

BEFORE THE ILLINOIS POLLUTION CONTROL BOARD

UNITED STATES STEEL)	
CORPORATION, a Delaware corporation,)	
)	
Petitioner,)	
)	
v.	)	PCB No. ____ - ____
	)	(Variance - Air)
ILLINOIS ENVIRONMENTAL)	
PROTECTION AGENCY,)	
)	
Respondent.)	

NOTICE OF FILING

TO: Mr. John Therriault	Division of Legal Counsel
Assistant Clerk of the Board	Illinois Environmental Protection Agency
Illinois Pollution Control Board	1021 North Grand Avenue East
100 West Randolph Street	Post Office Box 19276
Suite 11-500	Springfield, Illinois 62794-9276
Chicago, Illinois 60601	(VIA FIRST CLASS MAIL)
(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 United States Steel Corporation's **PETITION FOR VARIANCE, ENTRY OF APPEARANCE OF KATHERINE D. HODGE, ENTRY OF APPEARANCE OF MONICA T. RIOS and ENTRY OF APPEARANCE OF MATTHEW C. READ**, copies of which are hereby served upon you.

Respectfully submitted,
UNITED STATES STEEL CORPORATION,
Petitioner,

Dated: September 9, 2011

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

Katherine D. Hodge
Monica T. Rios
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CERTIFICATE OF SERVICE

I, Katherine D. Hodge, the undersigned, certify that I have served the attached
PETITION FOR VARIANCE, ENTRY OF APPEARANCE OF KATHERINE D.
HODGE, ENTRY OF APPEARANCE OF MONICA T. RIOS and ENTRY OF
APPEARANCE OF MATTHEW C. READ 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 September 9, 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 September 9, 2011.

/s/Katherine D. Hodge
Katherine D. Hodge

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CORPORATION, a Delaware corporation,)	
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PETITION FOR VARIANCE

NOW COMES UNITED STATES STEEL CORPORATION (hereinafter "U.S. Steel"), by and through its attorneys, HODGE DWYER & DRIVER, and, pursuant to Section 38(b) of the Illinois Environmental Protection Act ("Act"), 415 ILCS 5/38(b), and 35 Ill. Admin. Code § 104.200, hereby petitions the Illinois Pollution Control Board ("Board") for a variance from the emission limitation for recuperative reheat furnaces combusting a combination of natural gas and coke oven gas ("COG"), applicable to its Slab Reheat Furnace 4, at 35 Ill. Admin. Code Part 217, Subpart I ("NOx RACT Rule" or "Rule") pursuant to the terms and conditions outlined in this Petition for Variance ("Petition").

U.S. Steel, as more fully discussed below, is requesting that the Board grant a variance for up to five years from the date of the Board's final order in this matter, from the emission limitation in the NOx RACT Rule applicable to Slab Reheat Furnace 4 at U.S. Steel's integrated steel manufacturing plant in Granite City, Illinois ("Facility"). The Rule requires implementation of Reasonably Available Control Technology ("RACT") at the Facility to control emissions of nitrogen oxides ("NOx") from

recuperative reheat furnaces combusting a combination of natural gas and COG. 35 Ill. Admin. Code § 217.244(a). The Rule establishes a limitation for NO_x emissions from slab reheat furnaces of 0.142 lb/mmBtu, for which compliance must be demonstrated on an ozone season and annual basis. *Id.* After the initial rulemaking, U.S. Steel installed low NO_x burners on Slab Reheat Furnace 4 which, prior to their installation, was determined to be RACT during the rulemaking process.

This variance is needed in order to allow U.S. Steel time to evaluate compliance options for Slab Reheat Furnace 4, which could include seeking an alternate RACT limit for the furnace. Further, it is necessary because the Rule poses an arbitrary and unreasonable hardship on U.S. Steel since: 1) U.S. Steel understood that the Illinois Environmental Protection Agency ("Illinois EPA") determined that the installation of low NO_x burners on the slab reheat furnaces at the Facility would meet RACT requirements; 2) the emission limitation set forth in the Rule for the slab reheat furnaces was a negotiated limitation that was based upon pre-construction vendor estimates for pollution control systems including low NO_x burners for the furnaces, as well as a related COG desulfurization system; 3) Illinois EPA and U.S. Steel agreed, and the Board noted this agreement, that emission limitations may need to be revisited to address actual operation of pollution control systems; and 4) stack testing conducted at Slab Reheat Furnace 4, after installation of low NO_x burners and combusting desulfurized COG, indicates that the NO_x emissions from Slab Reheat Furnace 4 are higher than the expected emissions that were used to develop the negotiated limitation in the Rule. Moreover, the requirements of the Rule are neither mandated by federal nor state statutes

at this time, and issuance of a new federal ozone standard has been delayed until at least 2013.

U.S. Steel and Illinois EPA agreed during the initial development of the Rule, and the Board noted this agreement, that emission limitations may need to be revisited after construction of a related pollution control system was complete to account for actual operating parameters. Second Notice, *In the Matter of: Nitrogen Oxides Emissions From Various Source Categories, Amendments to 35 Ill. Adm. Code Parts 211 and 217*, R08-19 at 15, 24 (Ill.Pol.Control.Bd. July 23, 2009) (order hereafter cited as “Second Notice”) (rulemaking hereafter cited as “R08-19”). Now that the pollution control systems have been constructed, it is appropriate to reconsider the emission limitation, using actual operating parameters with the control systems operating with good air pollution control practices, especially since emissions testing indicates that the NO_x emissions from Slab Reheat Furnace 4 are higher than the expected emissions used to develop the negotiated limitation in the Rule.

U.S. Steel’s request is also supported by the recent approval by the United States Environmental Protection Agency (“USEPA”) of Illinois EPA’s request that NO_x RACT requirements be waived because the Metro-East area has attained the 1997 8-hour ozone standard. 76 Fed. Reg. 9655 (Feb. 22, 2011). Furthermore, USEPA’s previous plan to issue a new ozone standard, which could have resulted in the need to implement NO_x RACT in the Metro-East area, has been delayed until at least 2013.¹

¹ Statement by the President on the Ozone National Ambient Air Quality Standards, <http://www.whitehouse.gov/the-press-office/2011/09/02/statement-president-ozone-national-ambient-air-quality-standards> (last visited Sep. 7, 2011).

As background, on January 18, 2007, Illinois EPA issued a construction permit to the Facility for certain emission reduction projects, which included the construction of a COG desulfurization system to desulfurize COG and low NO_x burners in the slab reheat furnaces (hereinafter "Construction Permit"). The Construction Permit is attached to this Petition as Exhibit 1. The Construction Permit includes a NO_x emission limitation of 0.283 lb/mmBtu for Slab Reheat Furnace 4. Exhibit 1 at 4. This permitted emission limitation for Slab Reheat Furnace 4 is higher than the emission limitation of 0.142 lb/mmBtu later negotiated in the NO_x RACT Rule. *See* 35 Ill. Admin. Code § 217.244(a).

