

***** DRAFT – NOT FOR FILING *****

3745-110-03 **RACT requirements and/or limitations for emissions of NOx from stationary sources.**

[Comment: For dates of non-regulatory government publications, publications of recognized organizations and associations, federal rules, and federal statutory provisions referenced in this rule, see -paragraph (C) of rule 3745-110-01 of the Administrative Code titled "Reference to materials."]

(A) Small boilers.

The owner or operator of a small boiler must annually perform a tune-up and maintain, in a permanently bound log book, or other format approved in writing by the director the following information:

- (1) The date of the last tune-up;
- (2) The name, title and affiliation of the person who performed the tune-up and made any adjustments; and
- (3) Any other information which the Ohio environmental protection agency may require as a condition of approval of any permit for the boiler.

(B) Mid-size boilers.

Except as otherwise provided in paragraphs ~~(J)~~(J) and ~~(K)~~(K) of this rule, on and after the compliance deadline specified by rule 3745-110-04 of the Administrative Code, no owner or operator of a mid-size boiler shall allow or permit the discharge into the ambient air of any NOx emissions in excess of the following:

-Emissions limitations [pounds of NOx emissions per mmBtu]-

| Fuel Type | Tangential-fired | Wall-fired | Cyclone-fired | Spreader Stoker-fired | Overfeed Stoker-fired |
|-------------------|------------------|------------|---------------|-----------------------|-----------------------|
| Gas Only | 0.10 | 0.10 | N/A | N/A | N/A |
| Distillate Oil | 0.12 | 0.12 | 0.12 | N/A | N/A |
| Residual Oil | 0.23 | 0.23 | 0.23 | N/A | N/A |
| Coal (Wet Bottom) | 0.30 | 0.30 | 0.30 | N/A | N/A |
| Coal (Dry Bottom) | 0.30 | 0.30 | 0.30 | 0.30 | 0.30 |

(C) Large boilers.

***** DRAFT – NOT FOR FILING *****

Except as otherwise provided in paragraphs [\(J\)](#) and [\(K\)](#) of this rule, on and after the compliance deadline specified by rule 3745-110-04 of the Administrative Code, no owner or operator of a large boiler shall allow or permit the discharge into the ambient air of any NOx emissions in excess of the following:

-Emissions Limitations [pounds of NOx emissions per mmBtu]-

| Fuel Type | Tangential-fired | Wall-fired | Cyclone-fired | Spreader Stoker-fired | Overfeed Stoker-fired |
|-------------------|------------------|------------|---------------|-----------------------|-----------------------|
| Gas Only | 0.10 | 0.10 | N/A | N/A | N/A |
| Distillate Oil | 0.12 | 0.12 | 0.12 | N/A | N/A |
| Residual Oil | 0.23 | 0.23 | 0.23 | N/A | N/A |
| Coal (Wet Bottom) | 0.30 | 0.30 | 0.30 | N/A | N/A |
| Coal (Dry Bottom) | 0.30 | 0.30 | 0.30 | 0.30 | 0.30 |

(D) Very large boilers.

Except as otherwise provided in paragraphs [\(J\)](#) and [\(K\)](#) of this rule, on and after the compliance deadline specified by rule 3745-110-04 of the Administrative Code, no owner or operator of a very large boiler shall allow or permit the discharge into the ambient air of any NOx emissions in excess of the following:

-Emissions Limitations [pounds of NOx emissions per mmBtu]-

| Fuel Type | Tangential-fired | Wall-fired | Cyclone-fired | Spreader Stoker-fired | Overfeed Stoker-fired |
|-------------------|------------------|------------|---------------|-----------------------|-----------------------|
| Gas Only | 0.10 | 0.10 | N/A | N/A | N/A |
| Distillate Oil | 0.12 | 0.12 | 0.12 | N/A | N/A |
| Residual Oil | 0.23 | 0.23 | 0.23 | N/A | N/A |
| Coal (Wet Bottom) | 0.30 | 0.30 | 0.30 | N/A | N/A |
| Coal (Dry Bottom) | 0.30 | 0.30 | 0.30 | 0.30 | 0.30 |

(E) Stationary combustion turbine:

Except as otherwise provided in paragraphs [\(J\)](#) and [\(K\)](#) of this rule, on and after the compliance deadline specified by rule 3745-110-04 of the Administrative Code, no owner or operator of a stationary combustion turbine shall allow or permit the discharge into the ambient air of any NOx emissions in excess of the following:

(1) Simple cycle turbines.

