

ATTACHMENT A (cont.)

b. Use careful positioning of the hot metal ladle with respect to the hood face and furnace mouth;

c. Use the most beneficial furnace tilt angle;

d. These procedures shall be posted in the crane operator booth.

Permit Application #95010001

ATTACHMENT B

ON-SITE FUGITIVE DUST ROADWAY CONTROL MEASURES AND
MAPS SHOWING THE ROAD SEGMENTS

To Tom Marshall 7/23/96

Attachment B

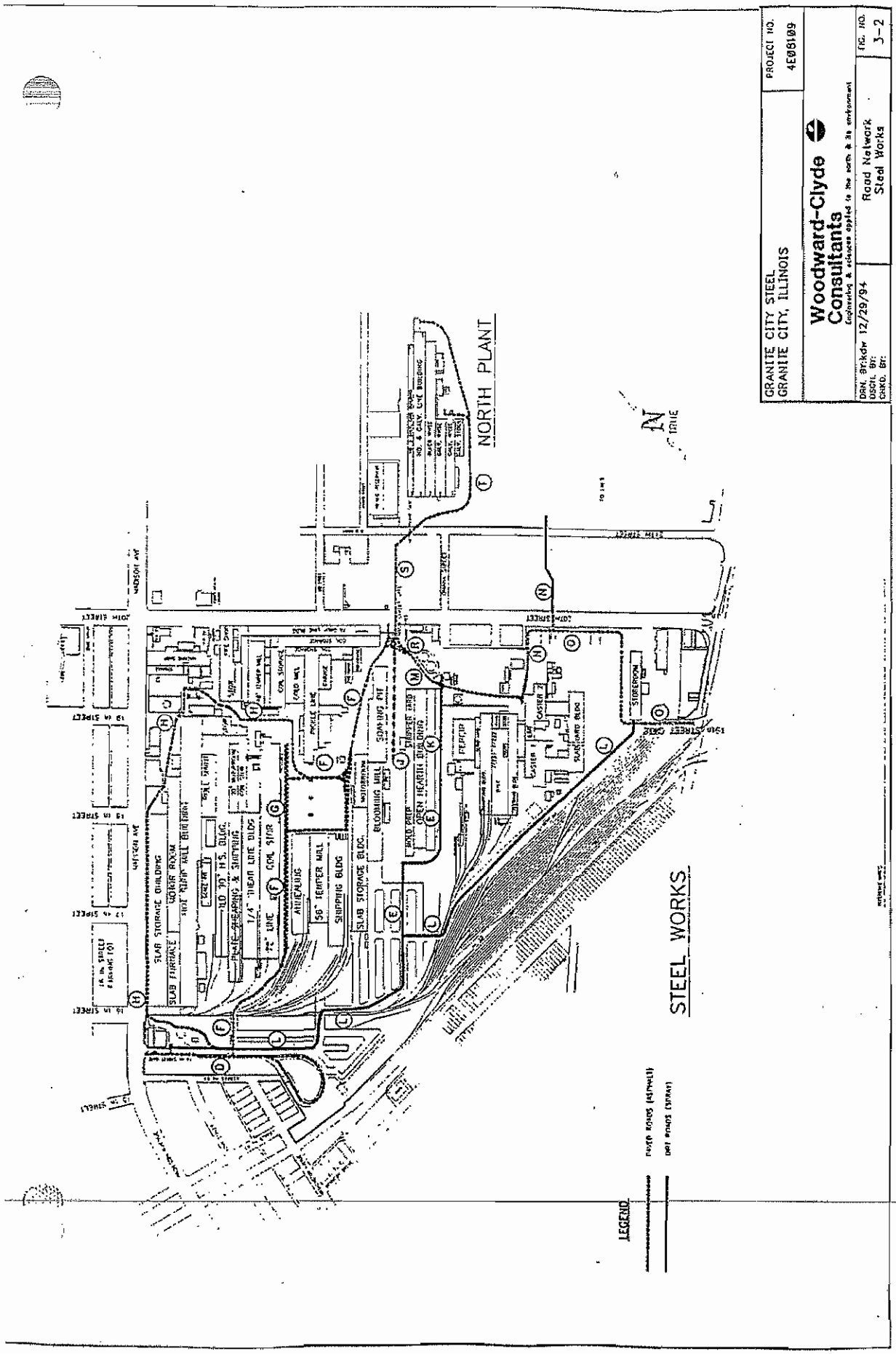
~~TABLE F-2~~

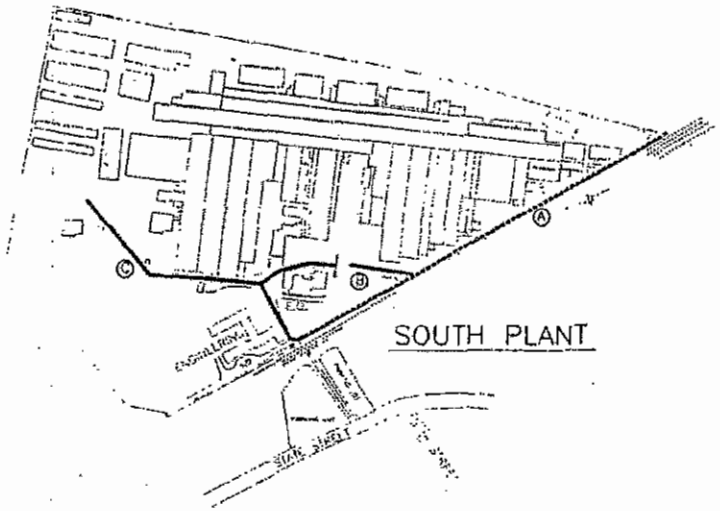
GRANITE CITY DIVISION of NATIONAL STEEL

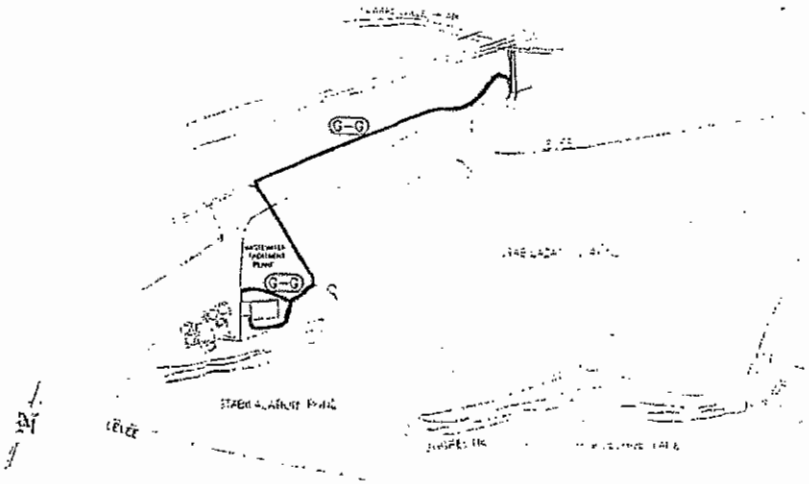
FUGITIVE PARTICULATE EMISSION CONTROL PROGRAM for REQUESTED PRODUCTION INCREASE

AREA	SEGMENT	SURFACE	CONTROL
South Plant	A	Paved	Sweep or Flush once per month
	B	Unpaved	Spray three times per month
	C	Unpaved	Spray three times per month
Steelworks	D	Paved	Sweep or flush daily
	K	Paved	Sweep or flush daily
	M	Paved	Sweep or flush daily
	E	Unpaved	Spray three times per month
	F	Paved	Sweep or flush daily
	G	Paved	Sweep or flush daily
	H *	Paved	Sweep or flush once per month
	J	Paved	Sweep or flush daily
	L	Unpaved	Spray four times per month
	R	Paved	Sweep or flush daily
BOF	O	Paved	Sweep or flush daily
	N	Unpaved	Spray three times per month
	P *	Paved	Sweep or flush five days per week
Blast Furnace	V *	Paved	Sweep or flush five days per week
	W	Paved	Sweep or flush five days per week
	X	Paved	Sweep or flush five days per week
	Y	Unpaved	Spray three times per month
	Z *	Paved	Sweep or flush five days per week
North Plant	S	Paved	Sweep or flush every other day
	T	Paved	Sweep or flush every other day
Area	D-D *	Paved	Sweep or flush five days per week
	E-E *	Paved	Sweep or flush five days per week
	F-F	Unpaved	Spray three times per month
	CS(1)	Paved	Sweep or flush five days per week
	CS(2)	Unpaved	Spray three times per month
	G-G	Unpaved	Spray quarterly

* Sprayed four times per month as of production increase; paved by July 31, 1996


NORTH PLANT
STEEL WORKS
N
TRUE
LEGEND
PUBLIC ROADS (ASPHALT)
DIRT ROADS (GRAVEL)
GRANITE CITY STEEL
GRANITE CITY, ILLINOIS
PROJECT NO.
4E08109
Woodward-Clyde Consultants
Engineering & sciences applied to the earth & its environment
DRN. BY: Kdw
DSGN. BY:
CHKD. BY:
12/29/94
Road Network
Steel Works
FIG. NO.
3-2





LEGEND

▬▬▬▬	PAVED ROAD (ASPHALT)
▬▬▬▬	DIRT ROAD (GRAVEL)

GRANITE CITY STEEL GRANITE CITY, ILLINOIS		PROJECT NO 4E08109
Woodward-Clyde Consultants Engineering & sciences applied to the earth & its environment		
DRN. BY: kdw 12/29/94 DSGN. BY: CHKD BY:	Road Network South Plant & WWTP	FIG NO 3-4

Permit Application #95010001

ATTACHMENT C

CONTEMPORANEOUS REDUCTIONS IN THE
EMISSIONS OF PM-10

- Historic roadway emissions of 428 tons/yr, minus future potential roadway emissions of 27 tons/yr, equals a resulting reduction in roadway emissions of 401 tons/yr
- Historic material handling emissions of 17 tons/yr minus future potential material handling emissions of 2 tons/yr, equals a resulting reduction in material handling emissions of 15 tons/yr.
- Emission reductions resulting from the sweeping of city streets = 52 tons/yr*
- Emission reductions resulting from sweeping and housekeeping of areas below and around BOF ESP = 12 tons/yr*

Total reductions in the emissions of PM-10 as a result of the additional dust control measures required by Illinois' SIP and the special conditions of this permit = 480 tons/yr

* These are considered reasonable estimates of reductions and are subject to change upon further investigation of the actual reductions which will occur as a result of the control measures required by this permit.

KLS:jar

STATE OF ILLINOIS
ENVIRONMENTAL PROTECTION AGENCY
DIVISION OF AIR POLLUTION CONTROL
P.O. BOX 19506
SPRINGFIELD, ILLINOIS 62794-9506

STANDARD CONDITIONS FOR OPERATING PERMITS

May, 1993

The Illinois Environmental Protection Act (Illinois Revised Statutes, Chapter 111-1/2, Section 1039) grants the Environmental Protection Agency authority to impose conditions on permits which it issues.

The following conditions are applicable unless superseded by special permit conditions(s).

1. The issuance of this permit does not release the Permittee from compliance with state and federal regulations which are part of the Illinois State Implementation Plan, as well as with other applicable statues and regulations of the United States or the State of Illinois or with applicable local laws, ordinances and regulations.

2. The Illinois EPA has issued this permit based upon the information submitted by the Permittee in the permit application. Any misinformation, false statement or misrepresentation in the application shall be ground for revocation under 35 Ill. Adm. Code 201.166.

3. a. The Permittee shall not authorize, cause, direct or allow any modification, as defined in 35 Ill. Adm. Code 201.102, of equipment, operations or practices which are reflected in the permit application as submitted unless a new application or request for revision of the existing permit is filed with the Illinois EPA and unless a new permit or revision of the existing permit(s) is issued for such modification.

   b. This permit only covers emission sources and control equipment while physically present at the indicated plant location(s). Unless the permit specifically provides for equipment relocation, this permit is void for an item of equipment on the day it is removed from the permitted location(s) or if all equipment is removed, notwithstanding the expiration date specified on the permit.