It is U.S. Steel's understanding that Illinois EPA agreed that low NO_x burners meet RACT requirements. Hearing Transcript, R08-19 at 7 (Ill.Pol.Control.Bd. Dec. 10, 2008). This was demonstrated by Illinois EPA's Second Motion to Amend the R08-19 rulemaking, which added an emission limitation for recuperative reheat furnaces combusting a combination of natural gas and COG, based on the projected operation of the COG desulfurization system and low NO_x burners. Post-Hearing Comments of Illinois EPA, R08-19 at 23 (Ill.Pol.Control.Bd. Mar. 23, 2009); *see* Illinois EPA Second Motion to Amend Rulemaking Proposal, R08-19 at 5, 12 (Ill.Pol.Control.Bd. Mar. 23, 2009). This emission limitation was later adopted by the Board. *See* 35 Ill. Admin. Code § 217.244(a). Since this emission limitation was based on projected operation of the COG desulfurization system and low NO_x burners, both Illinois EPA and U.S. Steel agreed that the emission limitation may need to be revised after installation of the desulfurization system to more accurately reflect actual operating parameters, and the Board noted such agreement. Second Notice at 15, 24. Therefore, the emission

limitation for slab reheat furnaces was developed according to the anticipated operating conditions of the equipment authorized by the Construction Permit, including the COG desulfurization system and the low NOx burners.

Pursuant to the Construction Permit, the desulfurization unit has been constructed and the low NOx burners have been installed at the slab reheat furnaces. These pollution controls have been shown to comply with the limits and requirements established in the Construction Permit. Most significantly, U.S. Steel recently performed emissions testing on slab reheat furnaces 1 through 4, and the results show that NOx emissions from the furnaces are in compliance with the emission limits in the Construction Permit. However, the stack test results also show that the emission rate from Slab Reheat Furnace 4, when combusting COG, is 0.155 lb/mmBtu. As discussed above, the Rule's negotiated emission limit is 0.142 lb/mmBtu.

During the R08-19 rulemaking, U.S. Steel and Illinois EPA had several discussions on the appropriate emission limit for the slab reheat furnaces, and in fact, specifically discussed the emission rate for each of the slab reheat furnaces in light of the varying utilization needs of the four slab reheat furnaces. In particular, in regards to Slab Reheat Furnace 4, the estimated emission rate for combusting desulfurized COG at 130 ppm HCN was 0.146 lb/mmBtu, which is higher than the 0.142 lb/mmBtu limit adopted by the Board. In addition, the actual concentration of hydrogen cyanide ("HCN") still present in COG after desulfurization was unknown at the time the Rule was developed. *Id.* Also, the NOx emission reductions to be achieved from installation of low NOx burners at the slab reheat furnaces were based upon vendor estimates. It was only with the utilization of the Rule's averaging provisions that the slab reheat furnaces

would be able to meet the Rule's limit. However, due to the emissions testing results for Slab Reheat Furnace 4, showing an emission rate above the previously estimated rate, and the fact that the negotiated limit was not only based on averaging, but also based on combusting COG at 130 ppm HCN, U.S. Steel needs time to evaluate compliance strategies to determine the most efficient option for compliance with the Rule's 0.142 lb/mmBtu limit for Slab Reheat Furnace 4.

As noted above, U.S. Steel proceeded with construction of the pollution control systems pursuant to the Construction Permit, and recent emissions testing indicates that the NOx emissions from the Slab Reheat Furnace 4² are higher than the expected emissions that were used to develop the negotiated limitation in the Rule. U.S. Steel must now evaluate why the emissions are higher than expected at Slab Reheat Furnace 4 and determine options for compliance³ under actual operating parameters with the limitation in the Rule, which may include an adjusted RACT limitation for Slab Reheat Furnace 4. While the actual HCN concentration in the COG may be contributing to the cause of the higher than expected emissions rate, the efficiency of the low NOx burners themselves at Slab Reheat Furnace 4 may be involved as well.

Accordingly, U.S. Steel is requesting a variance of up to five years from the final Board order in this matter, from the emission limitation in the Rule as set forth at 35 Ill. Admin. Code Part 217, Subpart I, for Slab Reheat Furnace 4, which is classified as a

² Recent emissions testing indicates that NOx emissions from the other three slab reheat furnaces are well under the negotiated limitation in the Rule.

³ Again, U.S. Steel understands that the Rule allows compliance to be demonstrated by Emissions Averaging Plans (35 Ill. Admin. Code § 217.158), and intends to evaluate the same; however, prior to such evaluation, it is necessary that the actual cause of the higher than expected emissions rate at Slab Reheat Furnace 4 be determined.

recuperative reheat furnace, combusting a combination of natural gas and COG. A variance is justified because the Rule may pose an arbitrary and unreasonable hardship on U.S. Steel.

I. REGULATORY BACKGROUND

The Board initially promulgated the emission limitation at issue in the NOx RACT Rule on August 20, 2009. Order and Opinion, R08-19 (Ill.Pol.Control.Bd. Aug. 20, 2009). U.S. Steel worked closely with Illinois EPA during that rulemaking to negotiate appropriate emission limitations for its slab reheat furnaces, based on its best estimates of operating parameters for a related pollution control system that had not yet been constructed and vendor estimates related to the low NOx burners that were not yet installed. Moreover, the initial compliance date for the NOx RACT Rule was January 1, 2012. *Id.* at 55-56.

Thereafter, Illinois EPA initiated a rulemaking to amend the compliance date of the NOx RACT Rule. *In the Matter of: Nitrogen Oxides Emissions, Amendments to 35 Ill. Adm. Code 217*, R11-24 and 11-26 (consol.) (Ill.Pol.Control.Bd. May 4, 2011) (rulemaking hereafter cited as "11-24"). Illinois EPA proposed to revise the general compliance date of the NOx RACT Rule from January 1, 2012 to January 1, 2015. The Board adopted this revision on August 18, 2011. Adopted Rule, R11-24 (Ill.Pol.Control.Bd. Aug. 18, 2011). The effective date of the NOx RACT Rule was August 22. 35 Ill. Reg. 14627 (Sep. 2, 2011). Accordingly, U.S. Steel is filing this Petition within the 20-day timeframe allowed by Section 38(b) of the Act, which stays the effectiveness of the Rule as to U.S. Steel. U.S. Steel respectfully requests confirmation of the stay by the Board.

II. EMISSIONS FROM SLAB REHEAT FURNACE 4 MUST BE ASSESSED IN LIGHT OF ACTUAL OPERATING PARAMETERS.

The emission limitation applicable to Slab Reheat Furnace 4 was established based on projected operating parameters of the COG desulfurization system and the low NOx burners. During the R08-19 rulemaking, both Illinois EPA and U.S. Steel agreed that the emission limitations for the slab reheat furnaces may need to be revised after installation of pollution control systems to reflect actual operating conditions. Second Notice at 15, 24. Given the need to assess actual operating conditions/parameters, along with the schedule for the same, compliance with the emission limitation in the Rule by January 1, 2015 may result in an arbitrary and unreasonable hardship on the Facility.