*** DRAFT – NOT FOR FILING ***

- (a) Less than 3.5 megawatts.
 - (i) 150.0 ppmvd, corrected to fifteen per cent oxygen, for combustion turbines firing only natural gas fuel, for both mechanical drive and electrical generation.
 - (ii) 200.0 ppmvd corrected to fifteen per cent oxygen, for combustion turbines firing distillate oil or diesel fuel, for both mechanical drive and electrical generation.
 - (b) 3.5 megawatts up to, and including 25.0 megawatts.
 - (i) 42.0 ppmvd, corrected to fifteen per cent oxygen, for combustion turbines firing only natural gas fuel, for both mechanical drive and electrical generation.
 - (ii) 96.0 ppmvd, corrected to fifteen per cent oxygen, for combustion turbines firing distillate oil or diesel fuel, for both mechanical drive and electrical generation.
 - (c) Greater than 25.0 megawatts and less than 50.0 megawatts.
 - (i) 42.0 ppmvd, corrected to fifteen per cent oxygen, for combustion turbines firing only natural gas fuel.
 - (ii) 96.0 ppmvd, corrected to fifteen per cent oxygen, for combustion turbines firing distillate oil or diesel fuel.
 - (d) Equal to or greater than 50.0 megawatts.
 - (i) 42.0 ppmvd, corrected to fifteen per cent oxygen, for combustion turbines firing only natural gas fuel.
 - (ii) 96.0 ppmvd, corrected to fifteen per cent oxygen, for combustion turbines firing distillate oil or diesel fuel.
- (2) Combined cycle turbines.
- (a) Less than 3.5 megawatts.
 - (i) 150.0 ppmvd, corrected to fifteen per cent oxygen, for combustion turbines firing only natural gas fuel, for both mechanical drive and electrical generation.

***** DRAFT – NOT FOR FILING *****

(ii) 200.0 ppmvd corrected to fifteen per cent oxygen, for combustion turbines firing distillate oil or diesel fuel, for both mechanical drive and electrical generation.

(b) 3.5 megawatts up to, and including 25.0 megawatts.

(i) 42.0 ppmvd, corrected to fifteen per cent oxygen, for combustion turbines firing only natural gas fuel, for both mechanical drive and electrical generation.

(ii) 96.0 ppmvd, corrected to fifteen per cent oxygen, for combustion turbines firing distillate oil or diesel fuel, for both mechanical drive and electrical generation.

(c) Greater than 25.0 megawatts and less than 50.0 megawatts.

(i) 42.0 ppmvd, corrected to fifteen per cent oxygen, for combustion turbines firing only natural gas fuel.

(ii) 96.0 ppmvd, corrected to fifteen per cent oxygen, for combustion turbines firing distillate oil or diesel fuel.

(d) Equal to or greater than 50.0 megawatts.

(i) 42.0 ppmvd, corrected to fifteen per cent oxygen, for combustion turbines firing only natural gas fuel.

(ii) 96.0 ppmvd, corrected to fifteen per cent oxygen, for combustion turbines firing distillate oil or diesel fuel.

(F) Stationary internal combustion engine.

Except as otherwise provided in paragraphs ~~(H)~~(J) and ~~(I)~~(K) of this rule, on and after the compliance deadline specified by rule 3745-110-04 of the Administrative Code, no owner or operator of a stationary internal combustion engine shall allow or permit the discharge into the ambient air of any NO_x emissions in excess of the following:

(1) For rich burn engines which burn only gaseous fuels, 3.0 grams per horsepower-hour for engines which are greater than two thousand horsepower.

(2) For lean burn engines which burn only gaseous fuels, 3.0 grams per horsepower-hour for engines which are greater than two thousand horsepower.

(3) For engines which burn only diesel fuel or distillate oil, 3.0 grams per horsepower-hour for engines which are greater than two thousand horsepower.

*** DRAFT – NOT FOR FILING ***

- (4) For engines which burn dual fuels, 3.0 grams per horsepower-hour for engines which are greater than two thousand horsepower.

(G) Reheat Furnaces.

