



ARIZONA DEPARTMENT OF ENVIRONMENTAL QUALITY

AIR QUALITY CLASS II PERMIT

COMPANY: *Nucor Steel Kingman, LLC.*
FACILITY: *Nucor Steel Kingman*
PERMIT #: *44141*
DATE ISSUED: *Draft*
EXPIRY DATE:

SUMMARY

This Class II, synthetic minor source permit is issued to Nucor Steel Kingman, LLC, for the operation of its steel reshaping facility outside of Kingman, Arizona.

Nucor Steel Kingman, LLC plans to operate a facility to re-shape steel. The facility will take steel bars (billets) from steel mills at other locations and shape them in a rolling mill which is part of a hot rolling process. Heating of steel to sufficient temperatures for hot rolling will be accomplished in an 85 million British thermal unit per hour (MMBTU/hr) natural gas-fired reheat furnace. The steel is then drawn down to the desired shape and size of the product that it will become. This is accomplished with a number of processing stations. The exact number and configuration of each will be determined by the product being produced.

Operations by Nucor Kingman, LLC will utilize a small portion of emission producing equipment remaining on site as purchased from the previous owners and operators. The equipment to be operated by Nucor does not include any equipment that was formerly used to melt scrap steel to a liquid form. Rather, the scrap steel melting operation will be conducted by steel making facilities at other locations, which will provide billets to the Kingman facility. Kingman will re-shape these billets through a hot rolling process into many final product shapes. Equipment that was associated with melting scrap steel and manufacturing billets may remain on-site as idle, but the operation of this equipment is not being included in permitted operations.

This permit is issued in accordance with Arizona Revised Statutes (ARS) 49-426. It contains requirements from the Arizona Administrative Code, Title 18, Chapter 2.

TABLE OF CONTENTS

ATTACHMENT “A”: GENERAL PROVISIONS3

I. PERMIT EXPIRATION AND RENEWAL.....3

II. COMPLIANCE WITH PERMIT CONDITIONS3

III. PERMIT REVISION, REOPENING, REVOCATION AND REISSUANCE, OR
TERMINATION FOR CAUSE.....3

IV. POSTING OF PERMIT4

V. FEE PAYMENT4

VI. ANNUAL EMISSION INVENTORY QUESTIONNAIRE4

VII. COMPLIANCE CERTIFICATION4

VIII. CERTIFICATION OF TRUTH, ACCURACY AND COMPLETENESS5

IX. INSPECTION AND ENTRY5

X. PERMIT REVISION PURSUANT TO FEDERAL HAZARDOUS AIR POLLUTANT
STANDARD.....6

XI. ACCIDENTAL RELEASE PROGRAM.....6

XII. EXCESS EMISSIONS, PERMIT DEVIATIONS, AND EMERGENCY REPORTING.....6

XIII. RECORD KEEPING REQUIREMENTS11

XIV. REPORTING REQUIREMENTS12

XV. DUTY TO PROVIDE INFORMATION.....12

XVI. PERMIT AMENDMENT OR REVISION.....12

XVII. FACILITY CHANGE WITHOUT A PERMIT REVISION.....13

XVIII. TESTING REQUIREMENTS15

XIX. PROPERTY RIGHTS.....17

XX. SEVERABILITY CLAUSE17

XXI. PERMIT SHIELD.....17

ATTACHMENT “B”: SPECIFIC CONDITIONS19

I. RELATIONSHIP OF PERMIT TO APPLICABLE STATE IMPLEMENTATION PLAN.....19

I. FACILITY WIDE REQUIREMENTS19

III. REHEAT FURNACE20

IV. HOT WATER & FIXED SPACE HEATERS24

V. COOLING TOWERS26

VI. INTERNAL COMBUSTION ENGINES - NON NSPS REQUIREMENTS.....29

VII. HOT ROLLING, SOLVENT CLEANING ACTIVITIES & WASTEWATER TREATMENT
PLANT.....32

VIII. FUGITIVE DUST REQUIREMENTS35

IX. MOBILE SOURCE REQUIREMENTS.....38

X. OTHER PERIODIC ACTIVITY REQUIREMENTS39

ATTACHMENT “C”: EQUIPMENT LIST43

ATTACHMENT "A": GENERAL PROVISIONS

Air Quality Control Permit No. 44141 for *Nucor Steel Kingman, LLC.*

I. PERMIT EXPIRATION AND RENEWAL

[ARS § 49-426.F, A.A.C. R18-2-304.C.2, and -306.A.1]

- A. This permit is valid for a period of five years from the date of issuance.
- B. The Permittee shall submit an application for renewal of this permit at least 6 months, but not more than 18 months, prior to the date of permit expiration.

II. COMPLIANCE WITH PERMIT CONDITIONS

[A.A.C. R18-2-306.A.8.a and b]

- A. The Permittee shall comply with all conditions of this permit including all applicable requirements of the Arizona air quality statutes and air quality rules. Any permit noncompliance constitutes a violation of the Arizona Revised Statutes and is grounds for enforcement action; for permit termination, revocation and reissuance, or revision; or for denial of a permit renewal application. In addition, noncompliance with any federally enforceable requirement constitutes a violation of the Clean Air Act.
- B. It shall not be a defense for a Permittee in an enforcement action that it would have been necessary to halt or reduce the permitted activity in order to maintain compliance with the conditions of this permit.

III. PERMIT REVISION, REOPENING, REVOCATION AND REISSUANCE, OR TERMINATION FOR CAUSE

[A.A.C. R18-2-306.A.8.c, -321.A.1.c-d, and -321.A.2]

- A. The permit may be revised, reopened, revoked and reissued, or terminated for cause. The filing of a request by the Permittee for a permit revision, revocation and reissuance, termination, or of a notification of planned changes or anticipated noncompliance does not stay any permit condition.
- B. The permit shall be reopened and revised under any of the following circumstances
 1. The Director or the Administrator determines that the permit contains a material mistake or that inaccurate statements were made in establishing the emissions standards or other terms or conditions of the permit.
 2. The Director or the Administrator determines that the permit needs to be revised or revoked to assure compliance with the applicable requirements.

- C. Proceedings to reopen and reissue a permit, including appeal of any final action relating to a permit reopening, shall follow the same procedures as apply to initial permit issuance and shall affect only those parts of the permit for which cause to reopen exists. Such reopenings shall be made as expeditiously as practicable. Permit reopenings shall not result in a resetting of the five-year permit term.

IV. POSTING OF PERMIT

[A.A.C. R18-2-315]

- A. The Permittee shall post this permit or a certificate of permit issuance where the facility is located in such a manner as to be clearly visible and accessible. All equipment covered by this permit shall be clearly marked with one of the following:
 - 1. Current permit number; or
 - 2. Serial number or other equipment ID number that is also listed in the permit to identify that piece of equipment.
- B. A copy of the complete permit shall be kept on site.

V. FEE PAYMENT

[A.A.C. R18-2-306.A.9 and -326]

The Permittee shall pay fees to the Director pursuant to ARS § 49-426(E) and A.A.C. R18-2-326.

VI. ANNUAL EMISSION INVENTORY QUESTIONNAIRE

[A.A.C. R18-2-327.A and B]

- A. The Permittee shall complete and submit to the Director an annual emissions inventory questionnaire. The questionnaire is due by March 31st or ninety days after the Director makes the inventory form available each year, whichever occurs later, and shall include emission information for the previous calendar year.
- B. The questionnaire shall be on a form provided by the Director and shall include the information required by A.A.C. R18-2-327.

VII. COMPLIANCE CERTIFICATION

[A.A.C. R18-2-309.2.a, -309.2.c-d, and -309.5.d]

- A. The Permittee shall submit a compliance certification to the Director semiannually which describes the compliance status of the source with respect to each permit condition. The first certification shall be submitted no later than May 15th, and shall report the compliance status of the source during the period between October 1st of the previous year and March 31st of the current year. The second certification shall be submitted no later than November 15th, and shall report the compliance status of the source during the period between April 1st and September 30th of the current year.

The compliance certifications shall include the following:

1. Identification of each term or condition of the permit that is the basis of the certification;
 2. The identification of the methods or other means used by the owner or operator for determining the compliance status with each term and condition during the certification period;
 3. The status of compliance with the terms and conditions of the permit for the period covered by the certification, including whether compliance during the period was continuous or intermittent. The certification shall be based on the methods or means designated in Condition VII.A.2 above. The certifications shall identify each deviation and take it into account for consideration in the compliance certification;
 4. All instances of deviations from permit requirements reported pursuant to Condition XII.B of this Attachment; and
 5. Other facts the Director may require determining the compliance status of the source.
- B.** A progress report on all outstanding compliance schedules shall be submitted every six months beginning with six months after permit issuance.