As explained in the pre-filed testimony of Mr. Larry Siebenberger in the R08-19 rulemaking, the design of the Facility is unique and necessitates special consideration when developing NOx standards for the slab reheat furnaces. Pre-Filed Testimony of Larry G. Siebenberger on Behalf of United States Steel Corporation, R08-19 at 2 (Ill.Pol.Control.Bd. Nov. 25, 2008). The Facility includes two coke batteries that produce metallurgical coke and COG, which is a byproduct. *Id.* at 2. COG has an energy content of 500-600 Btu's per cubic foot and contains approximately 52% hydrogen, 26% methane, and 5% carbon monoxide. *Id.* Undesulfurized COG also contains approximately 1800 ppm of HCN. *Id.* Because the HCN contributes additional fuel-bound nitrogen during the combustion process, undesulfurized COG produces higher NOx emissions than natural gas when burned. *Id.* COG is used in certain down stream units, including the slab reheat furnaces. *Id.* Slab reheat furnaces heat steel slabs using COG and natural gas so the slabs can be rolled by a series of rolling mills into flat sheets

of steel. *Id.* at 3. The flat sheets are then rolled into a coil, which is appropriate for sale or additional processing. *Id.*

The COG desulfurization system was authorized by Illinois EPA in the Construction Permit as part of an emission reduction project that also included installation of low NOx burners in the slab reheat furnaces. *See* Exhibit 1. The Construction Permit, issued prior to the adoption of the Rule's negotiated limit for reheat furnaces, included an emission limit for Slab Reheat Furnace 4, which is currently being met. At the time of the R08-19 rulemaking, however, U.S. Steel was in the process of installing the COG desulfurization system, which was designed to scrub out hydrogen sulfide, HCN, and carbon dioxide, and thus, the emission limitations developed during the R08-19 rulemaking were developed based on best estimates of the yet-to-be constructed COG desulfurization system and yet-to-be installed low NOx burners. *Tr.* at 13.

In post-hearing comments, U.S. Steel explained that the agreed-upon emission limitation was based on COG used in the slab reheat furnaces having an estimated HCN concentration of 130 ppm or less. *Post-Hearing Comments of United States Steel Corporation, R08-19 at 3 (Ill.Pol.Control.Bd. Mar. 23, 2009)*. However, U.S. Steel noted that these emission limitations would need to be revisited once the desulfurization system is complete if the concentration of HCN is greater than 130 ppm. *Id.* Moreover, although the HCN concentration in the COG may be contributing to the cause of the higher than expected emissions rate, the low NOx burners themselves at Slab Reheat Furnace 4 may not be reducing NOx to the levels expected and discussed during the R08-19 rulemaking.

Illinois EPA filed similar comments, acknowledging that “[a]n ancillary benefit of US Steel’s coke oven gas desulfurization unit is that in addition to removing sulfur compounds from the coke oven gas, it also removes hydrogen cyanide, which reduces fuel NOx in coke oven gas.” Post-Hearing Comments of the Illinois Environmental Protection Agency, R08-19 at 23 (Ill.Pol.Control.Bd. Mar. 23, 2009). Illinois EPA further explained that emission limitations for the slab reheat furnaces are based on U.S. Steel’s best estimate of 130 ppm HCN remaining in the COG after passing through the desulfurization unit. *Id.* Illinois EPA acknowledged that once the units are installed and operational, there was a possibility that emission limitations would require adjustment. *Id.*; *see* Illinois EPA Response to First Notice Comments of United States Steel Corporation and Arcelormital USA, Inc., R08-19 at 2 (Ill.Pol.Control.Bd. July 15, 2009) (stating that Illinois EPA agrees with U.S. Steel and acknowledges that the emission limitation may require adjustment after the gas desulfurization system is in operation).

Now that the COG desulfurization system and low NOx burners have been constructed, and testing indicates that the NOx emissions from Slab Reheat Furnace 4 are higher than the expected emissions rate that was used to negotiate the limitation in the Rule, compliance options must be evaluated. U.S. Steel is requesting a variance of up to five years in order to evaluate and determine compliance options for Slab Reheat Furnace 4. Although the Rule’s compliance date is not for three years, U.S. Steel is unable to guarantee that a new or revised compliance strategy for Slab Reheat Furnace 4 can be developed and implemented by that time.

Without such consideration, U.S. Steel would be required to comply with a Rule that both Illinois EPA and U.S. Steel agreed may need to be revisited. Compliance with

the emission limitation for Slab Reheat Furnace 4 poses an arbitrary and unreasonable hardship since the emission limitation is based on estimated operating conditions and not actual operating parameters that take into account the COG desulfurization system and the low NOx burners.

III. THERE IS NO FEDERAL BASIS OR URGENCY AT THIS TIME FOR THE RULE.

The NOx RACT Rule was proposed and adopted because it was believed at the time that implementation of the Rule would result in emission reductions needed to aid in attaining the 1997 8-hour ozone standard. *See generally* Statement of Reasons, R08-19 (Ill.Pol.Control.Bd. May 9, 2008). However, in December 2010, USEPA approved a request from Illinois EPA to waive the NOx RACT requirements in Illinois' nonattainment areas because the areas, including the Metro-East area, had attained the 1997 8-hour ozone standard. 75 Fed. Reg. 76332 (Dec. 8, 2010). Thus, the Metro-East nonattainment area attained the 1997 8-hour ozone standard without implementation of the NOx RACT Rule. Further, Illinois EPA testified in the recent rulemaking to amend the compliance date of the Rule that the Rule is not federally mandated at this time. Hearing Transcript, R11-24 at 19-20 (Ill.Pol.Control.Bd. June 2, 2011).

In addition, in regards to the anticipated new or reconsidered ozone standard, President Obama recently announced that the next ozone standard would be considered in 2013 and directed USEPA to withdraw the draft ozone standard.⁴ The fact that the Rule is not federally required at this time, and a new ozone standard, which could require RACT depending on area designations and classifications, will not be issued until at least

⁴ See footnote 1.

2013 supports U.S. Steel's request for variance since there is no urgency to implement the Rule for federal purposes.

IV. REGULATIONS FROM WHICH VARIANCE IS SOUGHT

U.S. Steel is seeking a variance of up to five years from the date of the Board's final order in this matter from the emission limitation applicable to Slab Reheat Furnace 4 in the NOx RACT Rule, which is set forth at 35 Ill. Admin. Code Part 217, Subpart I.