Except as otherwise provided in paragraphs (J) and (K) of this rule, on and after the compliance deadline specified by rule 3745-110-04 of the Administrative Code, no owner or operator of a reheat furnace with a maximum heat input capacity of greater than 50.0 mmBtu/hr shall allow or permit the discharge into the ambient air of any NOx emissions in excess of 0.09 lb/mmBtu.

~~(G)~~(H) The emissions limits specified in paragraphs (A) to ~~(F)~~(G) of this rule or pursuant to paragraph (I) of this rule shall be based on the following:

- (1) The average of three one-hour stack test runs if stack testing is used to demonstrate compliance; or
- (2) A twenty-four-hour daily heat input-weighted average if a continuous emissions monitor is used to demonstrate compliance. A thirty-day rolling heat input-weighted average emission rate may be used to demonstrate compliance with the appropriate emission limit from October first to April thirtieth.

~~(a) Determine the twenty four hour daily heat input weighted average NOx emission rate based on the heat input weighted average of the block hourly arithmetic average emission rates during each twenty four hour daily period from twelve a.m. to twelve a.m. the following day using continuous emissions monitor data. The block hourly heat input weighted average emission rate must be calculated for each one hour period starting with the period twelve a.m. to one a.m. and continuing through until the last period eleven p.m. to twelve a.m.; or, starting with the period twelve p.m. to one p.m. and continuing through the last period eleven a.m. to twelve p.m. The thirty day rolling heat input weighted average must be the average of the twenty four hour daily heat input weighted NOx emission rate.~~

Determine the twenty-four-hour daily heat input-weighted average NOx emission rate based on the heat input-weighted average of the block hourly arithmetic average emission rates during each twenty-four-hour daily period from twelve a.m. to twelve a.m. the following day using continuous emissions monitor data. The block hourly heat input-weighted average emission rate must be calculated for each one-hour period starting with the period twelve a.m. to one a.m. and continuing through until the last period eleven p.m. to twelve a.m.; or, starting with the period twelve p.m. to one p.m. and continuing through the last period eleven a.m. to twelve p.m. The thirty-day rolling heat input-weighted average must be the average of the twenty-four-hour daily heat input-weighted NOx emission rate.

*** DRAFT – NOT FOR FILING ***

~~(H)~~(I) Emission averaging programs.

- (1) An owner or operator of a source which is subject to this chapter may propose an emission averaging program in lieu of the applicable emission limit(s) specified in paragraphs (A) to ~~(H)~~(G) of this rule or established in accordance with paragraph ~~(H)~~(J) of this rule. Both affected sources under rule 3745-110-02 of the Administrative Code and non-affected sources are allowed to be utilized in the averaging program, to the extent that reductions are real, quantifiable and enforceable and are in excess of any state or federal requirements. Any proposed emission averaging program shall comply with all of the following requirements:
 - (a) Specify the RACT emission limit for each affected source in rule 3745-110-02 of the Administrative Code involved in the emission averaging program;
 - (b) Specify a clearly enforceable proposed emission limit for each source or group of sources involved in the emission averaging program;
 - (c) Result in actual reductions in NO_x emissions that are equal to or greater than the actual emission reductions that would be required by this rule if an emission averaging program were not employed; and
 - (d) Achieve compliance with the proposed emission limits in accordance with the compliance deadlines in rule 3745-110-04 of the Administrative Code.
 - (e) Reductions allowed under the emission averaging program are those reductions that are real, quantifiable and enforceable and are in excess of any state or federal requirements. For purposes of determining the reductions, the actual emissions in tons per year, from all sources included in the averaging program, are subtracted from the lesser of either the actual annual average emissions prior to when the actual reduction occurs or the allowable emissions. A shutdown is creditable only to the extent that the owner or operator can demonstrate to the satisfaction of the director that the shutdown does not correspond to load-shifting or other activity which results in or could result in an equivalent or greater emission increase and that the reduction accounts for any increase in NO_x emissions from other sources as a result of the shutdown.
 - (f) Owners or operators must submit a report to the director by March thirty-first of each year demonstrating that the equivalent reduction requirement in paragraph ~~(H)~~(I)(1)(c) of rule 3745-110-03 of the Administrative Code has been achieved for the previous calendar year.
- (2) Any emission averaging program approved by the director shall be submitted to and approved by the United States environmental protection agency as a revision of the Ohio state implementation plan. An emission averaging program

*** DRAFT – NOT FOR FILING ***

shall not be federally enforceable until the United States environmental protection agency approves the program as part of the Ohio state implementation plan.