4. The Permittee shall allow any duly authorized agent of the Illinois EPA, upon the presentation of credentials, at reasonable times:

   a. To enter the Permittee's property where actual or potential effluent, emission or noise sources are located or where any activity is to be conducted pursuant to this permit;

   b. To have access to and to copy any records required to be kept under the terms and conditions of this permit;

   c. To inspect, including during any hours of operation of equipment constructed or operated under this permit, such equipment and any equipment required to be kept, used, operated, calibrated and maintained under this permit;

   d. To obtain and remove samples of any discharge or emission of pollutants; and

   e. To enter and utilize any photographic, recording, testing, monitoring or other equipment for the purpose of preserving, testing, monitoring or recording any activity, discharge or emission authorized by this permit.

5. The issuance of this permit:

   a. Shall not be considered as in any manner affecting the title of the premises upon which the permitted facilities are located;

Directory
Environmental Protection Agency
Bureau of Air

May 22, 2003

For assistance in preparing a permit application, contact the Permit Section:

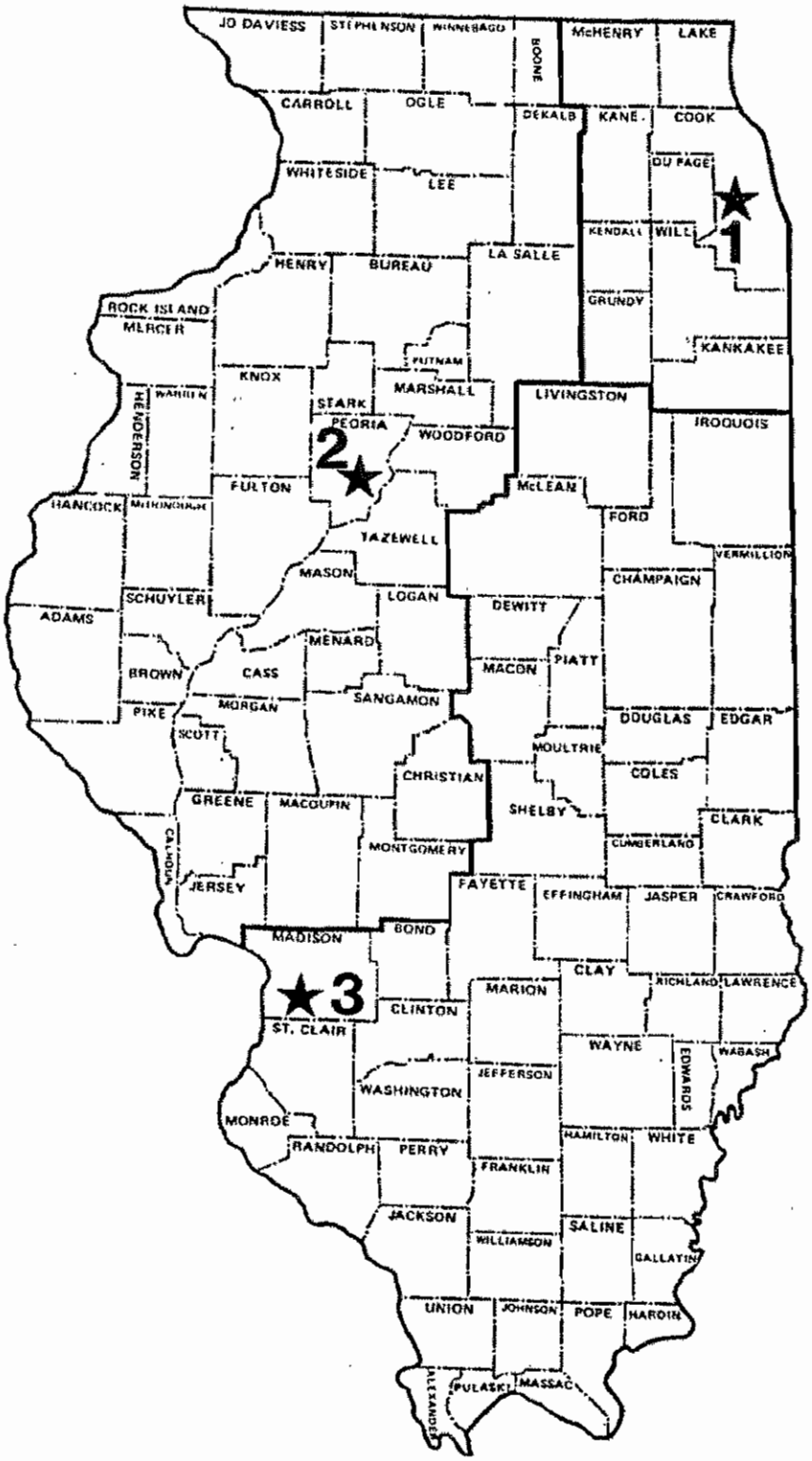
Illinois EPA
Division of Air Pollution Control
Permit Section
1021 N. Grand Ave E.
P.O. Box 19506
Springfield, Illinois 62794-9506
217/782-2113

Or contact a regional office of the Field Operations Section. The regional offices and their areas of responsibility are shown on the map. The addresses and telephone numbers of the regional offices are as follows:

Illinois EPA
Region 1
Bureau of Air, FOS
9511 West Harrison
Des Plaines, Illinois 60016
847/294-4000

Illinois EPA
Region 2
5415 North Univiversity
Peoria, Illinois 61614
309/693-5461

Illinois EPA
Region 3
2009 Mall Street
Collinsville, Illinois 62234
618/346-5120



OBSOLETE

State of Illinois
ENVIRONMENTAL PROTECTION AGENCY

Mary A. Gade, Director
P. O. Box 19506, Springfield, IL 62794-9506
217/782-2113

CONSTRUCTION PERMIT

PERMITTEE

Granite City Division
of National Steel Corporation
Attn: Joseph S. Kocot
20th and State Street
Granite City, Illinois 62040

Application No.: 95010001 I.D. No.: 119813AAI
Applicant's Designation: Date Received: March 5, 1996
Subject: Production Increase
Date Issued: July 23, 1996
Location: Southeastern Granite City

Permit is hereby granted to the above-designated Permittee for an increase in the allowable production rate of iron (from 2,372,500 to 3,165,000 net tons per year) and steel (from 2,774,000 to 3,580,000 net tons per year) as described in the above-referenced application. This permit is subject to standard conditions attached hereto and the following special conditions:

1. Prior to issuance of this permit, a draft of this permit has undergone a public notice and comment period, and a public hearing was held.

BLAST FURNACE OPERATIONS

2a. Total combined production of hot metal (a.k.a., iron) from blast furnaces A and B shall not exceed 9,849 net tons per day, averaged over any calendar month, and;

b. Total combined production of hot metal from blast furnaces A and B shall not exceed 3,165,000 net tons per year.

3a. Particulate emissions from the blast furnace casthouse baghouse and iron spout baghouse shall not exceed 0.010 gr/dscf, pursuant to 35 Ill. Adm. Code 212.445(b)(1).

b. The opacity of emissions from the blast furnace casthouse baghouse and the iron spout baghouse shall not exceed 10% on a 6 minute rolling average basis, pursuant to 35 Ill. Adm. Code 212.445(b)(1).

4a. Emissions of particulate matter from any opening in the blast furnace casthouse shall not exceed 20% opacity on a 6-minute rolling average basis beginning from initiation of the opening of the tap hole up to the point where iron and slag stops flowing in the troughs, pursuant to 35 Ill. Adm. Code 212.445(a)(2).

5. Emissions from Blast Furnace operations shall not exceed the limits in attached Tables 1 and 5.

BASIC OXYGEN FURNACE SHOP

6a. Total combined production of liquid steel from the Basic Oxygen Furnaces (BOF's) shall not exceed 11,000 net tons per day, averaged over any calendar month, and;

b. Total combined production of liquid steel from the BOF's shall not exceed 3,580,000 net tons per year.

7. The emissions of PM-10 from the BOF ESP stack for the total of all BOF processes (i.e., operations from the beginning of the charging process through the end of the tapping process) shall not exceed 60.0 lbs/hr and 0.225 lbs per ton of steel in process, pursuant to 35 Ill. Adm. Code 212.458(b)(23).

8. Visible emissions from any opening in the BOF shop (e.g., roof monitor) shall not exceed 20% on a 3 minute rolling average basis.

9a. The Permittee shall determine the opacity from the openings BOF shop on at least a weekly basis. Observations shall be conducted for at least an hour or the entire BOF cycle, whichever is greater.

b. The Permittee shall determine the opacity from the BOF ESP stack for at least one hour on any normal work day (i.e., Monday through Friday) that the continuous opacity monitor on the BOF ESP stack has an outage that exceeds two consecutive hours and is still down. The readings shall commence as soon as possible after the opacity monitor has been down for two consecutive hours. If meteorological conditions or lack of visibility preclude these observations from being conducted, then this shall be noted in the log book.

c. The opacity shall be determined in accordance with the observation procedures set out in 40 CFR Part 60, Appendix A, Method 9 including the requirement that readings be taken by a certified observer.

d. These determinations shall be recorded in a log book, which at a minimum shall include the date and time of observations, name and title of observer, individual opacity readings, calculated opacity so as to determine compliance with Section 212.123, and calculated opacity relative to 20% opacity on a three minute rolling average basis.

10. The Permittee shall follow the BOF operating procedures and requirements specified in attachment A. These requirements are designed to ensure proper operation of the BOF control system. These procedures shall be posted in the BOF pulpit (a.k.a., control room).

11. Flame suppression shall be used and maintained during the entire tapping process.

12a. The stack gas pulpit set point of the BOF ESP control system shall be set in accordance with the following, so as to establish sufficient particulate matter capture efficiency of the charging and primary hoods:

i. Set point requirements while only a single BOF vessel is in operation;

A. Minimum set point during charging process: 550,000 cfm;

B. Minimum set point during refining process: 650,000 cfm;

C. Minimum set point during tapping process: 200,000 cfm (until one minute after completing alloy addition);

b. i. During dual operation of BOF vessels (a.k.a., overlapping BOF operation) the minimum set point shall be 700,000 cfm.

ii. Overlapping operations of the BOF vessels is allowed under the following conditions:

A. The hot metal charge of the second vessel shall be initiated and completed during the time between completion of the blow and start of tap on the first vessel while sufficient draft at the ESP capture system is established and maintained for both vessels.

B. The charge and/or blow on one vessel shall not begin until sufficient draft has been established at the associated ESP capture system (aka., doghouse) and the alloy addition at the vessel tapping has been completed for a least 1 minute.

C. Sufficient draft at the ESP capture system of the vessel being tapped shall be maintained for at least 1 minute after alloy addition has been completed. After such period, the capture system draft may be transferred over to the other vessel in order to satisfy condition (A) above.

D. Only overlapping of the hot metal charge of the second vessel after the end of blow and prior to onset of tap of the first vessel

and

overlapping of tapping of the first vessel, after alloy addition, and the hot metal charge and/or blow on the second vessel are allowed.

E. Condition B and C above shall be part of the Standard Operating Procedure (SOP) of the BOF vessels.

c. The BOF capture system shall be operated at the above minimum set points until and unless the Agency approves a lower minimum set point based on a demonstration that a better level of particulate matter control will occur, except for purposes of emissions testing as related to the set point.

d. The Permittee shall calibrate, operate, and maintain a continuous strip chart recorder of the ESP stack gas flow rate as measured by the stack gas flow meter during ESP use.

e. The Permittee shall record for each steel production cycle the various stack gas flow rates for each process (i.e., for each charge, each refine, each tap) of each steel production cycle. That is, the Permittee shall be able to distinguish the measured flow rate of stack gas during each production cycle.

f. The stack gas flow meter shall be calibrated on at least a quarterly basis.

13a. Within 270 days of the original date issued of this permit (January 25, 1996), the Permittee shall install, calibrate, operate, and maintain a monitoring device that continually measures and records for each process (i.e., for each charge, each refine, each tap) of each steel production cycle the various exhaust ventilation rates or levels of exhaust ventilation through the main downcommer duct of the ESP emissions capture and transport system.

b. The monitoring system shall be designed to be used as a mechanism to ensure sufficient draft is maintained in the emissions capture hoods and transport ducts so as to maximize emissions capture and transport and minimize uncaptured emissions and emission leaks.

c. The monitoring system shall be operated, tested and maintained to ensure accurate and useful data.

d. The Agency may allow an equivalent system or method instead of the above monitoring system provided the Permittee demonstrates, and the Agency approves, that such system or method will ensure sufficient draft is maintained in the emissions capture hoods and transport ducts so as to maximize emissions capture and transport and minimize uncaptured emissions and emission leaks in an equivalent manner, and that such system or method can be installed and operated within the time period required for the monitoring system as stated in this permit.

