BEFORE THE ILLINOIS POLLUTION CONTROL BOARD

IN THE MATTER OF:	)	
	)	R08-19
NITROGEN OXIDES EMISSIONS FROM	)	(Rulemaking – Air)
VARIOUS SOURCE CATEGORIES:	)	
AMENDMENTS TO 35 ILL. ADM. CODE	)	
PARTS 211 AND 217	)	

NOTICE OF FILING

TO: Mr. John T. Therriault
Assistant Clerk of the Board
Illinois Pollution Control Board
100 W. Randolph Street
Suite 11-500
Chicago, Illinois 60601
therriaj@ipcb.state.il.us
(VIA ELECTRONIC FILING)

Timothy Fox, Esq.
Hearing Officer
Illinois Pollution Control Board
100 W. Randolph Street
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Chicago, Illinois 60601
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(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 the **RESPONSE TO THE FIRST NOTICE PUBLIC COMMENT OF THE ILLINOIS EPA SUBMITTED BY ARCELORMITTAL USA, INC.** a copy of which is herewith served upon you.

Respectfully submitted,

By: Christina L Archer
Christina L. Archer

Dated: July 7, 2009

Christina L. Archer
Associate General Counsel
ARCELORMITTAL USA, INC.
1 South Dearborn, 19th Floor
Chicago, Illinois 60603
(312) 899-3865

CERTIFICATE OF SERVICE

I, Christina L. Archer, the undersigned, hereby certify that I have served the attached **RESPONSE TO THE FIRST NOTICE PUBLIC COMMENT OF THE ILLINOIS EPA SUBMITTED BY ARCELORMITTAL USA, INC.** upon:

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by electronic mail on July 7, 2009.

Christina L. Archer

BEFORE THE ILLINOIS POLLUTION CONTROL BOARD

IN THE MATTER OF:	)	
	)	R08-19
NITROGEN OXIDES EMISSIONS FROM	)	(Rulemaking – Air)
VARIOUS SOURCE CATEGORIES:	)	
AMENDMENTS TO 35 ILL. ADM. CODE	)	
PARTS 211 AND 217	)	

RESPONSE TO THE FIRST NOTICE PUBLIC COMMENT BY THE ILLINOIS EPA SUBMITTED BY ARCELORMITTAL USA, INC.

Pursuant to 35 Ill. Adm. Code 102.108(d), this Response to the First Notice Public Comment by the Illinois EPA is respectfully being submitted by ArcelorMittal USA Inc. on behalf of ArcelorMittal Riverdale Inc. (ArcelorMittal). On July 1, 2009, ArcelorMittal filed its First Notice Public Comment in this matter and on July 6, 2009, the Illinois EPA filed its First Notice Public Comment in this matter. In its July 6, 2009 First Notice Public Comment, the Illinois EPA raised a few issues regarding cost effectiveness and the appropriate NOx emission limit for other sources that ArcelorMittal feels must be rebutted. Therefore, ArcelorMittal is requesting the Hearing Officer and/or Board consider this Response timely filed pursuant to 35 Ill. Adm. Code 102.108(d) to prevent material prejudice to ArcelorMittal.

By way of background, on March 23, 2009, ArcelorMittal filed its Post-Hearing Comments in this matter and attached an economic analysis of cost effectiveness for tunnel furnace burner change for the Illinois EPA's review. That economic analysis assumed a 5-year equipment life and a contingency factor of 20%. The Illinois EPA questioned both these factors in its First Notice Public Comment. However, ArcelorMittal used U.S. EPA published factors for both the equipment life and contingency, which was duly noted on the analysis spreadsheet. The economic equipment life factor is derived from U.S. EPA's "Alternative Control Technique Document – NOx Emissions from iron and Steel Mills," EPA/453/R-94-065, September 1994