~~(H)~~(J) RACT studies for stationary sources.

- (1) For any affected source of NO_x emissions at an affected facility that is not subject to the emissions limits specified in paragraphs (A) to ~~(F)~~(G) of this rule, or that is subject to the emissions limits specified in paragraphs (A) to ~~(F)~~(G) of this rule but the owner or operator claims that the applicable limit is technically infeasible and/or economically unreasonable (i.e. not cost-effective) to achieve, the owner or operator shall conduct a detailed engineering study to determine the technical and economic feasibility of reducing the NO_x emissions and to define RACT for the source. The detailed engineering study shall be conducted by an engineering consulting firm or other person or persons experienced in the field of air pollution control, and it shall provide the following information:
 - (a) The complete facility name and address.
 - (b) The name, title, address and telephone number of the owner or operator's representative within the company who shall be the contact person for this facility regarding the engineering study and affected sources.
 - (c) The name, title, address and telephone number of the official who is responsible for approval of the engineering study.
 - (d) The standard industrial classification code number(s) which are applicable to the facility's operation.
 - (e) The following general information for each affected source:
 - (i) Ohio environmental protection agency application number(s);
 - (ii) Company identification;
 - (iii) Source description;
 - (iv) Month and year installed;
 - (v) Normal operating schedule (hours per day, days per week, and weeks per year);
 - (vi) Annual production rates for each of the three full calendar years preceding the effective date of this rule;

***** DRAFT – NOT FOR FILING *****

- (vii) Average and maximum daily production rates for each of the three full calendar years preceding the effective date of this rule; and
 - (viii) The type of control equipment employed and the date installed.
- (f) A plot plan which shows the general layout of the facility and the affected source(s).

(g) The following emissions data for each affected source:

- (i) Average daily NO_x emissions (pounds per day of operation) based upon the highest average daily production rate for each of the three full calendar years preceding the effective date of this rule or any other year that may be representative of the highest average daily emissions;

[Comment: The average daily production rate for a calendar year may be calculated in the following manner:

$$\text{AverageDailyProduction Rate} = \frac{\text{[total production during the calendar year]}}{\text{[number of days production occurred during the calendar year]}}$$

Repeat the calculation for each of the three calendar years preceding the effective date of this rule. the highest value of these three years is the representative value used to calculate the average daily NO_x emissions per year.]

- (ii) Maximum daily NO_x emissions (pounds per day of operation) based upon the highest maximum daily production rate for each of the three full calendar years preceding the effective date of this rule or any year that may be more representative of the highest maximum daily emissions;
 - (iii) Annual NO_x emissions (tons per year) based upon the highest annual production rate for each of the three full calendar years preceding the effective date of this rule or any year period that may be more representative of the annual production rate;
 - (iv) Documentation of the efficiency of the existing control equipment; and
 - (v) Documentation of any emissions testing which has been performed.
- (h) A detailed discussion of the technical feasibility of employing each of the following types of control measures for each affected source (or combination of sources):

*** DRAFT – NOT FOR FILING ***

- (i) Low-NOx burners;
- (ii) Close coupled or separated over-fire ports;
- (iii) Flue gas recirculation;
- (iv) Low NOx burners with external flue gas recirculation;
- ~~(iv)~~(v) Burners out of service;
- ~~(v)~~(vi) Steam/water injection;
- ~~(vi)~~(vii) Dry low-NOx burners;
- ~~(vii)~~(viii) Ignition timing retard;
- ~~(viii)~~(ix) Separate circuit after-cooling;
- ~~(ix)~~(x) Fuel emulsification;
- ~~(x)~~(xi) Selective noncatalytic reduction;
- ~~(xi)~~(xii) Nonselective catalytic reduction;
- ~~(xii)~~(xiii) Selective catalytic reduction using urea ammonia and methane as reducing agents;
- ~~(xiii)~~(xiv) Incineration (for sources other than boilers);
- ~~(xiv)~~(xv) Scrubbing (for sources other than boilers);
- ~~(xv)~~(xvi) Process modification;
- ~~(xvi)~~(xvii) Fuel switching;
- ~~(xvii)~~(xviii) Adjustment of air/fuel ratio (for internal combustion engines only);
- ~~(xviii)~~(xix) Low excess air;
- (xx) Mid-kiln firing;
- (xxi) Mid-kiln air injection;
- ~~(xix)~~(xxii) Gaseous fuels reburn; and

*** DRAFT – NOT FOR FILING ***

~~(xx)~~(xxiii) Any other such RACT alternatives not listed in paragraph (J)(1)(h) of this rule that may be applicable to an affected source, or as are proposed by the owner or operator.