Section 217.150(a) states, in relevant part:

- 1) The provisions of this Subpart and Subparts E, F, G, H, I, and M of this Part apply to the following:
 - A) All sources that are located in either one of the following areas and that emit or have the potential to emit NOx in an amount equal to or greater than 100 tons per year:
 - i) The area composed of the Chicago area counties of Cook, DuPage, Kane, Lake, McHenry, and Will, the Townships of Aux Sable and Goose Lake in Grundy County, and the Township of Oswego in Kendall County; or
 - ii) The area composed of the Metro East area counties of Jersey, Madison, Monroe, and St. Clair, and the Township of Baldwin in Randolph County; and
 - B) Any industrial boiler, process heater, glass melting furnace, cement kiln, lime kiln, iron and steel reheat, annealing, or galvanizing furnace, aluminum reverberatory or crucible furnace, or fossil fuel-fired stationary boiler at such sources described in subsection (a)(1)(A) of this Section that emits NOx in an amount equal to or greater than 15 tons per year and equal to or greater than five tons per ozone season.
- 2) For purposes of this Section, "potential to emit" means the quantity of NOx that potentially could be emitted by a stationary source before add-on controls based on the design capacity or maximum

production capacity of the source and 8,760 hours per year or the quantity of NO_x that potentially could be emitted by a stationary source as established in a federally enforceable permit.

35 Ill. Admin. Code § 217.150(a).

The NO_x RACT Rule is applicable to U.S. Steel's Facility because it is located in Madison County and has the potential to emit 100 tons of NO_x per year. Pursuant to Subpart I of the Rule, emissions from recuperative reheat furnaces combusting a combination of natural gas and COG may not exceed 0.142 lb/mmBtu. 35 Ill. Admin. Code § 217.224(a).

U.S. Steel is requesting a variance of up to five years from the date of the Board's final order in this matter from the emission limitation at 35 Ill. Admin. Code § 217.224(a) for Slab Reheat Furnace 4. Without this variance, Slab Reheat Furnace 4 must comply with the 0.142 lb/mmBtu emission limitation by January 1, 2015, and as discussed in detail above, U.S. Steel needs time to evaluate why the emissions are higher than expected, as well as possible compliance strategies in order to ensure that Slab Reheat Furnace 4 can meet the limitation in the Rule, which could include seeking an alternative RACT limit for Slab Reheat Furnace 4.

V. ACTIVITY OF U.S. STEEL

A. U.S. Steel's Facility and Operations Description

The U.S. Steel Facility is the last fully integrated iron and steel mill in Illinois. It was originally founded in 1878 and is located on approximately 1,100 acres of land on 20th and State Streets in Granite City in Madison County, in an area primarily used for industrial purposes, with some residential and agricultural properties nearby. The Facility employs approximately 2,200 employees, and a significant number of contractors

that fluctuates depending upon activities at the Facility. The Facility is one of the largest employers in the region.

Activities at the Facility include raw material preparation and production, coke production, COG by-product recovery, iron production, steel production, and steel finishing. Most applicable to this Petition, slab reheat furnaces heat steel slabs using COG and natural gas so the slabs can be rolled into flat sheets of steel at the Hot Strip Mill. The flat sheets are then rolled into coils, which are appropriate for sale or additional processing.

B. Location of Points of Discharge and Nearest Monitoring Station Maintained by Illinois EPA

As stated above, U.S. Steel is seeking a variance from the 0.142 lb/mmBtu emission limitation in the NO_x RACT Rule for Slab Reheat Furnace 4, which is located in the Hot Strip Mill at the Facility. The nearest ozone monitoring station maintained by Illinois EPA is located at 200 W. Division, Maryville, Illinois. *See* Illinois EPA Bureau of Air, Ambient Air Monitoring Network Plan – 2012 (July 2011).

C. Prior Variance(s) Issued to U.S. Steel or Any Predecessor Regarding Similar Relief

Neither U.S. Steel, nor any of its predecessors, has been issued a prior variance regarding relief that is similar to what is requested in this Petition.

D. Identification of Permits

U.S. Steel operates the Facility pursuant to a Title V Clean Air Act Permit Program (“CAAPP”) permit issued by Illinois EPA on May 2, 2011. *See* CAAPP Permit No. 96030056. Condition 7.7.14 of the CAAPP Permit requires U.S. Steel to comply with the applicable requirements of the rule by “the applicable compliance date.” *Id.* at

235. A variance from the NOx RACT Rule would not interfere with this condition. In addition, Condition 7.7.7 of the CAAPP Permit limits emissions from Slab Reheat Furnace 4 to the same emissions as the Construction Permit. If and when the NOx RACT Rule becomes applicable to the Facility, U.S. Steel's CAAPP permit will need to be updated accordingly.

E. Number of Persons Employed & Age of Facility

Again, the Facility began operation in 1878. Currently, there are approximately 2,200 employees at the Facility, and a significant number of contractors that fluctuates depending upon activities at the Facility.

F. Nature and Amount of Materials Used in Activity for which Variance is Sought and a Full Description of the Particular Process or Activity in which the Materials will be Used

This variance is being sought only for Slab Reheat Furnace 4, which is subject to an emission limitation in the NOx RACT Rule. Slab reheat furnaces heat steel slabs using COG and natural gas so the slabs can be rolled by a series of rolling mills into flat sheets of steel. The flat sheets are then rolled into coils, which are appropriate for sale or additional processing. In 2010, the Facility produced 2,236,551 tons of iron and approximately 2,665,468 tons of steel. The total gas usage for Slab Reheat Furnace 4 is limited to 2,206,238 mmBtu/year and COG usage for Slab Reheat Furnace 4 is limited to 1,544,367 mmBtu/year. Exhibit 1 at 3; *see* CAAPP Permit No. 96030056 at 229.

G. A Description of the Relevant Pollution Control Equipment Already in Use

Pursuant to the Construction Permit, U.S. Steel constructed a COG desulfurization system and installed low NOx burners on Slab Reheat Furnaces 1 through

4. The COG desulfurization system consists of a packed tower amine unit, HCN destruct unit, and a Claus sulfur recovery unit with oxidizer. U.S. Steel understood that Illinois EPA agreed that low NOx burners are considered RACT for the slab reheat furnaces. Tr. at 7. According to the Permit, the installation of the low NOx burners would result in an annual decrease in emissions of at least 381.77 tons of NOx. Exhibit 1 at 2. Based upon actual emissions from the slab reheat furnaces in 2010, the decrease was considerably more.

H. Nature and Amount of NOx Emissions Currently Generated by Petitioner's Activity

NOx emissions from the slab reheat furnaces combined were approximately 180 tons in 2010, substantially less than the 724.09 tons per year allowed by the Construction Permit.