VIII. CERTIFICATION OF TRUTH, ACCURACY AND COMPLETENESS

[A.A.C. R18-2-304.H]

Any document required to be submitted by this permit, including reports, shall contain a certification by a responsible official of truth, accuracy, and completeness. This certification shall state that, based on information and belief formed after reasonable inquiry, the statements and information in the document are true, accurate, and complete.

IX. INSPECTION AND ENTRY

[A.A.C. R18-2-309.4]

Upon presentation of proper credentials, the Permittee shall allow the Director or the authorized representative of the Director to:

- A.** Enter upon the Permittee's premises where a source is located, emissions-related activity is conducted, or where records are required to be kept under the conditions of the permit;
- B.** Have access to and copy, at reasonable times, any records that are required to be kept under the conditions of the permit;
- C.** Inspect, at reasonable times, any facilities, equipment (including monitoring and air pollution control equipment), practices, or operations regulated or required under the permit;
- D.** Sample or monitor, at reasonable times, substances or parameters for the purpose of assuring compliance with the permit or other applicable requirements; and

E. Record any inspection by use of written, electronic, magnetic and photographic media.

X. PERMIT REVISION PURSUANT TO FEDERAL HAZARDOUS AIR POLLUTANT STANDARD

[A.A.C. R18-2-304.C]

If this source becomes subject to a standard promulgated by the Administrator pursuant to Section 112(d) of the Act, then the Permittee shall, within twelve months of the date on which the standard is promulgated, submit an application for a permit revision demonstrating how the source will comply with the standard.

XI. ACCIDENTAL RELEASE PROGRAM

[40 CFR Part 68]

If this source becomes subject to the provisions of 40 CFR Part 68, then the Permittee shall comply with these provisions according to the time line specified in 40 CFR Part 68.

XII. EXCESS EMISSIONS, PERMIT DEVIATIONS, AND EMERGENCY REPORTING

A. Excess Emissions Reporting

[A.A.C. R18-2-310.01.A and -310.01.B]

1. Excess emissions shall be reported as follows:

a. The Permittee shall report to the Director any emissions in excess of the limits established by this permit. Such report shall be in two parts as specified below:

i. Notification by telephone or facsimile within 24 hours of the time when the Permittee first learned of the occurrence of excess emissions including all available information from Condition XII.A.1.b below.

ii. Detailed written notification by submission of an excess emissions report within 72 hours of the notification pursuant to Condition XII.A.1.a.i. above.

b. The report shall contain the following information:

i. Identity of each stack or other emission point where the excess emissions occurred;

ii. Magnitude of the excess emissions expressed in the units of the applicable emission limitation and the operating data and calculations used in determining the magnitude of the excess emissions;

iii. Date, time and duration, or expected duration, of the excess emissions;

- iv. Identity of the equipment from which the excess emissions emanated;
 - v. Nature and cause of such emissions;
 - vi. If the excess emissions were the result of a malfunction, steps taken to remedy the malfunction and the steps taken or planned to prevent the recurrence of such malfunctions; and
 - vii. Steps taken to limit the excess emissions. If the excess emissions resulted from start-up or malfunction, the report shall contain a list of the steps taken to comply with the permit procedures.
2. In the case of continuous or recurring excess emissions, the notification requirements of this section shall be satisfied if the source provides the required notification after excess emissions are first detected and includes in such notification an estimate of the time the excess emissions will continue. Excess emissions occurring after the estimated time period, or changes in the nature of the emissions as originally reported, shall require additional notification pursuant to Condition XII.A.1 above.

[A.A.C. R18-2-310.01.C]

B. Permit Deviations Reporting

[A.A.C. R18-2-306.A.5.b]

The Permittee shall promptly report deviations from permit requirements, including those attributable to upset conditions as defined in the permit, the probable cause of such deviations, and any corrective actions or preventive measures taken. Prompt reporting shall mean that the report was submitted to the Director by certified mail, facsimile, or hand delivery within two working days of the time when emission limitations were exceeded due to an emergency or within two working days of the time when the owner or operator first learned of the occurrence of a deviation from a permit requirement.

C. Emergency Provision

[A.A.C. R18-2-306.E]

1. An “emergency” means any situation arising from sudden and reasonable unforeseeable events beyond the control of the source, including acts of God, that require immediate corrective action to restore normal operation, and that causes the source to exceed a technology-based emission limitation under the permit, due to unavoidable increases in emissions attributable to the emergency. An emergency shall not include noncompliance to the extent caused by improperly designed equipment, lack of preventative maintenance, careless or improper operation, or operator error.

2. An emergency constitutes an affirmative defense to an action brought for noncompliance with such technology-based emission limitations if Condition XII.C.3 is met.
3. The affirmative defense of emergency shall be demonstrated through properly signed, contemporaneous operating logs, or other relevant evidence that:
 - a. An emergency occurred and that the Permittee can identify the cause(s) of the emergency;
 - b. The permitted facility was being properly operated at the time;
 - c. During the period of the emergency, the Permittee took all reasonable steps to minimize levels of emissions that exceeded the emissions standards or other requirements in the permit; and
 - d. The Permittee submitted notice of the emergency to the Director by certified mail, facsimile, or hand delivery within two working days of the time when emission limitations were exceeded due to the emergency. This notice shall contain a description of the emergency, any steps taken to mitigate emissions, and corrective action taken.
4. In any enforcement proceeding, the Permittee seeking to establish the occurrence of an emergency has the burden of proof.
5. This provision is in addition to any emergency or upset provision contained in any applicable requirement.

D. Compliance Schedule

[ARS § 49-426.I.5]

For any excess emission or permit deviation that cannot be corrected within 72 hours, the Permittee is required to submit a compliance schedule to the Director within 21 days of such occurrence. The compliance schedule shall include a schedule of remedial measures, including an enforceable sequence of actions with milestones, leading to compliance with the permit terms or conditions that have been violated.

E. Affirmative Defenses for Excess Emissions Due to Malfunctions, Startup, and Shutdown

[A.A.C. R18-2-310]

1. Applicability

This rule establishes affirmative defenses for certain emissions in excess of an emission standard or limitation and applies to all emission standards or limitations except for standards or limitations:

- a. Promulgated pursuant to Sections 111 or 112 of the Act;
- b. Promulgated pursuant to Titles IV or VI of the Clean Air Act;

- c. Contained in any Prevention of Significant Deterioration (PSD) or New Source Review (NSR) permit issued by the U.S. EPA;
- d. Contained in A.A.C. R18-2-715.F; or
- e. Included in a permit to meet the requirements of A.A.C. R18-2-406.A.5.

2. Affirmative Defense for Malfunctions

Emissions in excess of an applicable emission limitation due to malfunction shall constitute a violation. When emissions in excess of an applicable emission limitation are due to a malfunction, the Permittee has an affirmative defense to a civil or administrative enforcement proceeding based on that violation, other than a judicial action seeking injunctive relief, if the Permittee has complied with the reporting requirements of A.A.C. R18-2-310.01 and has demonstrated all of the following:

- a. The excess emissions resulted from a sudden and unavoidable breakdown of process equipment or air pollution control equipment beyond the reasonable control of the Permittee;
- b. The air pollution control equipment, process equipment, or processes were at all times maintained and operated in a manner consistent with good practice for minimizing emissions;
- c. If repairs were required, the repairs were made in an expeditious fashion when the applicable emission limitations were being exceeded. Off-shift labor and overtime were utilized where practicable to ensure that the repairs were made as expeditiously as possible. If off-shift labor and overtime were not utilized, the Permittee satisfactorily demonstrated that the measures were impracticable;
- d. The amount and duration of the excess emissions (including any bypass operation) were minimized to the maximum extent practicable during periods of such emissions;
- e. All reasonable steps were taken to minimize the impact of the excess emissions on ambient air quality;
- f. The excess emissions were not part of a recurring pattern indicative of inadequate design, operation, or maintenance;
- g. During the period of excess emissions there were no exceedances of the relevant ambient air quality standards established in Title 18, Chapter 2, Article 2 of the Arizona Administrative Code that could be attributed to the emitting source;

- h. The excess emissions did not stem from any activity or event that could have been foreseen and avoided, or planned, and could not have been avoided by better operations and maintenance practices;
- i. All emissions monitoring systems were kept in operation if at all practicable; and
- j. The Permittee's actions in response to the excess emissions were documented by contemporaneous records.