A detailed engineering discussion is not required for those control measures which are not applicable to a particular source.

- (i) For each type of control measure that is determined to be technically feasible, an estimate of the control efficiency that can be achieved.
 - (j) For each control measure that is determined to be technically feasible, an estimate of the capital cost, annualized cost (including capital and operating costs), and the cost-effectiveness (annual dollars per ton of NO_x removed annually).
 - (k) A comparison and discussion of the advantages and disadvantages of the control options that are determined to be technically feasible.
 - (l) A recommended definition of RACT for the source, including enforceable production limits, emissions limits, control efficiencies, and/or operating requirements.
 - (m) An expeditious schedule for implementing the recommended definition of RACT, including milestones for awarding contracts, initiating construction, completing construction, and performing emissions testing, if necessary, to demonstrate compliance with the approved definition of RACT.
 - (n) In the engineering study, all calculations of the NO_x emissions, including all assumptions made, shall be documented clearly and in detail. In addition, the capital and operating costs and the cost-effectiveness estimates shall be calculated in a manner that is consistent with the Ohio environmental protection agency, division of air pollution control document entitled "Guidance for Estimating Capital and Annual Costs of Air Pollution Systems," or the most recent edition of the "United States environmental protection agency air pollution control cost manual."
- (2) Any definition of RACT and schedule of compliance for an affected source that are approved by the director shall be submitted to and approved by the United States environmental protection agency as a revision of the Ohio state implementation plan.
- (3) For any source that is subject to an emissions limit(s) contained in paragraphs (A) to ~~(F)~~(G) of this rule, if the director approves a definition of RACT and a schedule of compliance for the source pursuant to paragraph ~~(F)~~(J) of this rule, the source shall no longer be subject to the emissions limit(s) contained in paragraphs (A) to ~~(F)~~(G) of this rule.

*** DRAFT – NOT FOR FILING ***

For any source that is subject to an emission limit(s) contained in paragraph (A) to (G) of this rule, if the director disapproves a definition of RACT and a schedule of compliance for the source pursuant to paragraph (I) of this rule, or if the RACT study determines the applicable NOx emission limit(s) contained in paragraphs (A) to (G) of this rule is technically feasible and economically reasonable (i.e., cost-effective) to achieve, the source remains subject to the emission limit(s) contained in paragraphs (A) to (G) of this rule and the applicable compliance deadline specified in paragraph (B) of rule 3745-110-04 of the Administrative Code.

- (4) If, within the five years prior to December 22, 2007, the Ohio environmental protection agency has defined best available technology, pursuant to section 3704.01 of the Revised Code, for NOx emissions from a source which is subject to paragraph ~~(H)~~(J) of this rule, and the owner or operator is employing or has committed to employ the best available technology, the owner or operator may provide the following information to the director in satisfaction of the requirements of paragraph ~~(H)~~(J)(1) of this rule:
- (a) All information required by paragraphs ~~(H)~~(J)(1)(a), ~~(H)~~(J)(1)(b), ~~(H)~~(J)(1)(d), - ~~(H)~~(J)(1)(e) and ~~(H)~~(J)(1)(g) of this rule.
 - (b) Copies of the documents and technical information that support the existing best available technology determination.
 - (c) The name, title, address and telephone number of the official who is responsible for the information submitted in accordance with paragraph ~~(H)~~(J)(4) of this rule.

If upon review of this information, the director determines that the information does not or may not indicate that the definition of best available technology satisfies the requirements of this chapter, the director shall so notify the owner or operator, and the owner or operator shall conduct a full RACT engineering study in accordance with paragraph ~~(H)~~(J)(1) of this rule.