14a. The Permittee shall visually inspect at least monthly all visible BOF vessel enclosures, hooding and ducts used to capture and transport emissions for the BOF ESP control system.

b. A log shall maintained of these inspections which includes observations of the physical appearance of the capture system and any noted deficiencies (e.g., the presence of any holes in ductwork or hoods, flow constrictions caused by dents or accumulated dust in ductwork, and fan erosion).

c. Any leaks or areas otherwise noted to be in need of repair, shall be repaired as soon as practicable.

15a. The Permittee shall operate, maintain, and repair the BOF ESP in a manner that assures compliance with the conditions of this permit.

b. An adequate inventory of spare parts for the BOF ESP shall be maintained.

16. Written operating procedures for the BOF ESP shall be maintained and updated describing proper normal process and equipment operating parameters, monitoring and instrumentation for measuring control equipment operating parameters, control equipment inspection and

maintenance practices, and the availability of spare parts from inventory, local suppliers and other sources.

17. The Permittee shall keep operating records, a maintenance log, and inspection log for the BOF ESP and associated control systems which includes the following:

    a. Operating time of the BOF;

    b. Operating time of the capture systems and performance parameters, including air flow and fan amperage through the fan motors, gas temperature at inlet to ESP, damper settings, and steam injection rate;

    c. Operating time of the ESP and performance parameters, including voltage and amperage of each transformer/rectifier set, number of sections in use;

    d. All routine and nonroutine maintenance performed, including dates and duration of outages, inspection schedule and findings, leaks detected, repair actions, and replacements.

18. Emissions from the BOF Shop shall not exceed the limits in attached Tables 2 and 5.

Note: For purposes of this permit, a BOF cycle is defined as the period from the beginning of the charging process through the end of the tapping process. The cycle is comprised of three main processes which are charging, refining, and tapping.

CONTINUOUS CASTING OPERATIONS

19. The continuous casting operations shall comply with 35 Ill. Adm. Code 212.450 and 212.458(b)(8).

20. Emissions from the continuous casting operations shall not exceed the limits in Tables 3 and 5.

FUEL COMBUSTION

21. Total fuel usage for blast furnace stoves (A and B), boiler house boilers (1-10), blast furnace boilers (11 and 12), ladle drying preheaters and blast furnace gas flares shall not exceed the following limits:

    a. Natural Gas usage: 190 million ft^3 per month and 1,145 million ft^3 per year;

    b. Blast Furnace Gas (BFG) usage: 30,800 million ft^3 per month and 185,030 million ft^3 per year;

    c. Fuel Oil usage: 60 thousand gallons per month and 365 thousand gallons per year.

22. Emissions from the fuel combustion units listed above shall not exceed the limits in Tables 4 and 5.

ON-SITE FUGITIVE DUST CONTROL

(Refer to Attachment B for a table which summarizes the required on-site fugitive dust roadway control measures and maps indicating the referred to road segments)

23. The Permittee shall immediately initiate and maintain the on-site fugitive dust control measures specified in this permit so as eliminate dust spillage on in-plant and out-of-plant roadways.

24a. The Permittee shall sweep or flush at least every day the paved access area below the BOF ESP where ESP dust collection bags are used, stored and transported.

b. The Permittee shall implement a housekeeping program for the non-roadway areas below and around the BOF ESP. This program shall, at a minimum, contain the following:

i. The ground and other accessible areas where dust may gather shall be swept or cleaned at least every day;

ii. Cleaning shall be performed in such a manner as to minimize the escape of dust into the atmosphere;

iii. Dust collection bags shall be inspected at least daily for rips, tears, or insecure connection to the discharge chutes of the ESP hoppers;

iv. Dust collection bags shall be inspected after removal from, and connection to, the discharge chutes of the ESP hoppers;

v. Ripped or torn bags shall be taken out of service and transported as soon as practicable in a covered truck.

25. Fugitive emissions of particulate matter from any roadway or parking area shall not exceed an opacity of 5%, pursuant to 35 Ill. Adm. code 212.316(e)(1).

26a. UNPAVED ROADS: On unpaved roads that are part of normal traffic patterns as identified in attachment B (including roads B, C, E, N, F-F, and CS(2)) the Permittee shall apply a chemical dust suppressant at least three times a month, with the following exceptions:

i. Road segment G-G, which shall be sprayed at least quarterly;

ii. Road segments P, V, Z, D-D, E-E, and H, which shall be sprayed at least 4 times per month until paving is completed. Paving shall be completed on these roads no later than July 31, 1996;

iii. Road segment L, which shall be sprayed at least 4 times per month.

b. All other unpaved roads shall be treated as necessary.

c. Applications of suppressant may be less frequent than specified above if weather conditions, i.e., precipitation or temperature, interfere with the schedule for spraying, provided each such instance shall be recorded in accordance with the daily records for on-site fugitive dust control required by this permit.

27a. PAVED ROADWAYS AND AREAS: Paved roadways and areas shall be maintained in good condition.

b. On paved roadways and other areas, the Permittee shall sweep or flush as follows:

i. Road segments D, K, M, F, G, J, R, and O shall be swept or flushed at least daily;

ii. Road segments P, V, W, X, Z, D-D, E-E, and CS(1) shall be swept or flushed at least five days per week;

iii. Road segments S and T shall be swept or flushed at least every other day;

iv. Road segments A and H shall be swept or flushed at least once per month;

v. All gate areas leading from the Steelworks area shall be swept or flushed at least daily;

vi. All gate areas leading from the iron making area shall be swept or flushed at least five times per week.

28. The above on-site dust control measures shall be conducted to maximize their effectiveness by performing said measures when the roads or areas are not normally obstructed by parked vehicles and by preferentially using filter sweeping (e.g., Enviro-Whirl sweeper) for the gate areas, the roads and areas surrounding the BOF and BOF ESP, and other key areas.

29. The Permittee shall maintain daily records relative to the on-site fugitive dust control program which includes the following information as a minimum:

a. The date (and time for the gate areas) each road or area was treated;

b. The manner in which the road or area was treated (i.e., filter sweep, conventional sweep, suppressant spray or flush);

c. Detailed information for use of dust suppressant, including but not limited to the application rate, dilution ratio, type of suppressant used, and the number of gallons of suppressant applied;

d. Observations, if any, concerning the condition of the roadway, e.g., presence of parked vehicles, detection of potholes;

e. The amount of precipitation and temperature recorded for each day, and if determination was made to suspend application of suppressant, include name and title of person who made determination to suspend application and explanation;

f. Any and all suspensions or deviations from the designated control procedures, with date, description, and explanation for suspension of application.

OFF-SITE FUGITIVE DUST CONTROL

30. The Permittee or the Permittee's Agent shall sweep or flush the following Granite City street road areas:

a. At least weekly, the quarter mile segment of Madison Avenue in front of the 16th street gate (i.e., 1/8 of a mile in either direction);

b. At least weekly, segment of 20th street between Lee and Quincy roads;

c. At least monthly, segment of 20th street between Madison and Route 203 (a.k.a. Edwardsville Road).

PM-10 CONTINGENCY MEASURES

31. The Permittee shall comply with the additional control measures (e.g., PM-10 contingency plan) required by 35 Ill Adm. Code Part 212 Subpart U.

COMPLIANCE DETERMINATIONS

32a. Compliance with the daily limits of this permit shall be determined from a monthly total of the relevant daily data divided by the number of days in the month.

b. Compliance with the monthly limits of this permit (e.g., fuel usage) shall be determined by direct comparison of monthly data to the applicable limit.

c. i. Compliance with the annual limits of this permit shall be determined based on a calendar year.

ii. A. Compliance with the production limits in conditions 2(b) and 6(b) shall also be determined on a month by month basis by showing that the actual production of iron and steel from the plant did not exceed the scheduled rate of production for a month given in the most recent production schedule provided to the Agency that shows compliance with the following requirements.

B. If no production schedule is submitted to the Agency by the Permittee for a particular year, the scheduled monthly production of iron and steel shall be set at one twelfth of the annual production limits in conditions 2(b) and 6(b).

C. 1. The Permittee may submit a schedule for iron and steel production for each month of the calendar year. Such schedule shall provide the scheduled monthly iron and steel production for each month and the total of such scheduled production shall not exceed the annual production limits in

conditions 2(b) and 6(b). This schedule shall be submitted each year no later than December 15th of the preceding year.

2. During the course of the year, the Permittee may submit a revised production schedule which accounts for actual production levels which were below that scheduled for the previous months, provided that in no case shall the scheduled production for prior months in such a revised schedule be lowered to less than actual production levels or raised. Such revised schedule shall be submitted to the Agency no later than 15 days after the first day of the month for which scheduled production has been raised. Such schedule shall be accompanied by data on actual production in preceding months.

33a. Compliance with opacity limits and measurements of opacity shall be made by opacity readings taken in accordance with the observation procedures set out in 40 CFR Part 60, Appendix A, Method 9.

b. The Permittee shall have at least two employees or agents experienced in making opacity readings to the extent that it is reasonably possible to do so, who shall be able to make the opacity readings required by this permit.

34a. Blast furnace hot metal production shall be measured at the BOF hot metal transfer station, and adjusted by documented slag and iron losses.

b. BOF liquid steel production shall be initially measured by a scale equipped crane and adjusted based upon documented steel production analysis of the continuous casters.

c. BFG usage shall be calculated based on 0.05846 $mmft^3$ BFG generated per net ton of hot metal produced.

d. Natural gas usage shall be determined by metered volumes.

e. Fuel oil usage shall be determined by tank height differentials.

RECORD KEEPING

35. The Permittee shall keep records of the following items and such other items which may be appropriate to allow the Agency to review compliance:

a. Blast Furnace hot metal production (total combined daily, monthly and annual in tons), including documentation on iron and slag losses;

b. BOF liquid steel production (total combined daily, monthly and annual in tons), including documentation on adjustments made due to production analysis and losses;

c. Fuel usage as follows; Usage of natural gas and BFG (total combined million ft^3 per month and year, each) and fuel oil (total combined gallons/month and year) for the blast furnace stoves (A and B), boiler house boilers (1-10), blast furnace boilers (11 and 12), ladle drying preheaters and blast furnace gas flares.

36. All records and logs required by this permit shall be retained at a readily accessible location at the source for at least three years from the date of entry and shall be made available for inspection and copying by the Agency and USEPA upon request. Any records retained in a computer shall be capable of being retrieved and printed on paper during normal source office hours so as to be able to respond to an Agency request for records during the course of a source inspection.

STARTUP AND TESTING

37. The special conditions of this permit supplement the special conditions of any existing operating permits for this source, and supersede such conditions in cases where a conflict exists.

38. Operation at the increased production rates specified in this permit is allowed for 270 days from the original date issued (i.e., January 25, 1996) under this construction permit.

39a. The following tests shall be performed to demonstrate compliance with the conditions of this permit within 270 days from the original date issued of this permit (i.e., January 25, 1996):

i. Blast Furnace testing: The emissions of particulate matter, volatile organic material, sulfur dioxide, nitrogen oxides, and the opacity from the blast furnace casthouse stack shall be measured. These tests shall be designed to verify compliance with 35 Ill. Adm. Code 212.445 and the requirements of this permit;

ii. Hot Metal Desulfurization testing: The emissions of particulate matter from the desulfurization baghouse shall be measured. These tests shall be designed to verify compliance with the requirements of this permit and 35 Ill. Adm. Code 212.446(b)(2);

iii. BOF testing: The emissions of particulate matter, carbon monoxide, and lead from the BOF ESP stack, and the opacity from both the BOF ESP stack and BOF Shop shall be measured. These tests shall be designed to verify compliance with 35 Ill. Adm. Code 212.446, 212.458 and the requirements of this permit;

iv. Fuel Combustion Units testing: The emissions of particulate matter from a representative boiler while burning blast furnace gas shall be measured. This test shall be designed to verify compliance with the requirements of this permit and the emission factor used (i.e., 2.9 lbs particulate emitted per mmcf BFG burned);

vii. The format and content of the Source Test Report.

e. The Agency shall be notified before these tests to enable the Agency to observe these tests. Notification for the expected date of testing shall be submitted a minimum of thirty (30) days prior to the expected date. Notification of the actual and expected time of testing shall be submitted a minimum of five (5) working days prior to the actual date of the test. The Agency may at its discretion accept notifications with shorter advance notice provided that the Agency will not accept such notifications if it interferes with the Agency's ability to observe testing.

f. The Final Report of these tests shall include as a minimum:

i. A tabular summary of results which includes:

- process weight rate and/or fuel usage rate
- production rate
- allowable emission limit
- measured emission rate
- determined emission factor
- compliance demonstrated - Yes/No
- other pertinent information (e.g., for the BOF, pulpit set point for each process of the BOF cycle - charging, refining, and tapping);

ii. Description of test methods and procedures used, including description of sampling train, analysis equipment, and test schedule;

iii. Detailed description of test conditions, including,

- pertinent process information (e.g. fuel or raw material consumption)
- control equipment information, i.e. equipment condition and operating parameters during testing;

iv. Data and calculations, including copies of all raw data sheets and records of laboratory analyses, sample calculations, and data on equipment calibration;

g. Copies of the Final Report for these tests shall be submitted to the Agency within 14 days after the test results are compiled and finalized and in no case later than upon the submittal of the operating permit application for this production increase.

h. Submittals of information shall be made as follows:

i. Notice of Test - one copy to Source Emission Test Specialist, one copy to Regional Office, and one copy to Permit Section;

ii. Final Report - one copy to Source Emission Test Specialist, one copy to Regional Office, and one copy to Permit Section.