3. Affirmative Defense for Startup and Shutdown

- a. Except as provided in Condition XII.E.3.b below, and unless otherwise provided for in the applicable requirement, emissions in excess of an applicable emission limitation due to startup and shutdown shall constitute a violation. When emissions in excess of an applicable emission limitation are due to startup and shutdown, the Permittee has an affirmative defense to a civil or administrative enforcement proceeding based on that violation, other than a judicial action seeking injunctive relief, if the Permittee has complied with the reporting requirements of A.A.C. R18-2-310.01 and has demonstrated all of the following:
 - i. The excess emissions could not have been prevented through careful and prudent planning and design;
 - ii. If the excess emissions were the result of a bypass of control equipment, the bypass was unavoidable to prevent loss of life, personal injury, or severe damage to air pollution control equipment, production equipment, or other property;
 - iii. The air pollution control equipment, process equipment, or processes were at all times maintained and operated in a manner consistent with good practice for minimizing emissions;
 - iv. The amount and duration of the excess emissions (including any bypass operation) were minimized to the maximum extent practicable during periods of such emissions;
 - v. All reasonable steps were taken to minimize the impact of the excess emissions on ambient air quality;
 - vi. During the period of excess emissions there were no exceedances of the relevant ambient air quality standards established in Title 18, Chapter 2, Article 2 of the Arizona Administrative Code that could be attributed to the emitting source;

- vii. All emissions monitoring systems were kept in operation if at all practicable; and
 - viii. Contemporaneous records documented the Permittee's actions in response to the excess emissions.
- b. If excess emissions occur due to a malfunction during routine startup and shutdown, then those instances shall be treated as other malfunctions subject to Condition XII.E.2 above.
4. Affirmative Defense for Malfunctions During Scheduled Maintenance

If excess emissions occur due to a malfunction during scheduled maintenance, then those instances will be treated as other malfunctions subject to Condition XII.E.2 above.

5. Demonstration of Reasonable and Practicable Measures

For an affirmative defense under Condition XII.E.2 or XII.E.3 above, the Permittee shall demonstrate, through submission of the data and information required by Condition XII.E and A.A.C. R18-2-310.01, that all reasonable and practicable measures within the Permittee's control were implemented to prevent the occurrence of the excess emissions.

XIII. RECORD KEEPING REQUIREMENTS

[A.A.C. R18-2-306.A.4]

- A.** The Permittee shall keep records of all required monitoring information including, but not limited to, the following:
- 1. The date, place as defined in the permit, and time of sampling or measurements;
 - 2. The date(s) analyses were performed;
 - 3. The name of the company or entity that performed the analyses;
 - 4. A description of the analytical techniques or methods used;
 - 5. The results of such analyses; and
 - 6. The operating conditions as existing at the time of sampling or measurement.
- B.** The Permittee shall retain records of all required monitoring data and support information for a period of at least 5 years from the date of the monitoring sample, measurement, report, or application. Support information includes all calibration and maintenance records and all original strip-chart recordings or other data recordings for continuous monitoring instrumentation, and copies of all reports required by the permit.

- C. All required records shall be maintained either in an unchangeable electronic format or in a handwritten logbook utilizing indelible ink.

XIV. REPORTING REQUIREMENTS

[A.A.C. R18-2-306.A.5.a]

The Permittee shall submit the following reports:

- A. Compliance certifications in accordance with Section VII of Attachment "A".
- B. Excess emission; permit deviation, and emergency reports in accordance with Section XII of Attachment "A".
- C. Other reports required by any condition of Attachment "B".

XV. DUTY TO PROVIDE INFORMATION

[A.A.C. R18-2-304.G and -306.A.8.e]

- A. The Permittee shall furnish to the Director, within a reasonable time, any information that the Director may request in writing to determine whether cause exists for revising, revoking and reissuing, or terminating the permit, or to determine compliance with the permit. Upon request, the Permittee shall also furnish to the Director copies of records required to be kept by the permit. For information claimed to be confidential, the Permittee shall furnish an additional copy of such records directly to the Administrator along with a claim of confidentiality.
- B. If the Permittee has failed to submit any relevant facts or has submitted incorrect information in the permit application, the Permittee shall, upon becoming aware of such failure or incorrect submittal, promptly submit such supplementary facts or corrected information.

XVI. PERMIT AMENDMENT OR REVISION

[A.A.C. R18-2-317.01, -318, -319, and -320]

The Permittee shall apply for a permit amendment or revision for changes to the facility which do not qualify for a facility change without revision under Section XVII, as follows:

- A. Facility Changes that Require a Permit Revision - Class II (A.A.C. R18-2-317.01);
- B. Administrative Permit Amendment (A.A.C. R18-2-318);
- C. Minor Permit Revision (A.A.C. R18-2-319); and
- D. Significant Permit Revision (A.A.C. R18-2-320)

The applicability and requirements for such action are defined in the above referenced regulations.

XVII. FACILITY CHANGE WITHOUT A PERMIT REVISION

[A.A.C. R18-2-306.A.4 and -317.02]

- A.** Except for a physical change or change in the method of operation at a Class II source requiring a permit revision under A.A.C. R18-2-317.01, or a change subject to logging or notice requirements in Conditions XVII.B and XVII.C below, a change at a Class II source shall not be subject to revision, notice, or logging requirements under this Section.
- B.** Except as otherwise provided in the conditions applicable to an emissions cap created under A.A.C. R18-2-306.02, the following changes may be made if the source keeps on site records of the changes according to Appendix 3 of the Arizona Administrative Code:
1. Implementing an alternative operating scenario, including raw materials changes;
 2. Changing process equipment, operating procedures, or making any other physical change if the permit requires the change to be logged;
 3. Engaging in any new insignificant activity listed in A.A.C. R18-2-101.57.a through A.A.C. R18-2-101.57.i but not listed in the permit;
 4. Replacing an item of air pollution control equipment listed in the permit with an identical (same model, different serial number) item. The Director may require verification of efficiency of the new equipment by performance tests; and
 5. A change that results in a decrease in actual emissions if the source wants to claim credit for the decrease in determining whether the source has a net emissions increase for any purpose. The logged information shall include a description of the change that will produce the decrease in actual emissions. A decrease that has not been logged is creditable only if the decrease is quantifiable, enforceable, and otherwise qualifies as a creditable decrease.
- C.** Except as provided in the conditions applicable to an emissions cap created under A.A.C. R18-2-306.02, the following changes may be made if the source provides written notice to the Department in advance of the change as provided below:
1. Replacing an item of air pollution control equipment listed in the permit with one that is not identical but that is substantially similar and has the same or better pollutant removal efficiency: 7 days. The Director may require verification of efficiency of the new equipment by performance tests;
 2. A physical change or change in the method of operation that increases actual emissions more than 10% of the major source threshold for any conventional pollutant but does not require a permit revision: 7 days;
 3. Replacing an item of air pollution control equipment listed in the permit with one that is not substantially similar but that has the same or better efficiency: 30 days.

The Director may require verification of efficiency of the new equipment by performance tests;

4. A change that would trigger an applicable requirement that already exists in the permit: 30 days unless otherwise required by the applicable requirement;
5. A change that amounts to reconstruction of the source or an affected facility: 7 days. For the purposes of this subsection, reconstruction of a source or an affected facility shall be presumed if the fixed capital cost of the new components exceeds 50% of the fixed capital cost of a comparable entirely new source or affected facility and the changes to the components have occurred over the 12 consecutive months beginning with commencement of construction; and
6. A change that will result in the emissions of a new regulated air pollutant above an applicable regulatory threshold but that does not trigger a new applicable requirement for that source category: 30 days. For purposes of this requirement, an applicable regulatory threshold for a conventional air pollutant shall be 10% of the applicable major source threshold for that pollutant.

D. For each change under Condition XVII.C above, the written notice shall be by certified mail or hand delivery and shall be received by the Director the minimum amount of time in advance of the change. Notifications of changes associated with emergency conditions, such as malfunctions necessitating the replacement of equipment, may be provided with less than required notice, but must be provided as far in advance of the change, or if advance notification is not practicable, as soon after the change as possible. The written notice shall include:

1. When the proposed change will occur;
2. A description of the change;
3. Any change in emissions of regulated air pollutants; and
4. Any permit term or condition that is no longer applicable as a result of the change.

E. A source may implement any change in Condition XVII.C above without the required notice by applying for a minor permit revision under A.A.C. R18-2-319 and complying with subsection A.A.C. R18-2-319.D.2 and A.A.C. R18-2-319.G.

F. The permit shield described in A.A.C. R18-2-325 shall not apply to any change made under this Section, other than implementation of an alternate operating scenario under Condition XVII.B.1.

G. Notwithstanding any other part of this Section, the Director may require a permit to be revised for any change that, when considered together with any other changes submitted by the same source under this Section over the term of the permit, constitutes a change under subsection A.A.C. R18-2-317.01.A.

H. If a source change is described under both Conditions XVII.B and XVII.C above, the source shall comply with Condition XVII.C above. If a source change is described under both Condition XVII.C above and A.A.C. R18-2-317.01.B, the source shall comply with A.A.C. R18-2-317.01.B.

I. A copy of all logs required under Condition XVII.B shall be filed with the Director within 30 days after each anniversary of the permit issuance date. If no changes were made at the source requiring logging, a statement to that effect shall be filed instead.