and the contingency was derived from U.S. EPA "Cost Air" spreadsheets available on-line at http://www.epa.gov/ttn. Even though not required to do so under U.S. EPA authority, taking the Illinois EPA's comments into consideration, ArcelorMittal prepared a revised economic analysis for burner change using 15 year economic equipment life and a 10% contingency. That analysis, which is attached hereto as Exhibit A, indicates a cost-effectiveness of $10,348/ton of NOx reduced for a next-generation 1500 burner and a cost-effectiveness of $17,841/ton of NOx reduced for a 1550 burner, still well in excess of the Illinois EPA's established range of $2,500 - $3,000 per ton of emission reduction, U.S. EPA's determination of less than $2,000 per ton and the Technical Support Document for this rulemaking's reference of $1,000 per ton.

The Illinois EPA also attempts to dismiss ArcelorMittal's argument regarding the appropriate NOx emission limit for other sources. In our First Notice Public Comment, we stated that the Beta Steel facility in Porter County, Indiana current emission limit for its reheat furnace was 0.077 lb/mmBTU based on a permit issued by the Indiana Department of Environmental Management on August 12, 2004 (whereas, the Illinois EPA had provided the Board with NOx emission limit of 0.0147 lb/mmBTU for this source).[1] The Illinois EPA stated in its First Notice Public Comment that the permitted limit for the Beta Steel facility is lower than the proposed emission limit they propose for reheat furnaces of 0.09 lb/mmBTU; however, the Illinois EPA misses the point that the permitted emission limit is more than 5 times greater than the emission limit they thought applicable for that facility. This certainly calls into question the arbitrary limit proposed by the Illinois EPA for reheat furnaces, which they have not demonstrated is based on Reasonably Available Control Technology (RACT).

[1] ArcelorMittal inadvertently cited to the Beta Steel emission limit as 0.77 lb/mmBTU in its First Notice Public Comment and apologizes for any confusion caused.

Rulemaking R08-19 is supposed to be based on RACT and the Illinois EPA is required to demonstrate to the Board that its proposal is both economically reasonable and technically feasible. The Illinois EPA has failed to do that for the category of reheat furnaces located at proposed section 35 Ill. Adm. Code 217.244(a)(2). ArcelorMittal again requests the Board make a decision based on RACT and retain the current, permitted emission limit of 0.171 lb/mmBTU for ArcelorMittal's tunnel furnace located at its facility in Riverdale, Illinois and conserve the time and resources of all parties involved by not requiring ArcelorMittal to initiate a proceeding for subsequent regulatory relief when the Board in its discretion is able to provide the relief requested in this rulemaking for all parties based on economic reasonableness and technical feasibility.

Respectfully submitted,
ARCELORMITTAL USA, INC.

By: Christina L Archer

Christina L. Archer

Dated: July 7, 2009

Christina L. Archer
Associate General Counsel
ARCELORMITTAL USA, INC.
1 South Dearborn, 19th Floor
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3/16/2009

ArcelorMittal Riverdale Tunnel Furnace NOx RACT Analysis
Estimated Cost Effectiveness for Burner Change (see note below)

CALCULATION FOR THE ANNUALIZED COST PER TON NO_x REMOVED BASED ON CHANGING BURNERS FROM SERIES 1430 TO 1500 (Scenario 1) or to 1550 (Scenario 2), see references and notes below.