Pertinent Addresses are:

Illinois Environmental Protection Agency
Division of Air Pollution Control
Attn: Source Emission Test Specialist
Intercontinental Center
1701 1st Avenue
Maywood, Illinois 60153

Illinois Environmental Protection Agency
Division of Air Pollution Control
Regional Office
2009 Mall Street
Collinsville, Illinois 62234

Illinois Environmental Protection Agency
Division of Air Pollution Control
Attn: Permit Section
P.O. Box 19506
Springfield, Illinois 62794-9506

REPORTING

40. If there is an exceedance of the requirements of this permit as determined by the records required by this permit, the Permittee shall submit a report to the Agency's Compliance Unit in Springfield, Illinois within 30 days after the exceedance. The report shall include the emissions released in accordance with the record keeping requirements, a copy of the relevant records, and a description of the exceedance or violation, cause of the exceedance, and efforts to reduce emissions and future occurrences. This report shall be sent to:

Illinois EPA
Bureau of Air
Compliance Unit (#40)
P.O. Box 19276
Springfield, Illinois 62794-9276

41. The Permittee shall submit the following additional information from the prior calendar year with the Annual Emissions Report, due May 1st of each year:

a. Iron and steel production (tons/month and tons/yr, each);

b. Natural gas and BFG usage ($mmft^3$/month and $mmft^3$/yr, each);

c. Fuel oil usage (thousand gallons/month and thousand gallons/yr, for each type of oil).

APPLICABILITY OF MAJOR SOURCE RULES

42a. As a consequence of the above conditions, this permit is issued based upon the following changes in emissions, as further described in Table 6, accompanying increased production as allowed by this permit:

i. The increases in emissions of lead and VOM are not significant under 35 Ill. Adm. Code Part 203 or 40 CFR 52.21 - Prevention of Significant Deterioration;

ii. The increase in emissions of NO_x are being accompanied by contemporaneous emission decreases provided by the shutdown of equipment and operations such that the net emissions change is not significant under 35 Ill. Adm. Code Part 203 or 40 CFR 52.21 - Prevention of Significant Deterioration.

iii. The increase in emissions of PM and PM-10 are being accompanied by contemporaneous emission decreases provided by additional road dust control and BOF capture and control such that the net emissions change is not significant under 35 Ill. Adm. Code Part 203 or 40 CFR 52.21 - Prevention of Significant Deterioration.

Also, the Permittee has agreed to provide further additional dust control consisting of the sweeping of Granite City public streets and housekeeping measures in the area below and surrounding the BOF ESP. Attachment C is a listing of the emission reductions provided by these control measures.

b. The increases in emissions of SO_2 and CO are significant under 40 CFR 52.21 - Prevention of Significant Deterioration (PSD). Accordingly, the project is considered a major modification and must comply with the requirements of PSD. These requirements include a demonstration of best available control requirements for affected SO2 and CO emission units, an analysis of air quality impacts, an analysis of the impacts of the project on visibility, vegetation's and soils, and the application and proposed permit must undergo a public participation. The Agency has determined that these additional requirements have been met.

c. The changes in emissions pertinent to this project are summarized as follows:

Units = tons/year

- Emission increases which could occur from the project:

PM-10	PM	NO_x	SO_2	CO	VOM	Lead
51.6	52.0	238.8	476.0	5,685	59.3	0.54

- Creditable contemporaneous actual emission decreases:

PM-10	PM	NO_x	SO_2	CO	VOM	Lead
58.0	58.0	226.5	0.38	23.31	32.8	0.0

- Other contemporaneous emission increases:

PM-10	PM	NO_x	SO_2	CO	VOM	Lead
20.7	20.3	26.0	0.25	11.8	1.6	0.0

- Net emission changes:

PM-10	PM	NO_x	SO_2	CO	VOM	Lead
+14.3	-89.2	+38.3	+475.9	+5,673	+28.1	+0.54

- Significant Levels:

PM-10	PM	NO_x	SO_2	CO	VOM	Lead
15	25	40	40	100	40	0.6

Explanatory Note:

PM	=	particulate matter = particulate;
PM-10	=	particulate matter less than or equal to 10 micrometers in size;
SO_2	=	sulfur dioxide;
NO_x	=	nitrogen oxides;
VOM	=	volatile organic material;
CO	=	carbon monoxide;
mm	=	million;
gr/dscf	=	grains per dry standard cubic foot;
acfm	=	actual cubic feet per minute;
mmcf	=	million cubic feet;
Mgal	=	thousands of gallons.

Please note that this permit has been revised to more clearly define the conditions which overlapping operations of the BOFs is allowed.

If you have any questions on this permit, please call Jim Ross at 217/782-2113.

Donald E. Sutton/jrr

Donald E. Sutton, P.E.
Manager, Permit Section
Division of Air Pollution Control

DES:JRR:jar

cc: IEPA, FOS Region 3

Permit Application #95010001

TABLE 1

BLAST FURNACE OPERATIONS

Maximum Hot Metal Production = 3,165,000 net tons per year

1. Casthouse Baghouse (furnace tapping)- captured emissions ducted to baghouse, uncaptured emissions emitted through roof, other openings, etc.

Pollutant	Emission Factor (Lbs/Ton)	Maximum Emissions (Tons/Yr)
PM	0.0703	111.19
PM-10	0.0703	111.19
SO_2	0.2006	422.0
NO_x	0.0144	22.79
VOM	0.0946	149.68

2. Blast Furnace - uncaptured fugitives

Pollutant	Emission Factor (Lbs/Ton)	Maximum Emissions (Tons/Yr)
PM	0.031	49.06
PM-10	0.0155	24.53
SO_2	0.0104	21.94
NO_x	0.0007	1.14
VOM	0.0047	7.42

3. Blast Furnace Charging
Maximum pellets charged = 4,308,581 tons/yr

Pollutant	Emission Factor (Lbs/Ton)	Maximum Emissions (Tons/Yr)
PM	0.0024	5.17
PM-10	0.0024	5.17

4. Slag Pits

Pollutant	Emission Factor (Lbs/Ton)	Maximum Emissions (Tons/Yr)
PM	0.00417	6.60
PM-10	0.00417	6.60
SO_2	0.0100	15.83

Permit Application #95010001

TABLE 1 (cont.)

5. Iron Spout Baghouse- captured emissions controlled by iron spout baghouse.

Pollutant	Emission Factor (Lbs/Ton)	Maximum Emissions (Tons/Yr)
PM	0.02548	40.32
PM-10	0.02548	40.32
SO_2	0.0073	13.89

6. Iron Pellet Screen
Maximum pellets charged = 4,308,581 tons/yr

Pollutant	Emission Factor (Lbs/Ton)	Maximum Emissions (Tons/Yr)
PM	0.00279	6.01
PM-10	0.00279	6.01

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TABLE 2

BOF SHOP

Maximum Liquid Steel Production = 3,580,000 net tons per year

1. BOF ESP Stack (charge, refine, tap)

Pollutant	Emission Factor (Lbs/Ton)	Maximum Emissions (Tons/Yr)
PM	0.16	262.80
PM-10	0.16	262.80
NO_x	0.0389	69.63
VOM	0.0060	10.74
CO	8.993	16,097.47
Lead	0.1934 lbs/hr	1.26 tons/yr

2. BOF Roof Monitor

Pollutant	Emission Factor (Lbs/Ton)	Maximum Emissions (Tons/Yr)
PM	0.0987	176.71
PM-10	0.06614	118.40
Lead	0.0129 lbs/hr	0.08 tons/yr

3. Desulfurization and Reladling - Hot Metal Transfer

Pollutant	Emission Factor (Lbs/Ton)	Maximum Emissions (Tons/Yr)
PM	0.03721	58.88
PM-10	0.03721	58.88
VOM	0.0010	1.58
Lead	0.0133 lbs/hr	0.09 tons/yr

4. BOF Additive System (i.e., fluxes) with Baghouse, a.k.a., BOF hopper baghouse

Pollutant	Emission Factor (Lbs/Ton)	Maximum Emissions (Tons/Yr)
PM	0.00032	0.57
PM-10	0.00032	0.57

Permit Application #95010001

TABLE 2 (cont.)

5. Flux conveyor & transfer pits, bin floor

Pollutant	Emission Factor (Lbs/Ton)	Maximum Emissions (Tons/Yr)
PM	0.0016	2.86
PM-10	0.0016	2.86

6. Hot metal charging ladle slag skimmer

Pollutant	Emission Factor (Lbs/Ton)	Maximum Emissions (Tons/Yr)
PM	0.0050	7.94
PM-10	0.0050	7.94

Permit Application #95010001

TABLE 3

CONTINUOUS CASTING OPERATIONS

Maximum Liquid Steel Throughput = 3,580,000 net tons per year

1. Argon Stirring Station and Material Handling Tripper (Ladle Metallurgy)

Pollutant	Emission Factor (Lbs/Ton)	Maximum Emissions (Tons/Yr)
PM	0.00715	12.80
PM-10	0.00715	12.80

2. Deslagging Station and Material HS.

Pollutant	Emission Factor (Lbs/Ton)	Maximum Emissions (Tons/Yr)
PM	0.00355	6.35
PM-10	0.00355	6.35

3. Caster Molds - Casting

Pollutant	Emission Factor (Lbs/Ton)	Maximum Emissions (Tons/Yr)
PM	0.006	10.74
PM-10	0.006	10.74
NO_x	0.050	89.50

4. Casters Spray Chambers

Pollutant	Emission Factor (Lbs/Ton)	Maximum Emissions (Tons/Yr)
PM	0.00852	15.25
PM-10	0.00852	15.25

5. Slab Cut-off

Pollutant	Emission Factor (Lbs/Ton)	Maximum Emissions (Tons/Yr)
PM	0.0071	12.71
PM-10	0.0071	12.71

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TABLE 3 (cont.)

6. Slab Ripping

Pollutant	Emission Factor (Lbs/Ton)	Maximum Emissions (Tons/Yr)
PM	0.00722	12.92
PM-10	0.00722	12.92

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TABLE 4

CERTAIN FUEL COMBUSTION UNITS

1. 10 boilers (#'s 1 - 10)
2. 2 boilers (#'s 11 - 12)
3. Blast Furnace Stoves A & B.
4. BFG Flares
5. Ladle Drying Preheaters (5 heaters).

Total combined fuel usage from affected units (i.e., Boilers, BF stoves, BF Flares, ladle drying preheaters)

	Maximum Usage ($mmft^3/Yr$)
NATURAL Gas (Total)	1,145
BFG	185,030

Fuel Oil 365 thousand gallons/yr

1. Natural Gas

Pollutant	Emission Factor (Lbs/mmcf)	Maximum Emissions (Tons/Yr)
PM	5.1	2.92
PM-10	5.1	2.92
SO_2	0.6	0.34
NO_x	306	175.19
VOM	2.8	1.60
CO	40	22.90

2. BFG

Pollutant	Emission Factor (Lbs/mmcf)	Maximum Emissions (Tons/Yr)
PM	2.9	268.29
PM-10	2.9	268.29
SO_2	6.65	615.22
NO_x	5.28	488.48
CO	13.7	1,267.46

Permit Application #95010001

TABLE 4 (cont.)