VI. COMPLIANCE WITH THE REGULATION MAY NOT BE ACHIEVED BY THE JANUARY 1, 2015 COMPLIANCE DATE

The NOx RACT Rule requires compliance with the emission limitation at 35 Ill. Admin. Code § 217.244(a) for the Slab Reheat Furnace 4 at U.S. Steel's Facility by January 1, 2015. As discussed in detail above, the negotiated limit in the Rule was based on best engineering judgment and projected operating conditions of pollution control equipment prior to construction, as well as vendor estimates of emissions from the slab reheat furnaces after installation of what was agreed to be considered RACT. Illinois EPA and U.S. Steel agreed, and the Board noted the agreement, that the Rule's emission limitation for the furnaces may need to be revisited once the COG desulfurization system and low NOx burners were installed. Based on recent emission testing of Slab Reheat Furnace 4, the scenario that Illinois EPA and U.S. Steel anticipated in regards to the

possibility of revisiting the Rule's emission limit has developed. As noted previously, it was only with the utilization of the Rule's averaging provisions that the negotiated limit could be met. Now that U.S. Steel has confirmed that emissions from Slab Reheat Furnace 4 are higher than the expected emissions used to develop the Rule's negotiated limit, even with the installation of low NO_x burners and operation of the COG desulfurization system, it needs to evaluate the operation of Slab Reheat Furnace 4 to determine what is causing the higher than expected emissions rate, and to determine feasible options for compliance with the Rule's 0.142 lb/mmBtu limit. Because of the scope of such an evaluation and consideration of any alternatives for compliance with the Rule's limit, U.S. Steel may require additional time, beyond the January 1, 2015 compliance date, to determine how Slab Reheat Furnace 4 will comply with the Rule.

VII. EFFORTS NECESSARY TO ACHIEVE COMPLIANCE BY DEADLINE IN RULE

Pursuant to the Construction Permit, U.S. Steel has installed the COG desulfurization system and low NO_x burners and is working to achieve compliance with the NO_x RACT emission limitation. Compliance with the emission limitations in the Construction Permit has already been demonstrated for Slab Reheat Furnaces 1 through 4. Similarly, compliance with the emission limitation in the NO_x RACT Rule has been demonstrated for Slab Reheat Furnaces 1 through 3. However, Slab Reheat Furnace 4 requires additional evaluation of possible compliance strategies in order to determine how Slab Reheat Furnace 4 can meet the limitation in the Rule, which as noted above, could include seeking an alternate RACT limit for this particular furnace. In order to determine compliance with the applicable emission limitation, U.S. Steel will assess the

operation of the COG desulfurization system and the low NOx burners associated with Slab Reheat Furnace 4. This assessment of Slab Reheat Furnace 4 should lead to a determination on how compliance with the Rule's limit can be achieved or that implementation of an alternative compliance plan or an alternative method of relief is necessary. Accordingly, based upon existing data, U.S. Steel cannot achieve the anticipated NOx emissions rate at Slab Reheat Furnace 4 and may need time beyond the January 1, 2015 compliance date to determine how Slab Reheat Furnace 4 will comply with the Rule's limitation.

VIII. ARBITRARY OR UNREASONABLE HARDSHIP

Illinois EPA and U.S. Steel anticipated that the Rule's emission limit for the slab reheat furnaces would need to be revisited after installation of the pollution controls. Given that the parties expected to revisit the Rule's limits, and recent testing results demonstrate that the NOx emission rate from Slab Reheat Furnace 4 is higher than the expected emissions rate used to develop the Rule's negotiated limit, it is arbitrary to require compliance with the limit by January 1, 2015. This request for variance merely allows U.S. Steel the necessary time to develop a compliance strategy for Slab Reheat Furnace 4 now that the pollution controls have been installed and the Facility knows that the NOx emissions rate at Slab Reheat Furnace 4 is higher than the expected emissions rate used to develop the negotiated limit. In addition, requiring compliance with the Rule's emission limitations based on projected operating conditions rather than actual operating conditions, as originally intended, poses an unreasonable hardship since actual operation of Slab Reheat Furnace 4 after installation of the pollution controls shows that

the NOx emissions from Slab Reheat Furnace are higher than the expected emissions that were used to develop the Rule's negotiated limit.

Furthermore, as briefly noted above, the NOx RACT Rule is not required by the CAA at this time, and the issuance of the new ozone standard has been delayed until at least 2013. Since there is not a federal requirement now or in the near future for this Rule, this request for variance will not cause any delay in implementation of the Rule for federal purposes, i.e. to meet a federal ozone standard, which supports U.S. Steel's position that this Rule is arbitrary.

IX. COMPLIANCE PLAN AND SUGGESTED CONDITIONS

As discussed throughout this Petition, the NOx RACT Rule is arbitrary and poses an unreasonable hardship on U.S. Steel. U.S. Steel has installed the COG desulfurization system and the low NOx burners on the slab reheat furnaces, which U.S. Steel understood that Illinois EPA determined to meet RACT requirements. Slab Reheat Furnaces 1 through 4 comply with the emission limitations in the Construction Permit, and Slab Reheat Furnaces 1 through 3 comply with the emission limitations in the NOx RACT Rule. However, additional testing and analysis for Slab Reheat Furnace 4 is required to determine how it will comply with the NOx RACT Rule. Therefore, U.S. Steel proposes to operate Slab Reheat Furnace 4 pursuant to its Construction Permit while it evaluates options for compliance with the Rule's emissions limit. U.S. Steel commits to developing an Evaluation Plan and submitting such plan to Illinois EPA for review and discussion in order to keep Illinois EPA updated on U.S. Steel's evaluation of compliance options, which could include seeking an alternate RACT limit for Slab Reheat Furnace 4.

X. ENVIRONMENTAL IMPACT

If the requested variance is granted, U.S. Steel would still operate the same pollution controls that Illinois EPA and the Board originally intended when the Rule was promulgated. However, a variance would allow U.S. Steel to determine whether initial estimates reflect actual operating conditions. Installation of low NOx burners resulted in a decrease of at least 381.77 tons of NOx from the Facility. Exhibit 1 at 2. Based upon actual emissions from the slab reheat furnaces in 2010, the decrease was considerably more. If the Board grants the requested variance, there will be little or no impact on human health and the environment compared to the impact if immediate compliance with the Rule is required because the Metro-East area has attained the 1997 ozone standard. Since attainment of the 1997 ozone standard has been reached prior to implementation of the Rule, there is little environmental impact, if any, in issuing a variance from the emission limitation. In addition, during the variance period, U.S. Steel will continue to operate the COG desulfurization system and the low NOx burners described in the Construction Permit pursuant to its Title V permit.

XI. PROPOSED VARIANCE PERIOD

U.S. Steel proposes a variance of up to five years beginning on the date of the Board's final order in this matter.

XII. CONSISTENCY WITH FEDERAL LAW

Under Title IX of the Act, 415 ILCS 5/35-38, the Board is responsible for granting variances when a petitioner demonstrates that immediate compliance with the Board regulation(s) would impose an "arbitrary or unreasonable hardship" on the

petitioner. 415 ILCS 5/35(a). The Board may grant a variance, however, only to the extent consistent with applicable federal law. *See* 415 ILCS 5/35(a).