J. Logging Requirements

[A.A.C. R18-2-306.A.4]

1. Each log entry required by a change under Condition XVII.B shall include at least the following information:

a. A description of the change, including:

(1) A description of any process change;

(2) A description of any equipment change, including both old and new equipment descriptions, model numbers, and serial numbers, or any other unique equipment ID number; and

(3) A description of any process material change.

b. The date and time that the change occurred.

c. The provision of A.A.C. R18-2-317.02.B that authorizes the change to be made with logging.

d. The date the entry was made and the first and last name of the person making the entry.

2. Logs shall be kept for 5 years from the date created. Logging shall be performed in indelible ink in a bound log book with sequentially number pages, or in any other form, including electronic format, approved by the Director.

XVIII. TESTING REQUIREMENTS

[A.A.C. R18-2-312]

A. The Permittee shall conduct performance tests as specified in the permit and at such other times as may be required by the Director.

B. Operational Conditions During Testing

Tests shall be conducted during operation at the maximum possible capacity of each unit under representative operational conditions unless other conditions are required by the applicable test method or in this permit. With prior written approval from the Director, testing may be performed at a lower rate. Operations during periods of start-up,

shutdown, and malfunction (as defined in A.A.C. R18-2-101) shall not constitute representative operational conditions unless otherwise specified in the applicable standard.

C. Tests shall be conducted and data reduced in accordance with the test methods and procedures contained in the Arizona Testing Manual unless modified by the Director pursuant to A.A.C. R18-2-312.B.

D. Test Plan

At least 14 calendar days prior to performing a test, the Permittee shall submit a test plan to the Director in accordance with A.A.C. R18-2-312.B and the Arizona Testing Manual. This test plan must include the following:

1. Test duration;
2. Test location(s);
3. Test method(s); and
4. Source operation and other parameters that may affect test results.

E. Stack Sampling Facilities

The Permittee shall provide, or cause to be provided, performance testing facilities as follows:

1. Sampling ports adequate for test methods applicable to the facility;
2. Safe sampling platform(s);
3. Safe access to sampling platform(s); and
4. Utilities for sampling and testing equipment.

F. Interpretation of Final Results

Each performance test shall consist of three separate runs using the applicable test method. Each run shall be conducted for the time and under the conditions specified in the applicable standard. For the purpose of determining compliance with an applicable standard, the arithmetic mean of the results of the three runs shall apply. In the event that a sample is accidentally lost or conditions occur in which one of the three runs is required to be discontinued because of forced shutdown, failure of an irreplaceable portion of the sample train, extreme meteorological conditions, or other circumstances beyond the Permittee's control, compliance may, upon the Director's approval, be determined using the arithmetic mean of the results of the other two runs. If the Director or the Director's designee is present, tests may only be stopped with the Director's or such designee's approval. If the Director or the Director's designee is not present, tests may only be

stopped for good cause. Good cause includes: forced shutdown, failure of an irreplaceable portion of the sample train, extreme meteorological conditions, or other circumstances beyond the Permittee's control. Termination of any test without good cause after the first run is commenced shall constitute a failure of the test. Supporting documentation, which demonstrates good cause, must be submitted.

G. Report of Final Test Results

A written report of the results of all performance tests shall be submitted to the Director within 30 days after the test is performed. The report shall be submitted in accordance with the Arizona Testing Manual and A.A.C. R18-2-312.A.

XIX. PROPERTY RIGHTS

[A.A.C. R18-2-306.A.8.d]

This permit does not convey any property rights of any sort, or any exclusive privilege.

XX. SEVERABILITY CLAUSE

[A.A.C. R18-2-306.A.7]

The provisions of this permit are severable. In the event of a challenge to any portion of this permit, or if any portion of this permit is held invalid, the remaining permit conditions remain valid and in force.

XXI. PERMIT SHIELD

[A.A.C. R18-2-325]

Compliance with the conditions of this permit shall be deemed compliance with all applicable requirements identified in the portions of this permit subtitled "Permit Shield". The permit shield shall not apply to any minor revisions pursuant to Condition XVI.C of this Attachment and any facility changes without a permit revision pursuant to Section XVII of this Attachment.

This page was left blank intentionally.

ATTACHMENT "B": SPECIFIC CONDITIONS

Air Quality Control Permit No. 44141

for

Nucor Steel Kingman, LLC.

I. RELATIONSHIP OF PERMIT TO APPLICABLE STATE IMPLEMENTATION PLAN

[ARS § 49-404.c and -426]

This permit is issued pursuant to the provisions of the Arizona Revised Statutes (ARS) and constitutes an Installation Permit for the purpose of the applicable State Implementation Plan.

II. FACILITY WIDE REQUIREMENTS

A. Operating Limitations

1. *The maximum process rate of finished steel product for the plant shall not exceed 350,000 tons per 12-month rolling period and 85 tons per hour.*

[A.A.C. R18-2-306.01.A and A.A.C. R18-2-331.A.3.a]

[Material Permit Condition is indicated by underline and italics]

2. The Permittee shall operate all equipment identified in Attachment "C" in accordance with vendor-supplied operations and maintenance instructions. If vendor-supplied operations and maintenance instructions are not available, the Permittee shall prepare an Operation and Maintenance Plan, which provides adequate information to properly operate and maintain the equipment in good working order. In the absence of vendor-supplied operations and maintenance instructions, the Permittee shall operate the equipment in accordance with the Operation and Maintenance Plan. [A.A.C. R18-2-306.A.2]

B. Monitoring, Recordkeeping and Reporting Requirements

1. Within 90 days of start-up the Permittee shall have on site or on call a person certified in EPA Reference Method 9. [A.A.C. R18-2-306.A.3.c]
2. No later than 30 days after installation, or upon start-up, whichever is earlier, the Permittee shall provide the make, model and date of manufacture for such equipment as listed in Attachment "C". [A.A.C. R18-2-306.A.3.c]
3. The Permittee shall maintain, on-site, records of the manufacturer supplied operations and maintenance instructions or an Operation and Maintenance Plan for minimizing emissions for all equipment identified in Attachment "C". [A.A.C. R18-2-306.A.4]
4. The Permittee shall submit reports of all monitoring activities required in Attachment "B" along with the compliance certifications required by Section VII of Attachment "A." [A.A.C. R18-2-306.A.5]

5. All records, analyses, and reports, shall be retained for a minimum of five years from the date of generation. The most recent two years of data shall be kept on-site. [A.A.C. R18-2-306.A.4]
6. The Permittee shall maintain records of all emission-related maintenance activities performed and make them available to ADEQ upon request. [A.A.C. R18-2-306.A.3.c]
7. The Permittee shall submit an updated equipment list to the Director within 30 days of purchasing an emergency generator. [A.A.C. R18-2-306.A.5]

III. REHEAT FURNACE

A. Applicability

This Section is applicable to the Reheat Furnace listed in Attachment "C".

B. Operating Limitations

1. The Permittee shall not operate the equipment subject to this Section in excess of the limits described in Condition II.A.1 or the actual throughput rate at the time of the most recent performance test, whichever is less. [A.A.C. R18-2-306.A.2]
2. The Permittee shall only fire natural gas in the Reheat Furnace. [A.A.C. R18-2-306.A.2]
3. Monitoring and Recordkeeping
 - a. The Permittee shall install, calibrate, maintain and operate monitoring devices, which can be used to determine hourly material throughput to equipment subject to this Section. [A.A.C. R18-2-306.A.3.c]
 - b. The Permittee shall keep hourly, monthly, and annual records of the throughputs for equipment subject to this Section. The Permittee shall calculate the annual records based on rolling 12 month totals. [A.A.C. R18-2-306.A.3.c]

C. Particulate Matter (PM) Requirements

1. Emissions Limitations and Standards
 - a. The Permittee shall not cause, allow or permit the emission of particulate matter into the atmosphere from the Reheat Furnace in excess of the amounts calculated by one of the following equations:
 - (1) For process sources having a process weight rate of 30 tons per hour or less, the maximum allowable emissions shall be determined by the following equation:

$$E = 4.10P^{0.67}$$

Where

E = the maximum allowable particulate emission rate in pounds-mass per hour

P = the process weight rate in tons-mass per hour
[A.A.C. R18-2-730.A.1.a]

- (2) For process sources having a process weight rate greater than 30 tons per hour, the maximum allowable emissions shall be determined by the following equation:

$$E = 55.0P^{0.11} - 40$$

Where "E" and "P" are defined as indicated in Condition III.C.1.a.(1).

[A.A.C. R18-2-730.A.1.b]

- (3) For purposes of this Section, the total process weight from all similar units employing a similar type process shall be used in determining the maximum allowable emission of particulate matter.

2. Monitoring, Reporting, and Recordkeeping [A.A.C. R18-2-306.A.3.c]

The Permittee shall keep records of fuel supplier certifications. The certification shall contain information regarding the name of fuel supplier and heating value of the fuel. These records shall be made available to ADEQ upon request.