3. Fuel Oil

Pollutant	Emission Factor (Lbs/Mgal)	Maximum Emissions (Tons/Yr)
PM	9.72	1.77
PM-10	9.72	1.77
SO_2	141.3	25.79
NO_x	55	10.04
VOM	0.28	0.05
CO	5.0	0.91
Lead	0.336	0.06 (waste oil)

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TABLE 5

LIMITS ON EMISSIONS FROM MAJOR PROCESSES AND ACTIVITIES

Units = tons/year

	PM	PM-10	SO_2	NO_x	VOM	CO	Lead
Blast Furnace Operations	218	194	474	24	157	--	--
BOF Shop	510	451	--	70	12	16,097	1.43
Continuous Casting Operations	71	71	--	90	--	--	--
Certain Fuel Combustion Units[A]	273	273	641	674	2	1,291	0.06
Roadways	27	27	--	--	--	--	--
Material Handling	2	2	--	--	--	--	--

	PM	PM-10	SO_2	NO_x	VOM	CO	Lead
TOTAL	1,101	1,018	1,115	858	171	17,388	1.49

[A] Blast furnace stoves (A and B), boiler house boilers (1-10), blast furnace boilers (11 and 12), ladle drying preheaters and blast furnace gas flares.

Permit Application #95010001

TABLE 6

EMISSIONS SUMMARY

Units = tons/year

- Emission increases which could occur from the project:

PM-10	PM	NO_x	SO_2	CO	VOM	Lead
51.6	-52.0	238.8	476.0	5,685	59.3	0.54

- Creditable contemporaneous actual emission decreases:

PM-10	PM	NO_x	SO_2	CO	VOM	Lead
58.0	58.0	226.5	0.38	23.31	32.8	0.0

- Other contemporaneous emission increases:

PM-10	PM	NO_x	SO_2	CO	VOM	Lead
20.7	20.3	26.0	0.25	11.8	1.6	0.0

- Net emission changes:

PM-10	PM	NO_x	SO_2	CO	VOM	Lead
+14.3	-89.2	+38.3	+475.9	+5,673	+28.1	+0.54

- Significant Levels:

PM-10	PM	NO_x	SO_2	CO	VOM	Lead
15	25	40	40	100	40	0.6

v. BFG generation testing: The amount of blast furnace gas generated ($mmft^3$) per ton of hot metal produced shall be determined. The Agency may waive this requirement for testing providing the Permittee submit a sufficient explanation of how BFG generation is determined with justification that such determination is appropriate for purposes of compliance determinations with this permit.

b. These tests shall be performed by an approved independent testing service during conditions which are representative of maximum emissions and at the maximum production rates allowed, or as close to such rates as reasonable if the Permittee demonstrates to the Agency prior to testing that testing at such production rates within the time constraints of an Agency request to test is not practicable.

c. i. The following methods and procedures shall be used for the testing, unless another method is approved by the Agency: Refer to 40 CFR 60, Appendix A for USEPA test methods;

Location of sample points	USEPA Method 1
Gas flow and velocity	USEPA Method 2
Particulate Matter	USEPA Method 5
Sulfur Dioxide	USEPA Method 6
Nitrogen Oxides	USEPA Method 7
Opacity	USEPA Method 9
Carbon Monoxide	USEPA Method 10
Lead	USEPA Method 12

ii. All particulate measured shall be considered PM-10 unless emissions are tested by an appropriate USEPA test method for measurement of PM-10, as specified in 35 Ill. Adm. Code 212.110(e).

d. At least 60 days prior to the actual date of testing of the BOF, a written test plan shall be submitted to the Agency for review and approval. This plan shall be describe the specific procedures for testing the BOF, including as a minimum:

i. The persons who will be performing sampling and analysis and their experience with similar tests;

ii. The specific conditions under which testing will be performed including a discussion of why these conditions will be representative of maximum emissions and the means by which operating parameters for the source and the emissions capture and control system will be determined;

iii. The specific determinations of emissions and operation which are intended to be made, including sampling and monitoring locations;

iv. The test methods which will be used, with the specific analysis methods;

v. Any proposed use of an alternative test method, with detailed justification;

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ATTACHMENT A

PROCEDURES TO ENSURE PROPER OPERATION
OF BOF ESP CONTROL SYSTEM

1. The emissions control operator shall:

   a. Check on a regular basis and report to the emissions control foreman or melter:

      i. Any ESP fields down;

      ii. Any ESP fields in which the meter readings are showing no current or a fault;

   b. Check on a regular basis that doors on all hopper screws are closed;

   c. Inspect on a regular basis the fans and motors for unusual sounds and/or visual problems. Any abnormalities will be immediately reported to the melter or maintenance foreman for investigation.

2. The melter shall:

   a. Check on a regular basis and report to the emissions control foreman or the area electrician any fields which the pulpit precipitator field short indicators shows as having a short and is able to reset;

   b. Check on a regular basis and report to the emissions control foreman or the maintenance foreman any draft or fan problems;

   c. Check the ESP stack opacity monitor on a regular basis and initiate the following in the event that the stack opacity level, as determined by the opacity monitor, exceeds 30% opacity on a six minute average:

      i. Check the pulpit indicators for proper operation of the steam and spray water system. Report any problems to emission control foreman or maintenance foreman;

      ii. Check the stack gas pulpit set point for proper setting;

      iii. Call the emissions control operator who shall perform the following steps;

         A. Check the AVC operation and power level. Report any problems to electrical maintenance foreman or area electrician;

         B. Check to ensure that doors on all hopper screws are closed;

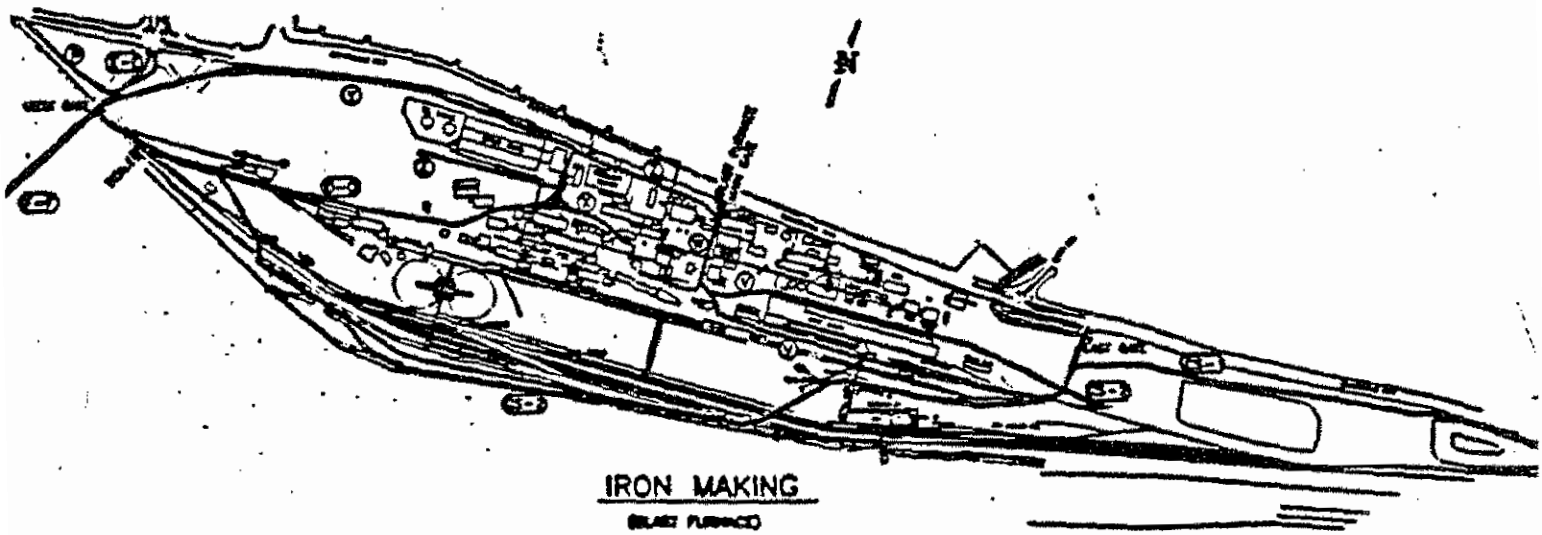
   d. Check oxygen blow rates and adjust, if necessary;

   e. Check hot metal chemistry;

Permit Application #95010001

ATTACHMENT B

ON-SITE FUGITIVE DUST ROADWAY CONTROL MEASURES AND MAPS SHOWING THE ROAD SEGMENTS



GRANITE CITY STEEL
GRANITE CITY, ILLINOIS

Woodward-Clyde Consultants

Road Network
Iron Making Area

3-3

Permit Application #95010001

ATTACHMENT A (cont.)

f. A log shall be maintained of the above checks and any actions taken as a result.

3. The emission control foreman shall:

   a. Check on a regular basis the opacity monitor exceedances and trends. The control specialist shall be contacted to correct any problems;

   b. Check on a regular basis the draft rate set points;

   c. Check on a regular basis primary and secondary damper settings;

   d. Check on a regular basis ESP operation, including the following:

      i. Fields down;

      ii. Fields indicating shorts and unable to reset;

      iii. Hopper screw doors are closed;

   e. Check on a regular basis blow rates;

   f. Check on a regular basis spray water system operation;

   g. Check on a regular basis steam injection rate;

   h. Contact the area manager regarding electrical maintenance and to schedule the ESP repair work;

   i. Contact the area manger for mechanical maintenance to schedule the isolation of the ESP channel by closing the inlet and outlet gates of that chamber and opening the top hatches for entry into the chamber;

   j. Notify the emissions control operator and melter when isolation work begins;

   k. A log shall be maintained of the above checks and any actions taken as a result.

4. The crane operator shall use the following procedures, as appropriate, to minimize emissions and maximize emissions capture by the hoods:

   a. Use controlled pouring of the hot metal into the BOF vessel;

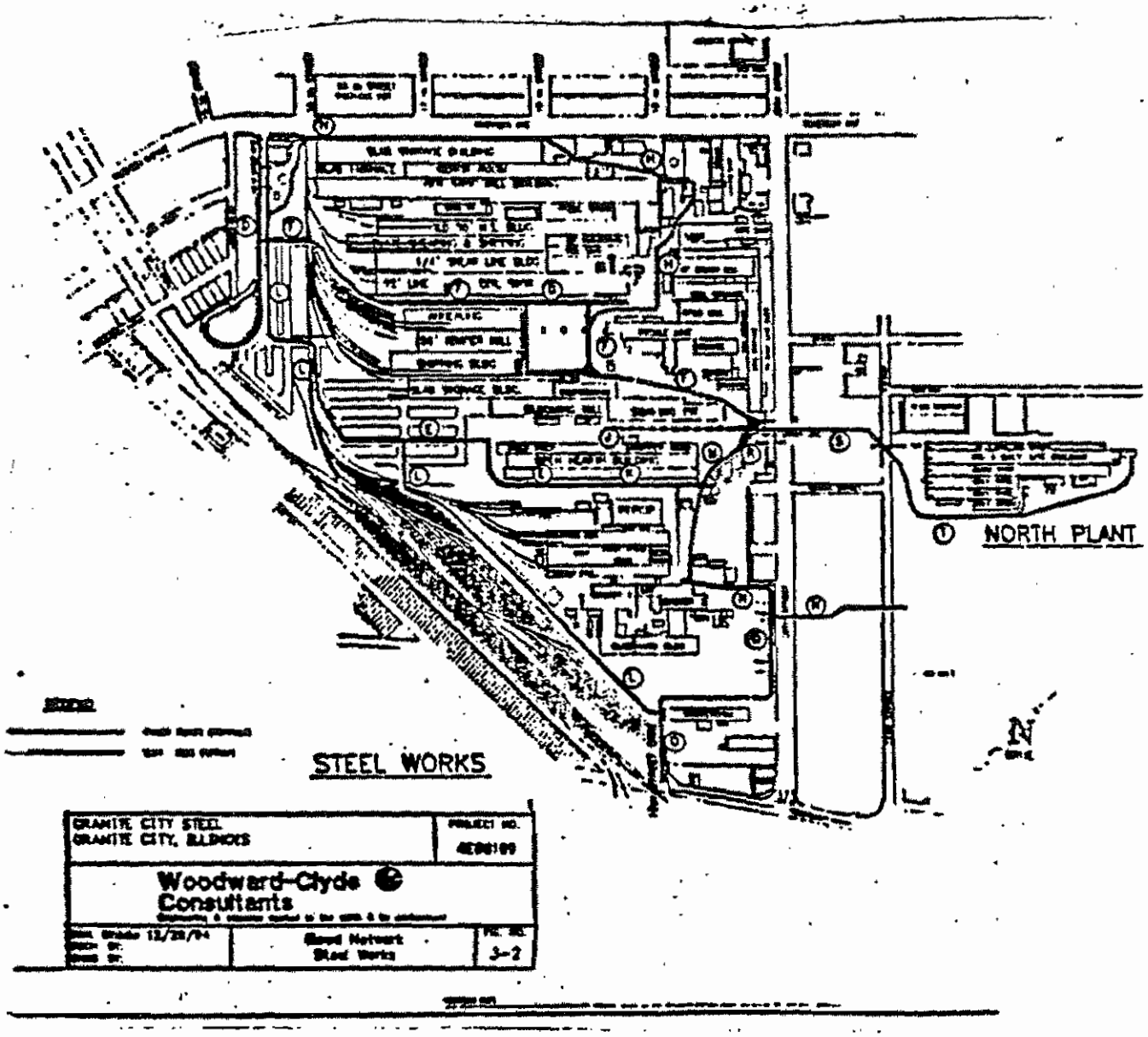
   b. Use careful positioning of the hot metal ladle with respect to the hood face and furnace mouth;

   c. Use the most beneficial furnace tilt angle;

   d. These procedures shall be posted in the crane operator booth.