Section 104.208(a) of the Board rules states the following with regard to consistency with federal law for all petitions for variances from the Board's air regulations:

- a) All petitions for variances from Title 11 of the Act or from 35 Ill. Adm. Code Subtitle B, Ch. I "Air Pollution", must indicate whether the Board may grant the requested relief consistent with the Clean Air Act (CAA) (42 USC 7401 et seq.) and the federal regulations adopted pursuant thereto. If granting a variance would require revision of the State Implementation Plan, the petition must indicate whether the requirements of Section 110(a) of the CAA (42 USC 7410(a)) and 40 CFR 51 will be satisfied.

35 Ill. Admin. Code § 104.208(a). In this situation, there are no applicable federal laws or regulations that preclude granting the instant variance request. As referenced above, the NO_x RACT Rule is not required by the CAA and does not appear to be required in the foreseeable future given USEPA's delay in issuing the new ozone standard until 2013. Therefore, the variance is consistent with federal law. In addition, granting this variance request would not require a revision to the SIP.

XIII. REQUEST FOR HEARING

Pursuant to 35 Ill. Admin. Code § 104.204(n), U.S. Steel requests a hearing on this Petition.

XIV. AFFIDAVIT IN SUPPORT

In support of this Petition, U.S. Steel is filing the Affidavit of Tishie Woodwell, which is attached hereto as Exhibit 2.

XV. CONCLUSION

Illinois EPA and U.S. Steel agreed that the emission limitation for Slab Reheat Furnace 4 in the NOx RACT Rule may need to be revisited after installation of related pollution control devices, to reflect actual operating parameters. This variance from the applicable requirements of the Rule is necessary because the Rule poses an arbitrary and unreasonable hardship on U.S. Steel since: 1) U.S. Steel understood that the Illinois EPA determined that the installation of low NOx burners on the slab reheat furnaces at the Facility would meet RACT requirements; 2) the emission limitation set forth in the Rule for the slab reheat furnaces was a negotiated limitation that was based upon pre-construction vendor estimates for pollution control systems including low NOx burners for the furnaces, as well as a related COG desulfurization system; 3) Illinois EPA and U.S. Steel agreed, and the Board noted this agreement, that emission limitations may need to be revisited to address actual operation of pollution control systems; and 4) stack testing conducted at Slab Reheat Furnace 4, after installation of low NOx burners and combusting desulfurized COG, indicates that the NOx emissions from Slab Reheat Furnace 4 are higher than the expected emissions that were used to develop the negotiated limitation in the Rule. Further, the Rule, at this time, is not federally required, and issuance of a new federal ozone standard has been delayed until at least 2013. These factors, considered in conjunction with each other, demonstrate that the Rule poses an arbitrary and unreasonable hardship on U.S. Steel.

U.S. Steel plans to evaluate compliance options for Slab Reheat Furnace 4 to determine whether Slab Reheat Furnace 4 can achieve compliance with the Rule's emission limitation or whether an alternate RACT limit is necessary for Slab Reheat

Furnace 4. Accordingly, the Board should grant this request for a variance for up to five years from the Rule's emission limitation requirements for Slab Reheat Furnace 4. U.S. Steel also seeks confirmation from the Board that the emission limitation applicable to Slab Reheat Furnace 4 is stayed pursuant to Section 38(b) of the Act.

WHEREFORE, Petitioner, United States Steel Corporation, respectfully requests that the Board grant a variance for up to five years from the date of the Board's final order in this matter from 35 Ill. Admin. Code § 217.244(a) for Slab Reheat Furnace 4.

Respectfully submitted,

UNITED STATES STEEL
CORPORATION,

Petitioner,

DATE: May 17, 2011

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

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

USSC:004/Filings/Petition for Variance/Petition for Variance

EXHIBIT 1

ILLINOIS ENVIRONMENTAL PROTECTION AGENCY



1021 NORTH GRAND AVENUE EAST, P.O. BOX 19506, SPRINGFIELD, ILLINOIS 62794-9506 - (217) 782-2113

ROD R. BLAGOJEVICH, GOVERNOR DOUGLAS P. SCOTT, DIRECTOR

217/782-2113

CONSTRUCTION PERMIT

PERMITTEE

United States Steel Corporation
Attn: Larry Siebenberger
600 Grant Street
Pittsburgh, PA 15219

Application No.: 06070022

I.D. No.: 119813AAI

Applicant's Designation:

Date Received: July 11, 2006

Subject: Emission Reduction Projects

Date Issued: January 18, 2007

Location: 1951 State Street, Granite City

This Permit is hereby granted to the above-designated Permittee to CONSTRUCT emission source(s) and/or air pollution control equipment consisting of a coke oven gas desulfurization system for the existing coke oven by-products plant and low NO_x burners in the hot strip slab furnaces, which would generate creditable emission reductions that would facilitate construction of other projects at the source, as described in the above-referenced application. This Permit is subject to standard conditions attached hereto and the following special condition(s):

- 1a. i. This permit authorizes construction of a coke oven gas (COG) desulfurization system ("affected system"), which consists of a packed tower amine unit, hydrogen cyanide destruct unit, and a Claus sulfur recovery unit with oxidizer. The affected system is designed to remove hydrogen sulfide (H₂S) from the COG stream after processing in the by-products plant, prior to use as fuel.
- ii. This permit is issued based upon the construction of the affected system being an emission control project that will reduce emissions of particulate matter (PM), particles with size equal to or smaller than 10 microns (PM₁₀), sulfur dioxide (SO₂), and sulfuric acid mist currently accompanying use of coke oven gas in combustion units at the source.

Note: The application indicates an annual decrease of 71 tons of PM/PM₁₀, 2,546 tons of SO₂, and 56 tons of sulfuric acid mist, from this system.

- iii. This permit does not alter requirements of existing permits for the plant, including Permit Number 94120017, which addresses SO₂ emissions from certain fuel burning emission units at the plant.
- b. i. This permit authorizes installation of low NO_x burners on hot strip slab furnaces 1 through 4 (the affected furnaces).

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Note: The application indicates an annual decrease of 381.77 tons of NO_x from the installation of low NO_x burners in the affected furnaces.

- c. This permit also acknowledges the planned permanent shutdown of Boilers 1-10, which would accompany construction of a new co-generation facility. Once the boilers are permanently shutdown, the restart of any of these boilers would require a construction permit from the Illinois EPA.

Note: The application indicates an annual decrease of 9.2 tons of CO, 186.7 tons of NO_x, 0.8 tons of PM/PM₁₀, 0.1 tons of SO₂, and 0.6 tons of VOM from the shutdown of Boilers 1-10. These values represent the actual emissions attributable to natural gas combustion in Boilers 1-10 and a portion of the NO_x emissions attributable to a portion of the COG burned in the boilers.