3. Testing Requirements [A.A.C. R18-2-312]

No later than 90 days after initial start-up of the operations and at least one year after the first test, the Permittee shall conduct performance test for PM_{10} on the reheat furnace stack using EPA Reference Method 201A and Method 202. Alternatively, the Permittee may use the front half and back half of an EPA Reference Method 5 test to represent PM_{10} . The additional test shall be conducted no earlier than 12 months following the initial test or no later than 12 months prior to the permit expiration date.

4. Permit Shield [A.A.C. R18-2-325]

Compliance with this Part shall be deemed compliance with A.A.C. R18-2-730.A.1.

D. Opacity Requirements

1. Emission Limitation / Standard

- a. The Permittee shall not cause to be discharged into the atmosphere from the reheat furnace any gases which exhibit greater than 20% opacity, measured in accordance with EPA Reference Method 9. [A.A.C. R18-2-702.B]
- b. If the presence of uncombined water is the only reason for an exceedance of any visible emissions requirement, the exceedance shall not constitute a violation of the applicable opacity limit. [A.A.C. R18-2-702.C]

2. Monitoring, record Keeping and Reporting Requirements

A certified EPA Reference Method 9 observer shall conduct a monthly survey of visible emissions emanating from the reheat furnace. If the opacity of the emissions observed appears to exceed the standard, the observer shall conduct a certified EPA Reference Method 9 observation. The Permittee shall keep records of the initial survey and any EPA Reference Method 9 observations performed. These records shall include the emission point observed, location of observer, name of observer, date and time of observation, and the results of the observation. If the observation results in an exceedance of the opacity limit contained in Condition.III.D.1.a above, the Permittee shall take corrective action and log all such actions. Such exceedance shall be reported as excess emissions in accordance with Section XII of Attachment "A". [A.A.C. R18-2-306.A.3.c]

3. Permit Shield

Compliance with the conditions of this Part shall be deemed compliance with A.A.C. R18-2-702.B and -702.C. [A.A.C. R18-2-325]

E. Gaseous Emissions

1. Emission Limitations/Standards

- a. The Permittee shall not cause or permit the emission of gaseous or odorous materials from equipment and operations associated with the reheat furnace in such quantities or concentrations as to cause air pollution. [A.A.C. R18-2-730.D]
- b. Where a stack, vent or other outlet is at such a level that fumes, gas mist, odor, smoke, vapor or any combination thereof constituting air pollution is discharged to adjoining property, the Director may require the installation of abatement equipment or the alteration of such stack, vent or other outlet by the Permittee to a degree that will adequately dilute, reduce or eliminate the discharge of air pollution to adjoining property. [A.A.C. R18-2-730.G]

2. Permit Shield [A.A.C. R18-2-325]

Compliance with this Part shall be deemed compliance with A.A.C. R18-2-730.D, and -730.G.

F. Sulfur Dioxide Emissions

1. Emissions Limitations and Standards [A.A.C. R18-2-730.A.2]

The Permittee shall not cause or allow the emission of sulfur dioxide from the reheat furnace, at an emission rate greater than 600 parts per million.

2. Permit Shield [A.A.C. R18-2-325]

Compliance with this Part shall be deemed compliance with A.A.C. R18-2-730.A.2.

G. Nitrogen Dioxide Emissions

1. Emissions Limitations and Standards

The Permittee shall not cause or allow the emission of nitrogen oxides from the reheat furnace, in excess of 0.15 pound/MMBtu of heat input.

[A.A.C. R18-2-306.01, -306.02.A, -331.A.3.a]
[Material permit conditions are indicated by underline and italics]

2. Air Pollution Control Requirement

At all times when the furnace is in operation, including periods of startup, shutdown, and malfunction, the Permittee shall, to the extent practicable, maintain and operate the low NO_x burners in a manner consistent with manufacturer equipment operating guidelines and good air pollution control practices for minimizing emissions.

[A.A.C. R18-2-306.A.2, -306.01.A, and -331.A.3.d and e]
[Material Permit Conditions are indicated with underline and italics]

3. Testing Requirements [A.A.C. R18-2-312]

No later than 90 days after initial start-up of the operations and at least one year after the first test, the Permittee shall conduct performance test for NO_x on the reheat furnace stack using EPA Reference Method 7E. The additional test shall be conducted no earlier than 12 months following the initial test or no later than 12 months prior to the permit expiration date.

H. Carbon Monoxide Emissions

1. Emissions Limitations and Standards

The Permittee shall not cause or allow the emission of carbon monoxide from the reheat furnace, in excess of 0.15 pound/MMBtu of heat input.

[A.A.C. R18-2-306.01, -306.02.A, -331.A.3.a]

[Material permit conditions are indicated by underline and italics]

2. Testing Requirements

[A.A.C. R18-2-312]

No later than 90 days after initial start-up of the operations and at least one year after the first test, the Permittee shall conduct performance test for CO on the reheat furnace stack using EPA Reference Method 10. The additional test shall be conducted no earlier than 12 months following the initial test or no later than 12 months prior to the permit expiration date.

IV. HOT WATER & FIXED SPACE HEATERS

A. Applicability

This Section is applicable to all hot water heaters and space heaters identified in Attachment "C".

B. Fuel Limitations

The Permittee shall only fire natural gas in the hot water and space heaters subject to this section.

[A.A.C. R18-2-306.A.2]

C. Particulate Matter (PM) Requirements

1. Emissions Limitations and Standards

- a. The Permittee shall not cause, allow or permit the emission of particulate matter, caused by combustion of fuel, from any the hot water and space heaters in excess of the amounts calculated by one of the following equations:

For equipment having a heat input rate of 4200 million Btu per hour or less, the maximum allowable emissions shall be determined by the following equation:

$$E = 1.02 Q^{0.769}$$

Where:

E = the maximum allowable particulate emissions rate in pounds-mass per hour

Q = the heat input in million Btu per hour

[A.A.C. R18-2-724.C]

- b. For purposes of this Section, the heat input shall be the aggregate heat content of all fuels whose products of combustion pass through a stack or other outlet. The total heat input of all fuel-burning units on a plant or premises shall be used for determining the maximum allowable amount of particulate matter which may be emitted. [A.A.C. R18-2-724.B]

2. Monitoring, Recordkeeping, and Reporting

The Permittee shall keep records of fuel supplier certifications. The certification shall contain information regarding the name of fuel supplier and lower heating value of the fuel. These records shall be made available to ADEQ upon request.

[A.A.C. R18-2-306.A.3.c]

3. Permit Shield

[A.A.C. R18-2-325]

Compliance with this Part shall be deemed compliance with A.A.C. R18-2-724.B. and A.A.C. R18-2-724.C.

D. Opacity Requirements

1. Emissions Limitations and Standards

The Permittee shall not cause, allow or permit the opacity of any plume or effluent from any hot water heater or space heater to exceed 15%.

[A.A.C. R18-2-724.J]

2. Monitoring, Recordkeeping, and Reporting

The Permittee shall report all 6-minute periods during which the visible emissions exceed 15 percent opacity, as required under Section XII of Attachment "A".

[A.A.C. R18-2-724.J]

3. Permit Shield

[A.A.C. R18-2-325]

Compliance with this Part shall be deemed compliance with A.A.C. R18-2-724.J.

V. COOLING TOWERS

A. Applicability

This Section applies to the cooling towers at the facility.

B. Operational Limitations

[Material permit conditions are indicated by underline and italics]

1. *The total combined fan hours for the cooling tower with serial id number UL 2031-S1 shall not exceed 5,000 hours per year, on a rolling twelve month total. Fan hours are defined as hours per fan per cooling tower.*
[A.A.C. R18-2-306.01 and 331.A.3.a]
2. *The total combined fan hours for the cooling tower with serial id number UL 2030-S1 shall not exceed 7,500 hours per year, on a rolling twelve month total. Fan hours are defined as hours per fan per cooling tower.*
[A.A.C. R18-2-306.01 and 331.A.3.a]
3. *The Permittee shall install, maintain, and operate drift eliminators on the cooling towers such that the guaranteed design total drift rate does not exceed 0.02 percent of circulating water flow.*
[A.A.C. R18-2-306.01 and 331.A.3.a]
4. The Permittee shall not cause, allow or permit the circulating water flow rate in the cooling tower with serial id number UL 2031-S1 to exceed 4,971 gallons per minute (gpm) and cooling tower with serial id number UL 2030-S1 to exceed 7,688 gallons per minute (gpm), based on instantaneous measurement.
[A.A.C. R18-2-306.A.2]
5. The Total Dissolved Solids (TDS) in the cooling system circulation water shall be less than or equal to 5,000 parts per million (ppm), based on instantaneous measurement.
[A.A.C. R18-2-306.A.2]
6. Monitoring and Recordkeeping [A.A.C. R18-2-306.A.3.c]
 - a. *The Permittee shall install, calibrate, maintain and operate non re-settable hourly meters or any other equivalent device for the continuous measurement of operation of the hours of operation of the cooling tower fans. The monitoring device shall be certified by the manufacturer to be accurate and must be calibrated on an annual basis in accordance with manufacturer's instructions.* [A.A.C. R18-2-306.A.3 and A.A.C. R18-2-331]
[Material Permit Conditions are indicated by underline and italics]
 - b. *The Permittee shall install, calibrate, maintain and operate flow meters or any other equivalent device for the continuous measurement of circulating water flow rate on each of the cooling towers. The monitoring device shall be certified by the manufacturer to be accurate*

and must be calibrated on an annual basis in accordance with manufacturer's instructions. [A.A.C. R18-2-306.A.3 and A.A.C. R18-2-331]
[Material Permit Conditions are indicated by underline and italics]