~~(H)~~(K) The requirements of paragraphs (A) to ~~(F)~~(G) of this rule shall not apply to the following sources:

- (1) Any industrial boiler having a maximum heat input of less than or equal to twenty mmBtu/hr.
- (2) Any emergency standby boiler, stationary internal combustion engine, or stationary combustion turbine which operates less than five hundred hours during any consecutive twelve-month period. However, the owner or operator of the emergency standby engine, boiler, or turbine shall maintain for a period of not less than three years, in a bound log book, or other format acceptable to the

***** DRAFT – NOT FOR FILING *****

director, a list of the dates and number of hours the emergency standby engine operated.

- (3) Any stationary internal combustion engine having an energy output capacity of less than two thousand horsepower.
- (4) Any stationary combustion turbine having an energy input capacity of less than twenty mmBtu/hr.
- (5) Any start-up unit located at an electric generating facility.
- (6) Any black start unit located at an electric generating facility.
- (7) Any peaking unit.
- (8) Any space heating unit.
- (9) Any auxiliary boiler.
- (10) Any CO boiler.
- (11) Any research and development source.
- (12) Any jet engine test cell.
- [\(13\) Any engine testing operation.](#)
- ~~(13)~~[\(14\) Any air pollution control device.](#)
- ~~(14)~~[\(15\) Any municipal waste combustor.](#)
- ~~(15)~~[\(16\) Any source other than a boiler, gas turbine or internal combustion engine that has the potential to emit less than twenty-five tons per year of NOx.](#)
- ~~(16)~~[\(17\) Any affected source issued a valid air operating permit by Ohio environmental protection agency that restricts such affected source to twenty-five tons per year or less of NOx emissions.](#)
- ~~(17)~~[\(18\) Any boiler, stationary internal combustion engine, or stationary combustion turbine subject to the United States environmental protection agency clean air interstate rule contained in 70 FR 25162.](#)
- ~~(18)~~[\(19\) Any boiler subject to paragraph \(C\)\(1\) of rule 3745-14-01 of the Administrative Code \(NOx SIP call\).](#)

*** DRAFT – NOT FOR FILING ***

~~(19)~~(20) Any affected source that is has been issued a permit-to-install that is subject to best available control technology or lowest achievable emission rate standards.

~~(20)~~(21) Any affected source whose utilization in less than ten per cent of its capacity factor on an annual average basis over a three-year rolling period and less than twenty per cent of its capacity factor in any year of the three-year rolling period.

~~(K)~~(L) On and after ~~the effective date of this rule~~ May 12, 2011, "Northeast Ohio Regional Sewer District - Southerly Wastewater Treatment Center" or any subsequent owner or operator of the "Northeast Ohio Regional Sewer District - Southerly Wastewater Treatment Center" facility located at 6000 Canal road, Cuyahoga Heights, Ohio shall comply with the following NOx emission limitations:

- (1) Boiler B002, rated at sixty-nine mmBtu/hr, shall not exceed a NOx emission rate of 0.15 lb/mmBtu; and
- (2) Boiler B003, rated at 92.99 mmBtu/hr, shall not exceed a NOx emission rate of 0.15 lb/mmBtu.

~~(L)~~(M) On and after ~~the effective date of this rule~~ May 12, 2011, "ArcelorMittal Cleveland Inc." (13-18-00-1613) or any subsequent owner or operator of the "ArcelorMittal Cleveland Inc." facility located at 3060 Eggers avenue, Cleveland, Ohio shall comply with the following NOx emission limitations:

--

| Emissions Unit | Description | NOx Emission Limitation |
|----------------|--|-------------------------|
| P049 | Anneal - North | 0.10 lb/mmBtu |
| P050 | Anneal - South | 0.10 lb/mmBtu |
| P071 | Continuous Galvanizing Line | 0.23 lb/mmBtu |
| P903 | C5 Blast Furnace: Stoves | 0.06 lb/mmBtu |
| P904 | C6 Blast Furnace: Stoves | 0.06 lb/mmBtu |
| P905 and P906 | No. 1 BOF: Ladle Preheaters | 0.10 lb/mmBtu |
| P925 and P926 | No. 2 BOF: Ladle Preheaters | 0.10 lb/mmBtu |
| P046 | Slab-Pusher Reheat Furnace No. 1 rated at 602.6 mmBtu/hr | 0.35 lb/mmBtu |
| P047 | Slab-Pusher Reheat Furnace No. 2 rated at 602.6 mmBtu/hr | 0.35 lb/mmBtu |
| P048 | Slab-Pusher Reheat Furnace No. 3 rated at | 0.35 lb/mmBtu |