The affected furnaces will combust additional COG and less natural gas due to the shutdown of Boilers 1-10. This transfer of COG will result in an overall decrease in emissions because affected boilers have higher NO_x emissions burners whereas the affected furnaces have low NO_x burners.

- d. This permit does not authorize the construction of new emission units at the source. In particular, this permit does not authorize construction of a co-generation facility or a heat recovery coke manufacturing facility, for which separate applications have been submitted and are currently pending with the Illinois EPA. (I.D. 119813AAI, Application No. 06070023, and ID 119040ATN, Application No. 06050052).
- 2a. i. The source shall operate the affected system at all times the by-products plant is producing COG, except when undertaking maintenance or repairs of the system. This total "outage" period shall not exceed 35 days (840 hours) per calendar year.
- ii. A. COG production during periods of time when the affected system is not operating shall not exceed 1,092 mmscf/year.
- B. Total COG production from the existing coke oven battery shall not exceed 1,140 mmscf/month and 11,400 mmscf/year.
- Note: This limit is based on the design capacity of the affected system as indicated in the application, i.e., 31.2 mmscf/day, monthly average.
- iii. A. The affected system shall be operated and maintained in conformance with good air pollution control practices.
- B. The oxidizer combustion chamber for the sulfur recovery unit shall be operated at a temperature that is consistent with at least the manufacturer's recommended temperature.

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- b. i. The affected furnaces shall be equipped, operated, and maintained with low NO_x burners. The burners shall be operated and maintained in conformance with good air pollution control practices.
- ii. Operation of the affected furnaces shall not exceed the following limits:

Emission Unit	Total Gas Usage (mmBtu/year)	COG Usage (mmBtu/year)
Hot Strip Slab Furnace #3	1,654,304	1,187,790
Hot Strip Slab Furnace #4	2,206,238	1,544,367
Total (Furnaces 1-4)	7,169,150	2,421,388

- c. Conditions 2(a)(i) and (ii), 2(b), and 3 of this permit take effect upon initial startup of new facility(ies) whose permitting, as reflected in Construction Permit(s) for those new unit(s), relies upon the emission reductions provided by the projects addressed by this permit.

Note: This permit does not specify particular levels of sulfur removal by the affected system before the above date(s) when operated on a voluntary basis. This is because the reduction in sulfur from the COG achieved by the system will exceed the equivalent SO₂ emissions from the sulfur recovery unit. This reduction in sulfur will also be accompanied by a reduction in particulate emissions when COG is burned.

- 3a. i. The H₂S content of the raw COG entering the desulfurization system shall not exceed 500 grains of H₂S/100 scf of COG.
- ii. The H₂S content of COG shall not exceed 66 grains/100 scf of COG, annual average
- iii. During periods of time when the affected system is operating, the H₂S content of COG shall not exceed the following limits:: 25 grains of H₂S/100 scf of COG, monthly average, excluding outages, startup, shutdown, and upsets such as failure of fans, pumps or heat exchangers and aberrations in the composition or condition of the raw COG.
- b. i. Annual emissions of the source from combustion of COG shall not exceed the following limits:

	Limits (Tons/Year)	
	PM ₁₀	SO ₂
"Outage" of Affected System	47.55	530.59
Total (includes normal and outage):	224.80	807.90

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- ii. Emissions from the sulfur recovery unit shall not exceed the following limits:

PM ₁₀		SO ₂	
(Lbs/Hr)	(Tons/Yr)	(Lbs/Hr)	(Tons/Yr)
5.6	24.6	67.3	294.7

- iii. Combined emissions of PM₁₀ and SO₂ from the sulfur recovery unit and combustion of coke oven gas shall not exceed 246.8 and 1,074.1 tons/year for PM₁₀ and SO₂, respectively.
- iv. The SO₂ emission limits in this permit are based on the H₂S content of the coke oven gas. These limits do not include emissions attributable to sulfur compounds other than H₂S.

- c. i. A. Emissions of NO_x from the affected furnaces shall not exceed the following limits:

Furnace	Limit (Lbs/mmBtu)
Furnace #1	0.150
Furnace #2	0.150
Furnace #3	0.264
Furnace #4	0.283

- B. Emissions of NO_x from the affected furnaces (combined) shall not exceed 73 tons/month and 724.09 tons/year.

- ii. This permit is issued based upon installation of low NO_x burners for the affected furnaces without any increase in emissions of CO, VOM, SO₂ and PM/PM₁₀.

- d. Compliance with the annual limits shall be determined from a running total of 12 months of data, unless otherwise specified.

- 4a. i. Within one year of initial startup of the affected system, the PM₁₀, NO_x, CO, and SO₂ emissions of the sulfur recovery unit shall be measured during conditions which are representative of maximum emissions.

- ii. Within 180 days of initial startup of the low NO_x burners, the NO_x and CO emissions of each affected furnace shall be measured during conditions which are representative of maximum emissions.

- b. The following methods and procedures shall be used for testing of emissions, unless another method is approved by the Illinois EPA: 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
Flue Gas Weight	USEPA Method 3
Moisture	USEPA Method 4

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PM ₁₀	USEPA Method 201A* and 202
Sulfur Dioxide	USEPA Method 6
Nitrogen Oxides	USEPA Method 7
Carbon Monoxide	USEPA Method 10

* The Permittee may also use Method 5, instead of Method 201A, provided that the measured results are considered PM₁₀.

- c. At least 60 days prior to the actual date of emissions testing, a written test plan shall be submitted to the Illinois EPA for review. This plan shall describe the specific procedures for testing, including as a minimum:
- i. The person(s) 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, any constraints on the operating configuration of the unit during testing, and the means by which the operating parameters for the emission unit and any control equipment 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 method(s) which will be used, with the specific analysis method, if the method can be used with different analysis methods.
 - v. Any minor changes in standard methodology proposed to accommodate the specific circumstances of testing, with justification.
 - vi. The format and content of the Source Test Report.
- d. The Illinois EPA shall be notified prior to this emissions test to enable the Illinois EPA to observe the test. Notification of the expected date of testing shall be submitted a minimum of thirty days prior to the expected date. Notification of the actual date and expected time of testing shall be submitted a minimum of five working days prior to the actual date of the test. 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. Copies of the Final Report(s) for this emissions test shall be submitted to the Illinois EPA within 45 days after completion of the test program. The Final Report shall include as a minimum:
- i. A summary of results
 - ii. General information