Permit Application #95010001

ATTACHMENT B (cont.)



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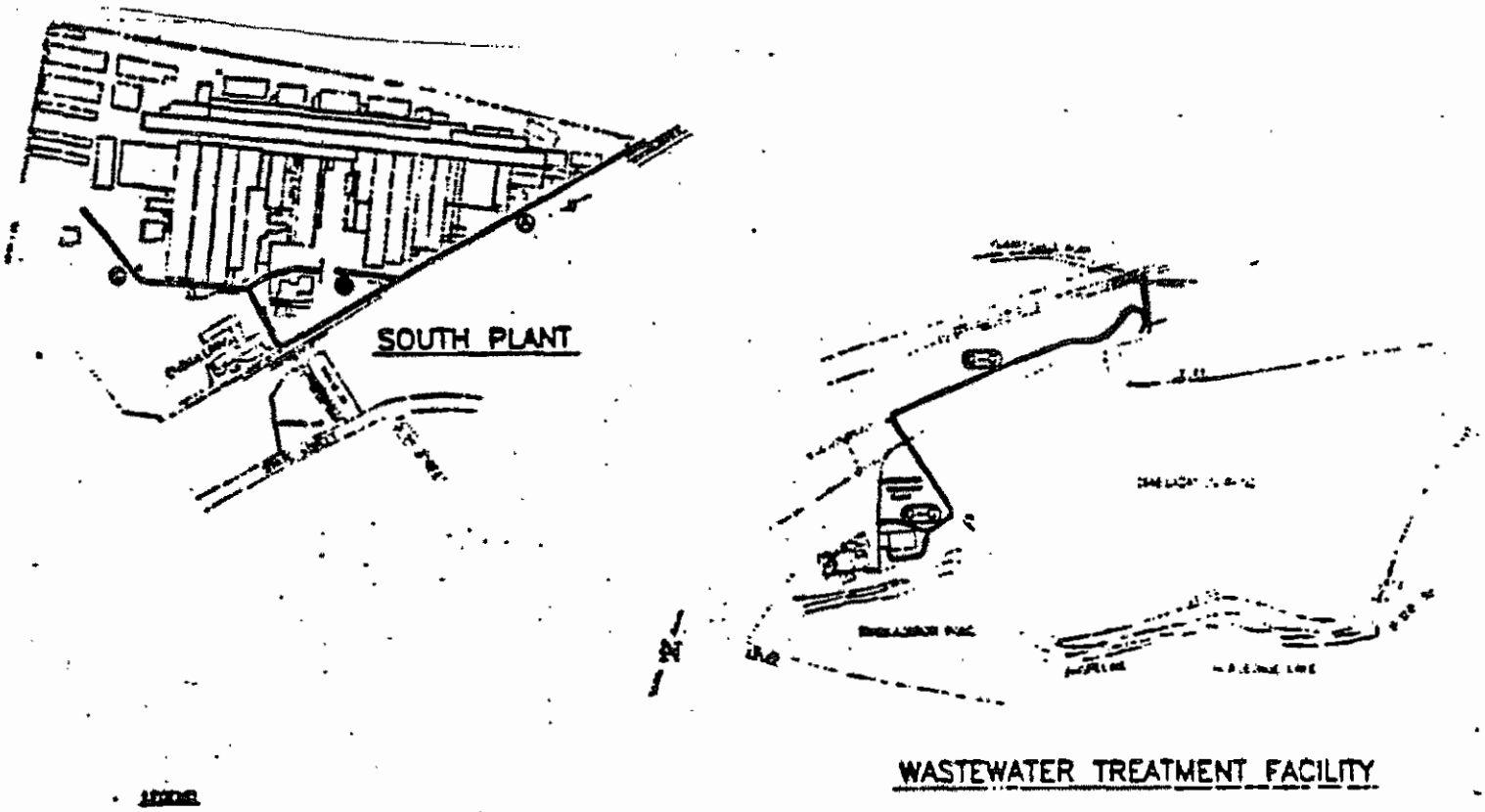
ATTACHMENT B (cont.)



GRANITE CITY STEEL GRANITE CITY, ILLINOIS	PROJECT NO. 4E88199
Woodward-Clyde Consultants	
Date: 12/29/94 Drawn By: Check By:	Road Network South Plant & WWTP
	FIG. NO. 3-4

Permit Application #95010001

ATTACHMENT C

CONTEMPORANEOUS REDUCTIONS IN THE
EMISSIONS OF PM-10

- Historic roadway emissions of 428 tons/yr, minus future potential roadway emissions of 27 tons/yr, equals a resulting reduction in roadway emissions of 401 tons/yr
- Historic material handling emissions of 17 tons/yr minus future potential material handling emissions of 2 tons/yr, equals a resulting reduction in material handling emissions of 15 tons/yr.
- Emission reductions resulting from the sweeping of city streets = 52 tons/yr*
- Emission reductions resulting from sweeping and housekeeping of areas below and around BOF ESP = 12 tons/yr*

Total reductions in the emissions of PM-10 as a result of the additional dust control measures required by Illinois' SIP and the special conditions of this permit = 480 tons/yr

* These are considered reasonable estimates of reductions and are subject to change upon further investigation of the actual reductions which will occur as a result of the control measures required by this permit.

JRR:jar

STATE OF ILLINOIS
ENVIRONMENTAL PROTECTION AGENCY
DIVISION OF AIR POLLUTION CONTROL
2200 CHURCHILL ROAD
SPRINGFIELD, ILLINOIS 62706

STANDARD CONDITIONS FOR CONSTRUCTION/DEVELOPMENT PERMITS ISSUED BY THE ILLINOIS ENVIRONMENTAL PROTECTION AGENCY

July 1, 1985

The Illinois Environmental Protection Act (Illinois Revised Statutes, Chapter 111-1/2, Section 1039) authorizes the Environmental Protection Agency to impose conditions on permits which it issues.

The following conditions are applicable unless susperseded by special condition(s).

1. Unless this permit has been extended or it has been voided by a newly issued permit, this permit will expire one year from the date of issuance, unless a continuous program of construction or development on this project has started by such time.

2. The construction or development covered by this permit shall be done in compliance with applicable provisions of the Illinois Environmental Protection Act and Regulations adopted by the Illinois Pollution Control Board.

3. There shall be no deviations from the approved plans and specifications unless a written request for modification, along with plans and specifications as required, shall have been submitted to the Agency and a supplemental written permit issued.

   The permittee shall allow any duly authorized agent of the Agency upon the presentation of credentials, at reasonable times:

   a. to enter the permittee's property where actual or potential effluent, emission or noise sources are located or where any activity is to be conducted pursuant to this permit,

   b. to have access to and to copy any records required to be kept under the terms and conditions of this permit,

   c. to inspect, including during any hours of operation of equipment constructed or operated under this permit, such equipment and any equipment required to be kept, used, operated, calibrated and maintained under this permit,

   d. to obtain and remove samples of any discharge or emissions of pollutants, and

   e. to enter and utilize any photographic, recording, testing, monitoring or other equipment for the purpose of preserving, testing, monitoring, or recording any activity, discharge, or emission authorized by this permit.

5. The issuance of this permit:

   a. shall not be considered as in any manner affecting the title of the premises upon which the permitted facilities are to be located,

   b. does not release the permittee from any liability for damage to person or property caused by or resulting from the construction, maintenance, or operation of the proposed facilities,

   c. does not release the permittee from compliance with other applicable statutes and regulations of the United States, of the State of Illinois, or with applicable local laws, ordinances and regulations,

   d. does not take into consideration or attest to the structural stability of any units or parts of the project, and

EXHIBIT 4

UNITED STATES ENVIRONMENTAL PROTECTION AGENCY
REGION 5
77 WEST JACKSON BOULEVARD
CHICAGO, IL 60604-3590

REPLY TO THE ATTENTION OF:
(A-18J)

OCT 16 2009

Laurel Kroack, Chief
Bureau of Air
Illinois Environmental Protection Agency
1021 North Grand Avenue East
Springfield, Illinois 62706

Re: Memorandum of Agreement with the Illinois Environmental Protection Agency for the Implementation of the Title V Operating Permit Program

Dear Ms. Kroack:

Enclosed is the signed memorandum of agreement (MOA) between the Illinois Environmental Protection Agency (IEPA) and the U.S. Environmental Protection Agency. The MOA establishes a working agreement between our two agencies for the implementation of Illinois' Title V Operating Permit Program, otherwise known as the Clean Air Act Permit Program. I signed the MOA on October 14, 2009 after we received the original signed by you on September 2, 2009. This MOA is the final step in executing the corrective action plan IEPA developed in response to EPA's 2006 Title V program evaluation.

If you would like to discuss this further, please call Genevieve Damico, of my staff at (312) 353-4761.

Sincerely,

Cheryl L. Newton
Director
Air and Radiation Division

Enclosure

MEMORANDUM OF AGREEMENT

I. General

A. Scope of Agreement

This Memorandum of Agreement ("Agreement") establishes a working agreement between the Illinois Environmental Protection Agency ("Illinois EPA") and the United States Environmental Protection Agency ("USEPA") for implementation of Illinois' Clean Air Act Permit Program ("CAAPP"), which is the permit program adopted by the State of Illinois and approved by USEPA to satisfy the mandate of Title V of the Clean Air Act ("CAA").

This Agreement does not address enforcement of the CAAPP, as enforcement is the subject of a separate, agreement between the Illinois EPA and USEPA.

B. Authority

This Agreement is entered into by the Chief of the Bureau of Air of the Illinois EPA and the Director of the Air and Radiation Division of USEPA, Region 5, The Illinois EPA enters into this agreement pursuant to authority granted to it by the Illinois Environmental Protection Act. Both parties recognize that CAAPP permits are to include all applicable requirements for all regulated air pollutants emitted by a source, including emissions of hazardous air pollutants regulated pursuant to Section 112 of the Clean Air Act, and that the CAAPP must be implemented in conformance with applicable state and federal laws and rules. This Agreement is not intended to contravene any such requirements.

C. Coverage

This Agreement covers the implementation of the CAAPP for the entire State of Illinois, except Indian Country[1].

D. Effective Date

This Agreement becomes effective upon signature by both parties.

E. Modification of Agreement

This Agreement may be modified at any time during the effectiveness of the agreement by either party. Modification shall be done in writing and be agreed upon by both parties. Modification may also include extensions of timeframes denoted in this agreement.

---

[1] Indian country is defined as any lands within the exterior boundaries of Indian reservations within a State; any land held in trust by the U.S. for an Indian tribe; and any other land, whether on or off an Indian reservation, that qualifies as Indian Country. As of the date of signing of this agreement, there is no Indian Country within the State of Illinois.

F. Expiration and Termination of Agreement

Either party may terminate the Agreement by providing written notice to the other terminating participation in the Agreement. Termination shall become effective 30 days after the date on the termination letter unless both parties agree to some alternative action within those 30 days.