- c. The Permittee shall keep records of monthly totals of fan hours for each cooling tower. At the end of each month, the Permittee shall calculate and record a rolling 12-month total of fan hours. [A.A.C. R18-2-306.A.3.c]
- d. The Permittee shall perform monthly inspections of the drift eliminators to verify performance. The Permittee shall keep records of the results of the inspections and any repairs performed in a written facility log. [A.A.C. R18-2-306.A.3.c]
- e. The Permittee shall perform monthly analysis of the total dissolved solids (TDS) in the cooling system circulation water. The Permittee shall keep records of the results of the analysis in a written facility log. [A.A.C. R18-2-306.A.3.c]
- f. The Permittee shall keep daily records of measurements of circulating water flow rate in each of the cooling towers in a written facility log. [A.A.C. R18-2-306.A.3.c]

C. Particulate Matter (PM) Requirements

1. Emission Limitation and Standards

- a. The Permittee shall not cause or permit the emissions of particulate matter discharged into the atmosphere in any one hour from any cooling towers in total quantities in excess of the amounts calculated by one of the following equations: [A.A.C. R18-2-730.A]

- (1) For process sources having a process weight rate of 60,000 pounds per hour (30 tons per hour) or less, the maximum allowable emissions shall be determined by the following equation:

$$E = 4.10P^{0.67}$$

where:

E = the maximum allowable particulate emissions rate in pounds-mass per hour.

P = the process weight rate in tons-mass per hour.

- (2) For process weight rate greater than 60,000 pounds per hour (30 tons per hour), the maximum allowable emissions shall be determined by the following equation:

$$E = 55.0P^{0.11} - 40$$

where:

"E" and "P" are defined as indicated in Condition V.C.1.a.(1).

- b. For purposes of this Section, the total process weight from all similar units employing a similar type process shall be used in determining the maximum allowable emission of particulate matter. [A.A.C. R18-2-730.B]

2. Permit Shield

Compliance with the conditions of this Part shall be deemed compliance with A.A.C. R18-2-730.A and A.A.C. R18-2-730.B. [A.A.C.R18-2-325]

B. Opacity Requirements

1. Emission Limits and Standards

- a. The Permittee shall not cause to be discharged into the atmosphere from the cooling towers any gases which exhibit greater than 20% opacity, measured in accordance with EPA Reference Method 9. [A.A.C. R18-2-702.B]

- b. If the presence of uncombined water is the only reason for an exceedance of any visible emissions requirement, the exceedance shall not constitute a violation of the applicable opacity limit. [A.A.C. R18-2-702.C]

2. Monitoring, Recordkeeping and Reporting Requirements

A certified EPA Reference Method 9 observer shall conduct a monthly survey of visible emissions emanating from the cooling towers. If the opacity of the emissions observed appears to exceed the standard, the observer shall conduct a certified EPA Reference Method 9 observation. The Permittee shall keep records of the initial survey and any EPA Reference Method 9 observations performed. These records shall include the emission point observed, location of observer, name of observer, date and time of observation, and the results of the observation. If the observation results in an exceedance of the opacity limit contained in Condition.V.B.1.a above, the Permittee shall take corrective action and log all such actions. Such exceedance shall be reported as excess emissions in accordance with Section XII of Attachment "A". [A.A.C. R18-2-306.A.3.c]

3. Permit Shield

[A.A.C. R18-2-325]

Compliance with the conditions of this Part shall be deemed compliance with A.A.C. R18-2-702.B, and A.A.C. R18-2-702.C.

C. Volatile Organic Compounds

1. Emission Limits and Standards

a. The Permittee shall not emit gaseous or odorous materials from equipment, operations or premises under his control in such quantities or concentrations as to cause air pollution. [A.A.C. R18-2-730.D]

b. Where a stack, vent or other outlet is at such a level that fumes, gas mist, odor, smoke, vapor or any combination thereof constituting air pollution is discharged to adjoining property, the Director may require the installation of abatement equipment or the alteration of such stack, vent, or other outlet by the Permittee thereof to a degree that will adequately dilute, reduce or eliminate the discharge of air pollution to adjoining property. [A.A.C. R18-2-730.G]

2. Permit Shield [A.A.C. R18-2-325]

Compliance with the conditions of this Part shall be deemed compliance with A.A.C. R18-2-730.D and G.

VI. INTERNAL COMBUSTION ENGINES – NON NSPS REQUIREMENTS

A. Applicability

The Section is applicable to the internal combustion engine marked as “Non-NSPS Generator” in column titled “Equipment Type” in Attachment “C”.

B. Operating Limitations

1. *The Permittee shall not operate the internal combustion engine for more than 500 hours per year, on a rolling twelve month total.*

[A.A.C. R18-2-306.01 and 331.A.3.a]
[Material permit conditions are indicated by underline and italics]

2. Monitoring and Recordkeeping [A.A.C. R18-2-306.A.3.c]

The Permittee shall keep records of monthly totals of the hours of operation of the internal combustion engine. At the end of each month, the Permittee shall calculate and record a rolling 12-month total of the hours of operation.

C. Fuel Limitations

1. The Permittee shall only fire low sulfur diesel fuel (less than 0.9 percent by weight of sulfur) fuel in the internal combustion engines. [A.A.C. R18-2-719.H]

2. Permit Shield

Compliance with this Part shall be deemed compliance with A.A.C. R18-2-719.H. [A.A.C. R18-2-325]

D. Particulate Matter (PM) Requirements

1. Emissions Limitations and Standards

- a. The Permittee shall not cause, allow or permit the emission of particulate matter, caused by combustion of fuel, from any stationary rotating machinery into the atmosphere in excess of the amounts calculated by the following equation: [A.A.C. R18-2-719.C.1]

For equipment having a heat input rate of 4200 million Btu per hour or less, the maximum allowable emissions shall be determined by the following equation:

$$E = 1.02 Q^{0.769}$$

Where

E = the maximum allowable particulate emission rate in pounds-mass per hour

Q = the heat input in million Btu per hour

- b. For purposes of this Section, the heat input shall be the aggregate heat content of all fuels whose products of combustion pass through a stack or other outlet. The total heat input of all operating fuel-burning units on a plant or premises shall be used for determining the maximum allowable amount of particulate matter which may be emitted. [A.A.C. R18-2-719.B]

2. Monitoring, Reporting, and Recordkeeping

The Permittee shall keep records of fuel supplier certifications. The certification shall contain information regarding the name of fuel supplier and lower heating value of the fuel. These records shall be made available to ADEQ upon request. [A.A.C. R18-2-306.A.3.c and -719.I]

3. Permit Shield

Compliance with this Part shall be deemed compliance with A.A.C. R18-2-719.C.1 and A.A.C. R18-2-719.I. [A.A.C. R18-2-325]

E. Opacity Requirements

1. Emissions Limitations and Standards

- a. The Permittee shall not cause, allow or permit to be emitted into the atmosphere from any stationary rotating machinery, smoke for any period greater than 10 consecutive seconds which exceeds 40% opacity. [A.A.C. R18-2-719.E]
- b. Visible emissions when starting cold equipment shall be exempt from this requirement for the first 10 minutes. [A.A.C. R18-2-719.E]

2. Monitoring, Reporting, and Recordkeeping

- a. A certified EPA Reference Method 9 observer shall conduct a monthly survey of visible emissions emanating from the stack of the IC engines if in operation. If the opacity of the emissions observed appears to exceed the standard, the observer shall conduct a certified EPA Reference Method 9 observation. The Permittee shall keep records of the initial survey and any EPA Reference Method 9 observations performed. These records shall include the emission point observed, location of the observer, name of observer, date and time of observation, and the results of the observation. [A.A.C. R18-2-306.A.3.c]
- b. If the observation results in a Method 9 opacity reading in excess of 40%, the Permittee shall report this to ADEQ as excess emission and initiate appropriate corrective action to reduce the opacity below 40%. The Permittee shall keep a record of the corrective action performed. [A.A.C. R18-2-306.A.3.c]

3. Permit Shield

Compliance with this Part shall be deemed compliance with A.A.C. R18-2-719.E. [A.A.C. R18-2-325]

F. Sulfur Dioxide Emissions

1. Emission Limitations and Standards

The Permittee shall not emit or cause to emit more than 1.0 pound of sulfur dioxide per million Btu. [A.A.C. R18-2-719.F]

2. Monitoring, Recordkeeping, and Reporting

- a. The Permittee shall keep daily records of the sulfur content and lower heating value of the fuel being fired in the machine. The Permittee shall comply with this provision by keeping copies of fuel supplier certifications. The certification shall contain the maximum sulfur content of the fuel and lower heating value of the fuel. These records shall be made available to ADEQ upon request.