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- iii. Description of test method(s), including description of sampling points, sampling train, analysis equipment, and test schedule
 - iv. Detailed description of test conditions, including
 - A. Process information, i.e., mode(s) of operation, process rate, e.g. raw material consumption
 - B. Control equipment information, i.e., equipment condition and operating parameters during testing
 - v. Data and calculations, including copies of all raw data sheets and records of laboratory analyses, sample calculations, and data on equipment calibration.
- 5a. The Permittee shall install, operate, and maintain a continuous monitoring system for the H₂S content of COG after processing by the affected system. (See also Condition 7 of FESOP 94120017)
- b. The Permittee shall equip the thermal oxidizer for the sulfur recovery unit with a continuous monitoring system which is installed, calibrated, maintained, and operated according to vendor specifications at all times that the affected system is in operation, to monitor the combustion chamber temperature.
- c. The Permittee shall keep the following records for each required monitoring system.
- i. Recorded data.
 - ii. A log of operating time for the control system or devices, monitoring system, and the coke oven byproducts plant.
 - iii. A maintenance log for the oxidizer and monitoring device detailing all routine and non-routine maintenance performed including dates and duration of any outages.
6. The Permittee shall conduct sampling and analysis for the H₂S content and total sulfur content of raw and treated COG (grains/100 scf).
7. The Permittee shall maintain records of the following items:
- a. Operating Records for the Packed Tower Amine Unit
 - i. Amine temperature leaving the unit (°F).
 - ii. Amine flow (gallons/minute).
 - iii. COG flow into or out of the unit.

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- b. Logs for the Affected System and Affected Furnaces
 - i. Operating logs.
 - ii. Maintenance logs detailing all routine and non-routine maintenance performed including dates and duration of any outages.
 - c. Production Records
 - i. COG production during periods of time when the affected system is operating (mmscf/month and mmscf/year).
 - ii. COG production during periods of time when the affected system is not operating (mmscf/month and mmscf/year).
 - iii. COG usage (mmBtu/month and mmBtu/year) for the affected furnaces #1-2 (combined), #3, and #4.
 - iv. Natural gas usage (mmBtu/month and mmBtu/year) for the affected furnaces #1-2 (combined), #3, and #4.
 - d. Records of H₂S content of COG:
 - i. H₂S content of raw COG.
 - ii. H₂S content of COG, annual average.
 - iii. H₂S content of treated COG, excluding outages, startup, shutdown, and upsets, monthly average.
 - e. Emission Records
 - i. Emissions of PM₁₀ and SO₂ from COG combustion based on the above records and separately recorded for total emissions and emissions during outage of the affected system.
 - ii. Emissions of PM₁₀ and SO₂ from the sulfur recovery unit (tons/month and tons/year).
 - iii. Emissions of NO_x from the affected furnaces (tons/month and tons/year).
8. One copy of required reports and notifications shall be sent to:

Illinois Environmental Protection Agency
Division of Air Pollution Control
Compliance Section (#40)
P.O. Box 19276
Springfield, Illinois 62794-9276

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and one copy shall be sent to the Illinois EPA's regional office at the following address unless otherwise indicated:

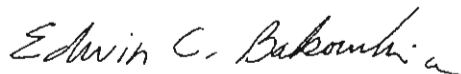
Illinois Environmental Protection Agency
Division of Air Pollution Control
2009 Mall Street
Collinsville, Illinois 62234

and one copy of reports and notifications concerning emission testing or continuous monitoring systems shall be sent to:

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

9. The affected system and affected furnaces with low NO_x burners may be operated under this permit until final action is taken on the source's CAAPP application.

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



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

ECB:JMS:psj

cc: Region 3
CES



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 superseded 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.
4. 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

- e. in no manner implies or suggests that the Agency (or its officers, agents or employees) assumes any liability, directly or indirectly, for any loss due to damage, installation, maintenance, or operation of the proposed equipment or facility.
6. a. Unless a joint construction/operation permit has been issued, a permit for operation shall be obtained from the Agency before the equipment covered by this permit is placed into operation.
- b. For purposes of shakedown and testing, unless otherwise specified by a special permit condition, the equipment covered under this permit may be operated for a period not to exceed thirty (30) days.
7. The Agency may file a complaint with the Board for modification, suspension or revocation of a permit:
- a. upon discovery that the permit application contained misrepresentations, misinformation or false statements or that all relevant facts were not disclosed, or
 - b. upon finding that any standard or special conditions have been violated, or
 - c. upon any violations of the Environmental Protection Act or any regulation effective thereunder as a result of the construction or development authorized by this permit.

EXHIBIT 2

BEFORE THE ILLINOIS POLLUTION CONTROL BOARD

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

AFFIDAVIT OF TISHIE WOODWELL

I, Tishie Woodwell, being first duly sworn on oath, depose and state as follows:

1. I am currently employed as the Director of Environmental Control for UNITED STATES STEEL CORPORATION ("U.S. Steel") in Pittsburgh, Pennsylvania, a position which I have held since May 2006.
2. I participated in the preparation of the Petition for Variance dated September 9, 2011, to the extent it discusses U.S. Steel.
3. I have read the Petition for Variance dated September 9, 2011, and based upon my personal knowledge and belief, the facts stated therein with regard to U.S. Steel are true and correct.

FURTHER AFFIANT SAYETH NOT.

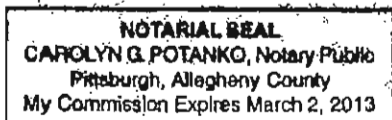
Tishie Woodwell

 Tishie Woodwell

Subscribed and sworn to before me
 this 9th day of September, 2011.

Carolyn G. Potanko

 Notary Public



BEFORE THE ILLINOIS POLLUTION CONTROL BOARD

UNITED STATES STEEL)	
CORPORATION, a Delaware corporation,)	
)	
Petitioner,)	
)	
v.	)	PCB No. ____ - ____
	)	(Variance - Air)
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,

Dated: September 9, 2011

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

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

BEFORE THE ILLINOIS POLLUTION CONTROL BOARD

UNITED STATES STEEL)	
CORPORATION, a Delaware corporation,)	
)	
Petitioner,)	
)	
v.	)	PCB No. ____ - ____
	)	(Variance - Air)
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,

Dated: September 9, 2011

By: /s/ Monica T. Rios
One of Its Attorneys

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

BEFORE THE ILLINOIS POLLUTION CONTROL BOARD

UNITED STATES STEEL)	
CORPORATION, a Delaware corporation,)	
)	
Petitioner,)	
)	
v.	)	PCB No. ____-____
	)	(Variance - Air)
ILLINOIS ENVIRONMENTAL)	
PROTECTION AGENCY,)	
)	
Respondent.)	

ENTRY OF APPEARANCE OF MATTHEW C. READ

NOW COMES Matthew C. Read, of the law firm of HODGE DWYER & DRIVER, and hereby enters his appearance on behalf of Petitioner, UNITED STATES STEEL CORPORATION, in the above-referenced matter.

Respectfully submitted,

UNITED STATES STEEL CORPORATION,
Petitioner,

Dated: September 9, 2011

By: /s/ Matthew C. Read
One of Its Attorneys

Matthew C. Read
HODGE DWYER & DRIVER
3150 Roland Avenue
Post Office Box 5776
Springfield, Illinois 62705-5776
(217) 523-4900