G. Review of Agreement

The parties will review this agreement bi-annually and concurrent with development of the Performance Partnership Agreement between the Illinois EPA and USEPA.

II. Policy Statement

Communication and cooperation between the Illinois EPA and USEPA, as addressed by this Agreement, are essential so that Illinois EPA can implement the Illinois CAAPP in an effective and timely manner, while Illinois EPA and USEPA optimize application of resources in implementation and oversight of the CAAPP.

III. Role of Parties

A. Illinois EPA Role
The Illinois EPA, as the state permitting authority in Illinois, has the primary responsibility for implementation of the CAAPP, including:

1. Handling all aspects of CAAPP permitting for individual sources, including determining completeness of applications and processing of applications (e.g. application technical review and addressing public comment), issuance or denial of permits, and reopening and modification of permits, except for those sources for which USEPA is obligated to process the application and permits as required by the Clean Air Act;

2. Processing applications for new CAAPP permits, renewal CAAPP permits, and modification (administrative, minor and significant) of CAAPP permits, including approving National Emission Standards for Hazardous Air Pollutants ("NESHAP") compliance date extensions and making determinations of Maximum Achievable Control Technology for emissions of hazardous air pollutants, pursuant to Section 112(j) of the Clean Air Act;

3. Acting as the primary repository of source related documents submitted by sources subject to the CAAPP, including permit applications, notifications, public comments, reports, and project summaries unless otherwise specified by applicable regulations or permit provisions;

4. Revising its administration of the CAAPP as needed and appropriate to maintain effectiveness and compliance with the Act and implementing regulations at 40 C.F.R. part 70, with appropriate notification to USEPA for such revisions; and

5. Initiating appropriate modifications to the laws and rules that govern the CAAPP to respond to changes in relevant federal laws and rules with appropriate consultation with USEPA during such process, and submission of the revisions to USEPA as modifications to the federally-approved CAAPP.

B. USEPA Role

The USEPA has responsibility for assistance in and oversight of the implementation of the CAAPP, including:

1. Providing technical and administrative assistance to the Illinois EPA on an ongoing basis to assist the Illinois EPA's implementation of the CAAPP, including both specific assistance as requested by the Illinois EPA and other assistance as developed by USEPA, including guidance and instruction regarding national initiatives;

2. Providing timely and clear statements while the Illinois EPA is processing CAAPP applications of the provisions that it finds are needed in a CAAPP permit for an individual source or a category of source to comply with the Clean Air Act and applicable federal regulations there under and applicable state rules in Title 35, Subtitle B: Air Pollution, Chapter I, approved by USEPA as part of Illinois' State Implementation Plan;

3. Providing information to the Illinois EPA that is relevant to the implementation of the CAAPP, including copies of proposed and adopted rules and policies; case decisions; petition responses; and copies of significant correspondence to other permitting authorities and individual sources, either by generally making such material available to the public including the Illinois EPA, e.g., by the Technology Transfer Network (TTN) or by direct transmittal to the Illinois EPA;

4. Overseeing the CAAPP to promote its effective implementation in a manner that is consistent with national policy, by regularly reviewing the Illinois EPA's implementation of the CAAPP and advising the Illinois EPA of its observations;

5. Consulting with the Illinois EPA during the development of federal rules and policy to the extent feasible;

6. Administering permits for individual sources in those limited circumstances where USEPA is obligated to process permits; and

7. Reviewing CAAPP permits that have been proposed to ensure the effectiveness of CAAPP permits is maintained and all facets of the CAAPP are being implemented properly and in accordance with applicable law.

IV. General Practices for Communication

A. The USEPA and Illinois EPA agree to the following general practices for communication:

1. The USEPA and Illinois EPA will maintain principle contacts, as follows, who will be the focal point of all communication related to the implementation of the CAAPP and will be responsible for any requests for expedited responses to requests. With appropriate notification, the principle contacts may designate specific persons on their staff to serve as contacts for specific projects or purposes:

   The Manager of the Permit Section of the Bureau of Air of the Illinois EPA, and the Chief of the Permits and Grants Section, Regulation Development Branch, Air and Radiation Division of Region 5 of USEPA;

2. USEPA and the Illinois EPA shall conduct telephone conferences on a regular basis. Such calls shall occur on a monthly basis, but shall be more frequent if necessary to review the implementation of the CAAPP and discuss specific applications; and

   a. Monthly call Agendas shall consist of the following items:
      i. Discussion of Monthly Report
      ii. Program Updates/Modifications
      iii. Regulatory Updates
      iv. Specific Permit Applications
         a. Those with potential for significant comment
         b. Those with significant USEPA interest
      v. Summary of significant communications between USEPA or Illinois EPA with CAAPP sources concerning pending application
      vi. Upcoming Activities
      vii. Other

   b. Monthly reports to be discussed during the monthly call shall contain the following:

      Illinois EPA Portion of monthly report –
      i. Current Status of CAAPP applications
      ii. Accomplishments during previous month
      iii. Challenges

iv. Backlog
v. Other

USEPA Portion of monthly report –
i. Status of pending Petitions for USEPA to object
ii. Third Party Correspondence
iii. Statistics within Region 5 and US
iv. Part 71 applications
v. Other

3. USEPA or the Illinois EPA may call meetings as needed to review operating procedures, resolve the handling of specific applications, or discuss concerns regarding implementation of the CAAPP. Prior to such a meeting, a written agenda shall be prepared.

B. The USEPA and Illinois EPA agree that new technology, including new computer technology, telecommunication systems and satellite communication, that will facilitate communication between the Illinois EPA and USEPA, should be used when it is available to both parties.

V. Routine Reporting Between the Illinois EPA and USEPA Concerning CAAPP Sources

A. The Illinois EPA and USEPA agree to the following procedures with respect to providing information concerning CAAPP permit applications, CAAPP permits and CAAPP sources to each other. Reports may be provided in any reasonable form, with the preferred means being electronic transmittal, by telephone and computer data bases maintained and updated by the Illinois EPA to which USEPA has access.

B. The Illinois EPA will report the following information to USEPA on a quarterly basis, reflecting information since the previous report:

1. The sources from which Illinois EPA received CAAPP applications and the types of applications (i.e., new CAAPP application, renewal application administrative amendments, minor modification, significant modification) received, with the following types of CAAPP applications specifically flagged:

a. An application for a case by case MACT determination pursuant to Section 112(j) of the Clean Air Act;

b. An application for a municipal waste combustor or commercial incineration of hazardous waste or medical waste;

c. Renewal applications that had significant public participation during the issuance of the previous CAAPP permit.

2. The sources whose CAAPP applications were deemed incomplete by the Illinois EPA;

3. The sources with CAAPP applications pending for which significant public interest or any concern including environmental justice has been identified;

4. The sources for which CAAPP permits were denied;

5. The sources for which the Illinois EPA was unable to timely revise the proposed permits to meet an objection (as specified in Section 505(c) of the Clean Air Act) that will have to be processed by USEPA;

6. The sources for which a CAAPP permit was issued;

7. The sources for which a CAAPP permit has been appealed before the Illinois Pollution Control Board; and

8. For each general CAAPP permit, the Illinois EPA will provide the identity of each source and Permittee authorized to operate pursuant to the permit, updated on at least a quarterly basis.

C. The USEPA shall report the following information to Illinois EPA on a quarterly basis, reflecting information since the previous report.

1. Any sources with CAAPP applications pending for which significant public interest or a concern including environmental justice has been identified by USEPA;

2. Any sources with CAAPP applications pending and for which USEPA has any special interest, with explanation; and

3. Any proposed or issued CAAPP permits about which USEPA received petitions for objection pursuant to Section 505(b)(2) of the Clean Air Act.

D. The Illinois EPA and USEPA will notify each other when either becomes aware that an issued or pending CAAPP permit has been affected by any administrative, Board, or court action, which notification shall include a copy of the relevant order.

E. The Illinois EPA will submit the required semi-annual Title V Operating Permit System ("TOPS") reports by January 31 and July 31 of each year.

VI. Preliminary Review, by the USEPA, of documents generated by Illinois EPA

The USEPA and Illinois EPA agree to the following procedures for USEPA review prior to public notice of working drafts of permits, permit conditions, project summaries, and

regulatory interpretations. These procedures are appropriate to assure that CAAPP permits are efficiently developed, without need for any additional effort in redrafting, to include appropriate conditions, e.g., proper interpretation of federal emission standards, simplification of overlapping regulatory requirements, adequate periodic monitoring, and appropriate definitions of prompt reporting for deviations from requirements in CAAPP permits:

A. At the request of the Illinois EPA, USEPA will provide the Illinois EPA with detailed comments on working drafts of permits, permit conditions, project summaries, and regulatory interpretations that address a source, emission unit, or situation that have not been addressed before. The USEPA will provide the same level of review for such material as for a proposed permit, to the extent practicable;

B. The Illinois EPA will submit such requests to Region 5 of USEPA in writing or via email. Region 5 will attempt to respond to Illinois EPA's requests within 15 days, but in any event, will respond as soon as possible, taking into account situations such as when Region 5 must refer the issue to another USEPA office. USEPA shall confirm receipt of each request within 10 working days, and, if possible, will provide an initial oral or email response to such material reviewing relevant facts or issues with Illinois EPA staff and providing any preliminary thoughts; and

C. The Illinois EPA will take reasonable steps to facilitate USEPA's preliminary review of material, by providing copies of relevant supporting information, e.g., excerpts from the application, supplying the Illinois EPA's preliminary analysis, and highlighting proposed changes to established language for permit conditions.

VII. Handling of Draft, Proposed and Issued Permits

The Illinois EPA and USEPA agree to the following procedures with respect to handling draft, proposed and issued CAAPP permits:

A. At the beginning of any public comment period on a draft CAAPP permit, the Illinois EPA will provide USEPA with a copy of the draft permit accompanied by the Illinois EPA's public notice and project summary via the USEPA database[2]:

1. The USEPA shall maintain a log of public inquiries which it receives concerning the draft permit for a source, including any requests for further information, which shall be promptly forwarded within five (5) working days of receipt to Illinois EPA;

[2] http://www.epa.gov/region5/air/permits/ilonline.html

2. The USEPA shall provide any preliminary comments on a draft CAAPP permit, including any editorial comments, to the Illinois EPA by the close of the comment period or the date of a public hearing, if one is scheduled, whichever is first. USEPA will convey its comments to the principle contact for Illinois EPA via email or other form of written communication. Providing Illinois EPA with preliminary comments during the public comment period does not prohibit or deter the USEPA in any way from making additional comments on or objecting to a permit during the 45 day USEPA review period discussed in sub-section B, below; and

3. Illinois EPA will address all comments received during the public comment period.

B. The Illinois EPA will provide proposed CAAPP permits to USEPA for review prior to issuance in accordance with Section 505 of the CAA as follows:

1. Propose CAAPP permits for review by USEPA to ensure integrity with the Title V program nationally. Illinois EPA will transmit a copy of the public notice, the proposed CAAPP permit and the project summary from the public comment period to USEPA when it submits the proposed CAAPP permit to USEPA, via USEPA's database[1], for the 45-day USEPA review.

   Additional CAAPP application materials may also be available to USEPA upon request.

   Illinois EPA agrees to provide these documents either through direct electronic access, or by hardcopy submission to USEPA.

2. Notwithstanding the above, USEPA will promptly notify the Illinois EPA (if Illinois EPA made a request to have the 45 day review period waived) of any proposed permit for which USEPA waives the full 45-day review period to review the proposed permit either because the proposed permit is acceptable as presented to USEPA, or because it would be acceptable with minor changes in wording, provided that (1) Illinois EPA issues the permit in accordance with USEPA's finding, and (2) Illinois EPA did not receive any adverse comments on the draft permit during the public comment period.

3 To the extent possible after receiving the proposed permit and prior to making any formal objection to the proposed permit, the USEPA will inform the Illinois EPA of the reasons that the USEPA is considering an objection and the types of changes that USEPA would require to eliminate the objection. USEPA will allow the Illinois EPA a reasonable opportunity to respond, so as to enable USEPA to reconsider or clarify any written objection to the proposed CAAPP permit.

4. The USEPA will provide any objection to a proposed CAAPP permit in writing within 45 days of receipt of the proposed permit. The objection will provide the reasons for the objection and, to the extent practicable, the specific language change required to correct the permit.