[A.A.C. R18-2-306.A.3.c and -719.I]

- b. The Permittee shall report to the Director any daily period during which the sulfur content of the fuel being fired in the machine exceeds 0.8%.

[A.A.C. R18-2-719.J]

3. Permit Shield

Compliance with this Part shall be deemed compliance with A.A.C. R18-2-719.F, A.A.C. R18-2-719.I, and A.A.C. R18-2-719.J.

[A.A.C. R18-2-325]

VII. HOT ROLLING, SOLVENT CLEANING ACTIVITIES & WASTEWATER TREATMENT PLANT

A. Applicability

This Section applies to following unclassified sources:

Hot rolling, parts washer and wastewater treatment plant.

B. Particulate Matter (PM) Requirements

1. Emission Limitations / Standards

a. Emission Limits and Standards

- i. The Permittee shall not allow or permit the emission of particulate matter into the atmosphere in any one hour from the recycling furnace in total quantities in excess of the amount calculated by the following equation:

For process sources having a process weight rate greater than of 30 tons per hour, the maximum allowable emissions shall be determined by the following equation:

$$E = 55.0 P^{0.11} - 40$$

Where:

E = the maximum allowable particulate emissions rate in pounds-mass per hour

P = the process weight rate in tons-mass per hour
[A.A.C. R18-2-730.A.1.b]

ii. For purposes of this Section, the total process weight from all similar units employing a similar type process shall be used in determining the maximum allowable emission of particulate matter.
[A.A.C. R18-2-730.B]

b. Air Pollution Control Requirement

The Permittee shall, to the extent practicable, install, maintain and operate the water sprays associated with hot rolling at all times the equipment is in operation consistent with technological limitations, manufacturer's specifications, and good engineering and maintenance practices for minimizing emissions.

[A.A.C. R18-2-306.A.2, -306.01.A, and -331.A.3.d and e]
[Material Permit Conditions are indicated with underline and italics]

c. Monitoring, Reporting, and Recordkeeping [A.A.C. R18-2-306.A.3.c]

The Permittee shall keep records of fuel supplier certifications. The certification shall contain information regarding the name of fuel supplier and heating value of the fuel. These records shall be made available to ADEQ upon request.

d. Permit Shield [A.A.C. R18-2-325]

Compliance with this Part shall be deemed compliance with A.A.C. R18-2-730.A.1.

C. Opacity Requirements

1. Emission Limitation / Standard

a. The Permittee shall not cause to be discharged into the atmosphere from the hot rolling process any gases which exhibit greater than 20% opacity, measured in accordance with EPA Reference Method 9.
[A.A.C. R18-2-702.B]

b. If the presence of uncombined water is the only reason for an exceedance of any visible emissions requirement, the exceedance shall not constitute a violation of the applicable opacity limit.
[A.A.C. R18-2-702.C]

2. Monitoring, record Keeping and Reporting Requirements

A certified EPA Reference Method 9 observer shall conduct a monthly survey of visible emissions emanating from the hot rolling process. If the opacity of the emissions observed appears to exceed the standard, the observer shall conduct a certified EPA Reference Method 9 observation. The Permittee shall keep records of the initial survey and any EPA Reference Method 9 observations performed. These records shall include the emission point observed, location of observer, name of observer, date and time of observation, and the results of the observation. If the observation results in an exceedance of the opacity limit contained in Condition.VII.C.1.a above, the Permittee shall take corrective action and log all such actions. Such exceedance shall be reported as excess emissions in accordance with Section XII of Attachment "A".

[A.A.C. R18-2-306.A.3.c]

3. Permit Shield

Compliance with the conditions of this Part shall be deemed compliance with A.A.C. R18-2-702.B and -702.C.

[A.A.C. R18-2-325]

E. Gaseous Emissions

1. Operational Limitations

a. Materials including solvents or other volatile compounds, paints, acids, alkalies, pesticides, fertilizers and manure shall be processed, stored, used and transported in such a manner and by such means that they will not evaporate, leak, escape or be otherwise discharged into the ambient air so as to cause or contribute to air pollution. Where means are available to reduce effectively the contribution to air pollution from evaporation, leakage or discharge, the installation and use of such control methods, devices, or equipment shall be mandatory. [A.A.C. R18-2-730.F]

b. Where a stack, vent or other outlet is at such a level that fumes, gas mist, odor, smoke, vapor or any combination thereof constituting air pollution is discharged to adjoining property, the Director may require the installation of abatement equipment or the alteration of such stack, vent, or other outlet by the owner or operator thereof to a degree that will adequately dilute, reduce or eliminate the discharge of air pollution to adjoining property. [A.A.C. R18-2-730.G]

2. Emissions Limitations and Standards

The Permittee shall not emit gaseous or odorous materials from equipment, operations or premises under his control in such quantities or concentrations as to cause air pollution. [A.A.C. R18-2-730.D]

3. Permit Shield [A.A.C. R18-2-325]

Compliance with the conditions of this Part shall be deemed compliance with A.A.C. R18-2-730.D, R18-2-730.F, and R18-2-730.G.

F. Hydrogen Sulfide Emissions

1. The Permittee shall not allow hydrogen sulfide to be emitted from the wastewater treatment plant in such a manner and amount that the concentration of such emissions into the ambient air at any occupied place beyond the premises on which the source is located exceeds 0.03 parts per million by volume for any average period of 30 minutes or more. [A.A.C. R18-2-730.H]
2. Permit Shield

Compliance with the conditions of this Part shall be deemed compliance with A.A.C. R18-2-730.H. [A.A.C. R18-2-325]

VIII. FUGITIVE DUST REQUIREMENTS

A. Applicability

This Section applies to any source of fugitive dust in the facility.

B. Particulate Matter and Opacity Requirements

1. Open Areas, Roadways & Streets, Storage Piles, and Material Handling
 - a. Emission Limitations/Standards
 - i. Opacity of emissions from any fugitive dust non-point source shall not be greater than 40% measured in accordance with the Arizona Testing Manual, Reference Method 9. [A.A.C. R18-2-614]
 - ii. The Permittee shall not cause, allow or permit visible emissions from any fugitive dust point source, in excess of 20 percent opacity. [A.A.C. R18-2-702.B]
 - iii. The Permittee shall employ the following reasonable precautions to prevent excessive amounts of particulate matter from becoming airborne:
 - (a) Keep dust and other types of air contaminants to a minimum in an open area where construction operations, repair operations, demolition activities, clearing operations, leveling operations, or any earth moving or excavating activities are taking place, by good modern

practices such as using an approved dust suppressant or adhesive soil stabilizer, paving, covering, landscaping, continuous wetting, detouring, barring access, or other acceptable means; [A.A.C. R18-2-604.A]

(b) Keep dust to a minimum from driveways, parking areas, and vacant lots where motor vehicular activity occurs by using an approved dust suppressant, or adhesive soil stabilizer, or by paving, or by barring access to the property, or by other acceptable means; [A.A.C. R18-2-604.B]

(c) Keep dust and other particulates to a minimum by employing dust suppressants, temporary paving, detouring, wetting down or by other reasonable means when a roadway is repaired, constructed, or reconstructed; [A.A.C. R18-2-605.A]

(d) Take reasonable precautions, such as wetting, applying dust suppressants, or covering the load when transporting material likely to give rise to airborne dust; [A.A.C. R18-2-605.B]

(e) Take reasonable precautions, such as the use of spray bars, wetting agents, dust suppressants, covering the load, and hoods when crushing, handling, or conveying material likely to give rise to airborne dust; [A.A.C. R18-2-606]

(f) Take reasonable precautions such as chemical stabilization, wetting, or covering when organic or inorganic dust producing material is being stacked, piled, or otherwise stored; [A.A.C. R18-2-607.A]

(g) Operate stacking and reclaiming machinery utilized at storage piles at all times with a minimum fall of material, or with the use of spray bars and wetting agents; [A.A.C. R18-2-607.B]

(h) Any other method as proposed by the Permittee and approved by the Director. [A.A.C. R18-2-306.A.3.c]

b. Monitoring and Recordkeeping Requirements

i. The Permittee shall maintain records of the dates on which any of the activities listed in Conditions VIII.B.1.a.iii.(a) through VIII.B.1.a.iii.(h) above were performed and the control measures that were adopted. [A.A.C. R18-2-306.A.3.c]

ii. Opacity Monitoring Requirements

- (a) A certified Method 9 observer shall conduct a monthly visual survey of visible emissions from the fugitive dust sources. The Permittee shall keep a record of the name of the observer, the date and location on which the observation was made, and the results of the observation.
- (b) If the observer sees a visible emission from a fugitive dust source that on an instantaneous basis appears to exceed applicable opacity standard, then the observer shall, if practicable, take a six-minute Method 9 observation of the visible emission.
 - (1) If the six-minute opacity of the visible emission is less than or equal to applicable opacity standard, the observer shall make a record of the following:
 - a) Location, date, and time of the observation; and
 - b) The results of the Method 9 observation.
 - (2). If the six-minute opacity of the visible emission exceeds applicable opacity standard, then the Permittee shall do the following:
 - a) Adjust or repair the controls or equipment to reduce opacity to below the applicable standard; and
 - b) Report it as an excess emission under Section XII.A of Attachment "A".