*** DRAFT – NOT FOR FILING ***

602.6 mmBtu/hr

~~(M)~~(N) On and after ~~the effective date of this rule~~ May 12, 2011, "Republic Engineered Products" or any subsequent owner or operator of the "Republic Engineered Products" facility located at 1807 East 28th street, Lorain, Ohio shall comply with the following NOx emission limitations:

- (1) Walking beam furnace P071, rated at two hundred six mmBtu/hr, shall not exceed a NOx emission rate of 0.15 lb/mmBtu; and
- (2) Bloom reheat furnace P081, rated at 421.6 mmBtu/hr, shall not exceed a NOx emission rate of 0.132 lb/mmBtu.

~~(N)~~(O) On and after ~~the effective date of this rule~~ May 12, 2011, "United States Steel Lorain Tubular Operations" or any subsequent owner or operator of the "United States Steel Lorain Tubular Operations" facility located at 2199 East 28th street, Lorain, Ohio shall comply with the following NOx emission limitations:

- (1) Number 3 seamless mill Q and T tempering furnace P003, rated at one hundred twelve mmBtu/hr, shall not exceed 0.068 lb/mmBtu;
- (2) Number 3 seamless mill number 2 reheat furnace P037, rated at 58.8 mmBtu/hr, shall not exceed 0.15 lb/mmBtu; and
- (3) Number 4 seamless mill reheat furnace P040, rated at 50.9 mmBtu/hr, shall not exceed 0.15 lb/mmBtu.

(P) On and after the effective date of this rule, "United States Steel Lorain Tubular Operations" or any subsequent owner or operator of the "United States Steel Lorain Tubular Operations" facility located at 2199 East 28th Street, Lorain, Ohio shall comply with the following NOx emission limitations:

- (1) Number 3 seamless mill rotary reheat furnace P035, rated at 296.0 mmBtu/hr, shall not exceed 0.09 lb/mmBtu; and
- (2) Number 4 seamless mill rotary reheat furnace P039, rated at 195.4 mmBtu/hr, shall not exceed 0.055 lb/mmBtu.

(Q) On and after the effective date of this rule, "Charter Steel" or any subsequent owner or operator of the "Charter Steel" facility located at 4300 East 49th Street, Cuyahoga Heights, Ohio shall comply with the following NOx emission limitation:

NOx emissions from the bar mill reheat furnace PO29, rated at 165.0 mmBtu/hr, shall not exceed 0.11 lb/mmBtu.

***** DRAFT – NOT FOR FILING *****

(R) On and after the effective date of this rule, "BASF Catalysts, LLC" or any subsequent owner or operator of the "BASF Catalysts, LLC" facility located at 120 Pine Street, Elyria, Ohio shall comply with the following NOx emission limitations:

(1) NOx emissions from calciners P009, P010, P080, P102, or P103 shall not exceed 1.86 lbs/hr (200.0 ppmvd) when operating the selective catalytic reduction (SCR) system; and

(2) NOx emissions from calciners P009, P010, P080, P102, or P103 shall not exceed 3.4 lbs/hr (250.0 ppmvd) when operating the caustic/chemical Tri-Mer scrubber.

(S) On and after the effective date of this rule, "Carmeuse Lime, Inc., Grand River Operation" or any subsequent owner or operator of the "Carmeuse Lime, Inc., Grand River Operation" facility located at 15 Williams Street, P.O. Box 298, Grand River, Ohio shall comply with the following NOx emission limitation:

NOx emissions from rotary lime kilns P001 and P002 (kilns #4 and #5), with a maximum process weight rate of 54.5 tons/hr of limestone per kiln, shall not exceed a NOx emission rate of 6.0 lbs/ton of lime produced.

(T) On and after the effective date of this rule, "Ross Incineration Services, Inc.," or any subsequent owner or operator of the "Ross Incineration Services, Inc.," facility located at 36790 Giles Road, Grafton, Ohio shall comply with the following NOx emission limitation:

NOx emissions from the hazardous waste incinerator, with a rated maximum capacity of 26,057.0 lbs/hr of waste materials, shall not exceed 158.1 lbs/hour, based on a rolling twenty-four hour average.