C. The Illinois EPA will provide USEPA, via the USEPA database[1], a copy of each CAAPP permit at the time that it is issued.

D. Except for documents that were not prepared by the Illinois EPA, which will be provided in paper form, the above material may be provided in any reasonable form, with the preferred means being electronic transmittal through computer data bases maintained by the Illinois EPA to which USEPA has telephone access or via e-mail.

VIII. Public Comment and EPA Review Periods

The USEPA and Illinois EPA agree to the following procedures with respect to comment periods for draft and proposed CAAPP permits:

A. Concurrent public comment and USEPA review is appropriate for CAAPP renewals or modifications for which no public comments were submitted during the processing of the CAAPP permit that is being renewed or modified. All other CAAPP permits shall undergo sequential public comment and USEPA review. A CAAPP permit that is under concurrent review will revert to sequential review under the following conditions:

1. The CAAPP permit receives public comments during the public comment period; or

2. At the request of USEPA.

B. The Illinois EPA may request an expedited review by the USEPA of CAAPP permits that have been proposed. Under expedited review, the USEPA will attempt to waive the remainder the remainder of its 45 day review period or object to the CAAPP permit within 10 working days of the request. The request by Illinois EPA will be given via email and will contain the name of the source, identification number, permit number and the reason for the request.

IX. Reopening of Permits

The USEPA and Illinois EPA agree to the following procedures with respect to reopening of issued CAAPP permits:

A. Prior to requiring a CAAPP permit to be reopened, the USEPA will provide the Illinois EPA with notice of its intent to require reopening of a permit, including an explanation why it believes the permit must be reopened, and allow the Illinois

EPA a reasonable opportunity, but not less than 30 days, to respond to such notice of intent;

B. USEPA will make any objection to the Illinois EPA's proposed determination to modify, revoke and reissue, or terminate a CAAPP permit in writing within 90 days after receipt of the Illinois EPA's proposed action; and

C. If after 90 days, USEPA has not submitted to the Illinois EPA a written objection, the Illinois EPA may issue the proposed determination as a final action. However, USEPA's failure to act within 90 days of receipt of Illinois EPA's proposed determination does not in any way limit or alter USEPA's authority under 40 C.F.R. § 70.7 to require Illinois EPA to reopen and modify, revoke and reissue or terminate the permit, or to take any action to modify, revoke and reissue or terminate the permit in the future.

X. Integrated Processing of Construction Permits

A. The USEPA and Illinois EPA agree that the following shall be considered acceptable procedures for integrating the modification of a CAAPP permit with the processing of a construction permit. The modification of a CAAPP permit to include the terms and conditions from a construction permit that was subject to all of these procedures may be done by administrative amendment if Illinois EPA meets the requirements of this section.

B. A construction permit that the Illinois EPA plans to issue pursuant to integrated processing shall:

1. Be prepared in the same general form as a CAAPP permit;

2. Be clearly identified as being subject to integrated processing;

3. Include all conditions that will be added to the CAAPP permit;

4. Include appropriate conditions to address construction and initial operation of such emission units, as would normally be present in a construction permit, which conditions shall be clearly noted if they will not be included in the CAAPP permit; and

5. Include a condition specifying the circumstances in which the terms of the construction permit may be placed in the CAAPP permit by administrative amendment, as further described in paragraph E, below.

C. The application for such a construction permit shall also be considered a CAAPP application for purposes of the sections of this agreement addressing routine reporting, preliminary review of material, handling of permits, and availability of information;

D. The public comment period for the draft of such permit shall also include notice to affected states, as would occur with a CAAPP permit;

E. A proposed permit will be sent to USEPA by the Illinois EPA for any such construction permit for review by USEPA in accordance with Section 505 of the Clean Air Act, prior to it being considered a construction permit that has completed integrated processing, as follows:

1. The proposed permit sent to USEPA will be accompanied by the Illinois EPA's public notice and project summary from the public comment period, the Illinois EPA's response to public comments, and copies of significant comments on the draft permit, including any comments from other State permit authorities;

2. If so designated by the Illinois EPA, the proposed permit sent to USEPA may constitute issuance of an enforceable construction permit for the purpose of authorizing commencement of construction under Illinois' State Implementation Plan. Any such construction permit shall clearly indicate that the permit, at the time of issuance, is a proposed CAAPP permit for purposes of integrated processing and will only be considered to have completed integrated processing if USEPA makes no objection to the permit within its 45 day period for review; and

3. If USEPA objects to the issuance of the construction permit as having completed integrated processing, the Illinois EPA shall issue a revised construction permit addressing USEPA's objections and submit it to USEPA for review until such time that USEPA has no objection or integrated processing is discontinued, as addressed by paragraph F, below.

F. When revising a CAAPP permit to include the conditions of a construction permit that has completed integrated processing:

1. The Illinois EPA need only include those conditions applicable to the emission units for which the request for revision to the CAAPP Permit has been made (as would occur in the event that construction and initial compliance demonstrations have only been completed for certain units) but shall include all conditions applicable to such emission units except as initially noted in the construction permit;

2. The terms and conditions from the construction permit shall be included in the CAAPP permit without any substantive changes and with at most minor changes in form or wording as needed to adapt them for placement in the CAAPP permit.

G. The Illinois EPA may decide at any time that such an application or construction permit will no longer be handled by integrated processing so that the CAAPP permit for the source will not be modified by administrative amendment to

include terms and conditions from the construction permit. The Illinois EPA will promptly notify the USEPA if such a decision is made to discontinue integrated processing while a proposed permit is under review by USEPA.

XI. USEPA Processing of 40 CFR Part 71 Applications

The Illinois EPA and USEPA agree that the following procedures shall be used for CAAPP applications that the USEPA must process.

A. The Illinois EPA will provide USEPA with a copy of the application and other relevant documents in the Illinois EPA's file for a source within 15 days of a request for such documentation by USEPA;

B. At the request of the USEPA, the Illinois EPA will provide the USEPA with detailed comments on permitting issues and working drafts of permits or permit conditions; and

C. The USEPA will provide the Illinois EPA with a copy of the draft Part 71 permit and Statement of Basis prior to the public comment period and at the time that it is made available for public comment.

XII. Annual Workplan

The USEPA and Illinois EPA agree that, in order for the CAAPP to be effective, efficient processing of applications is a priority. The USEPA and Illinois EPA agree to process applications in a timely, efficient and orderly manner. Each year the parties will discuss processing priorities and an annual workplan will be designed to meet the agreed to priorities. The priorities agreed upon are to be included in the Performance Partnership Agreement.

XII. Availability of Documents

The Illinois EPA and USEPA agree to the following procedures with respect to availability of documents:

A. The Illinois EPA will maintain a record of documents for each source that will include permit applications; public notices, project summaries and other documents associated with public comment periods; permits; notifications, reports, compliance certifications and other submittals made by the source; Illinois EPA inspection reports; documents related to enforcement actions against the source; and other pertinent documents related to the source. This record will be maintained at the Bureau of Air's main office and will be available for inspection by USEPA. This record, other than confidential information, shall also be available for inspection by the public, upon reasonable advance notice consistent with applicable State procedures governing public access to records;

B. The USEPA will maintain files of material necessary for its review of each proposed permit, which will be available for Illinois EPA and public inspection upon reasonable advance notice consistent with applicable federal procedures governing access to records; and

C. The Illinois EPA and USEPA will make copies of material in these files available to the other party upon reasonable request, provided however that both USEPA and Illinois EPA will take reasonable and appropriate measures to prevent unnecessary, redundant or overly burdensome requests.

XIII. USEPA Audit of Illinois EPA Implementation of the CAAPP

The USEPA and Illinois EPA agree that the following procedures shall be used for a formal audit by USEPA of the Illinois EPA's general implementation of the CAAPP:

A. USEPA will regularly conduct an on-site audit of the Illinois EPA's implementation of the CAAPP;

B. The USEPA will provide the Illinois EPA with at least 60 days advance notice of its audit, identifying the specific sources and material that it intends to review and whether the on-site audit will examine if permit fees adequately reflect the reasonable costs of the CAAPP, as required by Section 502(b)(3) of the Clean Air Act;

C. The Illinois EPA will make the requested material available for USEPA review at the Bureau of Air's main office; and

D. The USEPA will discuss its known preliminary observations and draft findings with the Illinois EPA in person followed by a final report documenting the on-site audit.

XIV. Handling of Confidential Information

The Illinois EPA and USEPA agree to the following procedures for handling of confidential information:

A. Any information subject to a claim of confidentiality that is provided from the Illinois EPA to USEPA or vice versa will be clearly marked as such and will be separated from information that is not so claimed;

B. If either Illinois EPA or USEPA is prohibited from providing requested information to the other party, because of a claim of confidentiality, the party holding the information will instruct the source to provide the information directly to the party requesting the information; and

C. Any information subject to a claim of confidentiality will be treated in accordance with applicable regulations governing protection of such materials, i.e., USEPA

will follow 40 CFR 2 and the Illinois EPA will follow Section 7 of Illinois' Environmental Protection Act.

XV. Dispute Resolution

The USEPA and Illinois EPA agree to the following procedures in the event of a dispute between the USEPA and Illinois EPA over the implementation of the CAAPP. For this purpose, a dispute is any disagreement between the staff of USEPA and Illinois EPA handling a particular matter that prevents further action on the matter by these individuals:

A. A dispute will be promptly referred to the Manager of the Permit Section of the Bureau of Air of the Illinois EPA and the Chief of the Permits and Grants Section for Region 5 of USEPA, or their designees, who will promptly review the issues and the relevant facts and circumstances and attempt to resolve the dispute;

B. If the dispute cannot be resolved at this level within 15 working days, the matter may be referred to the supervisors of these persons for resolution;

C. This process will continue, if necessary, to the level of the Chief of the Bureau of Air, of the Illinois EPA, and the Director of the Air and Radiation Division of USEPA, Region 5; and

D. Upon conclusion of dispute resolution, the Illinois EPA and USEPA will each review the nature of the disagreement and its resolution to identify opportunities for improving implementation of the CAAPP.

XVI. Signatures

Laurel L. Kroack, Chief
Bureau of Air
Illinois Environmental Protection Agency

3-20-09
Date

Cheryl L. Newton, Director
Air and Radiation Division, Region 5
United States Environmental Protection Agency

10/14/09
Date

BEFORE THE ILLINOIS POLLUTION CONTROL BOARD

UNITED STATES STEEL CORPORATION, a Delaware corporation,	)	
Petitioner,	)	
v.	)	PCB No. 12-___ (Air Permit Appeal)
ILLINOIS ENVIRONMENTAL PROTECTION AGENCY,	)	
Respondent.	)	

ENTRY OF APPEARANCE OF KATHERINE D. HODGE

NOW COMES Katherine D. Hodge, of the law firm of HODGE DWYER & DRIVER, and hereby enters her appearance on behalf of Petitioner, UNITED STATES STEEL CORPORATION, in the above-referenced matter.

Respectfully submitted,

UNITED STATES STEEL CORPORATION,
Petitioner,

By:/s/ Katherine D. Hodge
Katherine D. Hodge

Dated: October 5, 2011

Katherine D. Hodge
HODGE DWYER & DRIVER
3150 Roland Avenue
Post Office Box 5776
Springfield, Illinois 62705-5776
(217) 523-4900

USSC:005/Fil/EOA KDH

BEFORE THE ILLINOIS POLLUTION CONTROL BOARD

UNITED STATES STEEL CORPORATION, a Delaware corporation,	)	
Petitioner,	)	
v.	)	PCB No. 12-___ (Air Permit Appeal)
ILLINOIS ENVIRONMENTAL PROTECTION AGENCY,	)	
Respondent.	)	

ENTRY OF APPEARANCE OF MONICA T. RIOS

NOW COMES Monica T. Rios, of the law firm of HODGE DWYER & DRIVER, and hereby enters her appearance on behalf of Petitioner, UNITED STATES STEEL CORPORATION, in the above-referenced matter.

Respectfully submitted,

UNITED STATES STEEL CORPORATION,
Petitioner,

By:/s/ Monica T. Rios
Monica T. Rios

Dated: October 5, 2011

Monica T. Rios
HODGE DWYER & DRIVER
3150 Roland Avenue
Post Office Box 5776
Springfield, Illinois 62705-5776
(217) 523-4900

USSC:005/Fil/EOA MTR