Direct Capital Costs (DCC):	Scenario 1 1500 Burner	Scenario 2 1550 Burner	Reference
Purchased Equipment Costs:			
Equipment Costs (EC):	$1,230,000	$2,710,000	(1)
Sales Tax (0.03EC):	$36,900	$81,300	(2)
Total Purchased Equipment Costs (PEC):	$1,266,900	$2,791,300	
Installation Costs (IC), Including instrumentation, Freight, Engineering, Startup Consultancy	$300,000	$300,000	(3)
Total Purchased Equipment and Installation Cost (ICC=PEC + IC):	$1,566,900	$3,091,300	
Other Indirect Capital Costs (OCC)			
Lost Production:	$0	$0	(4)
Total Other Indirect Capital Costs (OCC):	$0	$0	
Contingency (CONT, 0.10 [ICC+OCC]):	$156,690	$309,130	(5) Assumed cont
Total Capital Cost (TCC=ICC+OCC+CONT):	$1,723,590	$3,400,430	
Annualized Capital Cost (ACC=TCCxCFR):	$189,241	$373,349	
Capital Recovery Factor (CRF):			see below
Direct Annual Costs (DAC):			
Operation (O)	$0	$0	
Maintenance (M)	$0	$0	
Replacement Materials	$0	$0	
Utilities	$0	$0	
Waste Disposal	$0	$0	
Chemicals	$0	$0	
Other	$0	$0	
Total Direct Annual Costs (DAC):	$0	$0	
Indirect Annual Costs (IAC):			
Overhead (0.60(O+M))	$0	$0	
Administrative (0.01TCC)	$17,236	$34,004	(6)
Property Tax (0.01TCC)	$17,236	$34,004	(6)
Insurance (0.02 TCC)	$34,472	$68,009	(6)
Total Indirect Annual Costs (IAC):	$68,944	$136,017	
Total Annual Cost (TAC=ACC+DAC+IAC):	$258,185	$509,366	

Capital Recovery Factor (CFR) = $\frac{I\,(1+I)^n}{(1+I)^n - 1}$

I = 7 % - interest rate (7)
n = 15 years - economic equipment life (8)

CFR = 0.110

Baseline			
Existing Burner (Bloom 1430) Emission Guarantee (lb NOx/MMBtu)	0.165	0.165	(9)
Natural Gas			
Tunnel Furnace Natural Gas Consumption with Series 1430 (Actual 2005 MMBtu)	514430	514430	2005 NG Usage
NOx Emissions			
NOx Emissions with Series 1430 (Actual tons NOx in 2005)	42.4	42.4	calculation

Burner Upgrade Scenarios			
Burner Series (Model)	Model 1500	Model 1550	
Burner Upgrade Emission Guarantee (lb NOx/MMBtu)	0.068	0.054	(9)
Natural Gas			
Tunnel Furnace Natural Gas Consumption (MMBtu/yr)	514430	514430	Furnace NG
NOx Emissions			
NOx Emissions = Emission Guarantee * NG usage/2000 (TPY)	17.5	13.9	calculation
Incremental Emissions Reduction (tons/yr): =(2005 NG usage * 0.165 lb NOx/MMBtu/2000) - (NG usage * emission factor for replacement burners/2000)	25	29	calculation
Cost-Effectiveness ($/ton):	**$10,348**	**$17,841**	

References:

Note: Vendors were unable to guarantee product quality aspects associated with a burner change, therefore a burner change is technically infeasible for Riverdale's Tunnel Furnace. Cost information is provided for informational purposes only.

(1) Bloom cost estimate (see email dated March 5, 2009 from Dave Church).
(2) "EPA Pollution Control Cost Manual, Sixth Edition," EPA/452/B-02-001, January, 2002, Table 2.4, Page 2-27.
(3) Conservative Cost Estimate
(4) Need to determine downtime for installation and include with cost (not included as a conservative measure)
(5) From EPA "Cost-Air" spreadsheets available on-line at http://www.epa.gov/ttn.
(6) "EPA Pollution Control Cost Manual, Sixth Edition," EPA/452/B-02-001, January, 2002, Section 2.5.5.8
(7) Riverdale cost of capital
(8) "Alternative Control Techniques Document - NOx Emissions from Iron and Steel Mills," EPA/453/R-94-065, September, 1994, Section 6.1.3 for costs of low-NOx burners applied to reheat furnaces.
(9) Bloom provided NOx emission guarantees for changing Series 1430 burners to Series 1500 and 1550.