[A.A.C. R18-2-306.A.3.c]

c. Permit Shield

Compliance with the conditions of this Part shall be deemed compliance with A.A.C. R18-2-604.A, A.A.C. R18-2-604.B, A.A.C. R18-2-605, A.A.C. R18-2-606, A.A.C. R18-2-607, A.A.C. R18-2-614 and A.A.C. R18-2-702.B. [A.A.C. R18-2-325]

2. Open Burning

a. Emission Limitation/Standard

Except as provided in A.A.C. R18-2-602.C.1, C.2, C.3, and C.4, and except when permitted to do so by either ADEQ or the local officer delegated the authority for issuance of open burning permits, the Permittee shall not conduct open burning. [A.A.C. R18-2-602]

b. Monitoring and Recordkeeping Requirement

Compliance with the requirements of Condition VIII.B.2.a above may be demonstrated by maintaining copies of all open burning permits on file. [A.A.C. R18-2-306.A.3.c]

c. Permit Shield

Compliance with the conditions of this Part shall be deemed compliance with A.A.C. R18-2-602. [A.A.C. R18-2-325]

IX. MOBILE SOURCE REQUIREMENTS

A. Applicability

The requirements of this Section are applicable to mobile sources which either move while emitting air contaminants or are frequently moved during the course of their utilization but are not classified as motor vehicles, agricultural vehicles, or agricultural equipment used in normal farm operations. Mobile sources shall not include portable sources as defined in A.A.C. R18-2-101.90. [A.A.C. R18-2-801.A]

B. Particulate Matter and Opacity Requirements

1. Emission Limitations/Standards

a. Off-Road Machinery

The Permittee shall not cause, allow, or permit to be emitted into the atmosphere from any off-road machinery, smoke for any period greater than ten consecutive seconds, the opacity of which exceeds 40%. Visible emissions when starting cold equipment shall be exempt from this requirement for the first ten minutes. Off-road machinery shall include trucks, graders, scrapers, rollers, and other construction and mining machinery not normally driven on a completed public roadway. [A.A.C. R18-2-802.A and -802.B]

b. Roadway and Site Cleaning Machinery

i. The Permittee shall not cause, allow or permit to be emitted into the atmosphere from any roadway and site cleaning machinery smoke or dust for any period greater than ten consecutive seconds, the opacity of which exceeds 40%. Visible emissions when starting cold equipment shall be exempt from this requirement for the first ten minutes. [A.A.C. R18-2-804.A]

ii. The Permittee shall take reasonable precautions, such as the use of dust suppressants, before the cleaning of a site, roadway, or alley. Earth or other material shall be removed from paved streets onto which earth or other material has been transported by trucking or earth moving equipment, erosion by water or by other means. [A.A.C. R18-2-804.B]

c. Unless otherwise specified, no mobile source shall emit smoke or dust the opacity of which exceeds 40%. [A.A.C. R18-2-801.B]

2. Recordkeeping Requirement

The Permittee shall keep a record of all emissions related maintenance activities performed on the Permittee's mobile sources stationed at the facility as per manufacturer's specifications. [A.A.C. R18-2-306.A.5.a]

3. Permit Shield

Compliance with this Section shall be deemed compliance with A.A.C. R18-2-801, A.A.C. R18-2-802.A, A.A.C. R18-2-804.A and A.A.C. R18-2-804.B. [A.A.C. R18-2-325]

X. OTHER PERIODIC ACTIVITY REQUIREMENTS

A. Abrasive Blasting

Particulate Matter and Opacity Requirements

1. Emission Limitations/Standards

a. The Permittee shall not cause or allow sandblasting or other abrasive blasting without minimizing dust emissions to the atmosphere through the use of good modern practices. Good modern practices include:

i. wet blasting;

ii. effective enclosures with necessary dust collecting equipment; or

iii. any other method approved by the Director.

[A.A.C. R18-2-726]

b. Opacity

The Permittee shall not cause, allow or permit visible emissions from sandblasting or other abrasive blasting operations in excess of 20% opacity, as measured by EPA Reference Method 9. [A.A.C. R18-2-702.B]

2. Monitoring and Recordkeeping Requirement

Each time an abrasive blasting project is conducted, the Permittee shall log in ink or in an electronic format, a record of the following:

- a. The date the project was conducted;
- b. The duration of the project; and
- c. Type of control measures employed.

[A.A.C. R18-2-306.A.3.c]

3. Permit Shield

Compliance with this Part shall be deemed compliance with A.A.C. R18-2-726, A.A.C. R18-2-702.B. [A.A.C. R18-2-325]

B. Use of Paints

1. Volatile Organic Compounds

a. Emission Limitations/Standards

While performing spray painting operations, the Permittee shall comply with the following requirements:

- i. The Permittee shall not conduct or cause to be conducted any spray painting operation without minimizing organic solvent emissions. Such operations, other than architectural coating and spot painting, shall be conducted in an enclosed area equipped with controls containing no less than 96 percent of the overspray.

[A.A.C. R18-2-727.A]

- ii. The Permittee or their designated contractor shall not either:

- (a) Employ, apply, evaporate, or dry any architectural coating containing photochemically reactive solvents for industrial or commercial purposes; or

- (b) Thin or dilute any architectural coating with a photochemically reactive solvent.

[A.A.C. R18-2-727.B]

iii. For the purposes of Condition X.B.1.a.ii, a photochemically reactive solvent shall be any solvent with an aggregate of more than 20 percent of its total volume composed of the chemical compounds classified in Conditions X.B.1.a.iii(a) through X.B.1.a.iii(c) below, or which exceeds any of the following percentage composition limitations, referred to the total volume of solvent:

- (a) A combination of the following types of compounds having an olefinic or cyclo-olefinic type of unsaturation-hydrocarbons, alcohols, aldehydes, esters, ethers, or ketones: 5 percent.
- (b) A combination of aromatic compounds with eight or more carbon atoms to the molecule except ethylbenzene: 8 percent.
- (c) A combination of ethylbenzene, ketones having branched hydrocarbon structures, trichloroethylene or toluene: 20 percent.

[A.A.C. R18-2-727.C]

iv. Whenever any organic solvent or any constituent of an organic solvent may be classified from its chemical structure into more than one of the groups of organic compounds described in Conditions X.B.1.a.iii(a) through X.B.1.a.iii(c) above, it shall be considered to be a member of the group having the least allowable percent of the total volume of solvents.

[A.A.C. R18-2-727.D]

b. Monitoring and Recordkeeping Requirements

i. Each time a spray painting project is conducted, the Permittee shall log in ink, or in an electronic format, a record of the following:

- (a) The date the project was conducted;
- (b) The duration of the project;
- (c) Type of control measures employed;
- (d) Material Safety Data Sheets for all paints and solvents used in the project; and

(e) The amount of paint consumed during the project.

ii. Architectural coating and spot painting projects shall be exempt from the recordkeeping requirements of Condition X.B.1.b.i above. [A.A.C. R18-2-306.A.3.c]

c. Permit Shield

Compliance with this Part shall be deemed compliance with A.A.C. R18-2-727.

[A.A.C. R18-2-325]

2. Opacity

a. Emission Limitation/Standard

The Permittee shall not cause, allow or permit visible emissions from painting operations in excess of 20% opacity, as measured by EPA Reference Method 9. [A.A.C. R18-2-702.B]

b. Permit Shield

Compliance with the conditions of this Part shall be deemed compliance with A.A.C. R18-2-702.B. [A.A.C. R18-2-325]

C. Demolition/Renovation - Hazardous Air Pollutants

1. Emission Limitation/Standard

The Permittee shall comply with all of the requirements of 40 CFR 61 Subpart M (National Emissions Standards for Hazardous Air Pollutants - Asbestos).

[A.A.C. R18-2-1101.A.8]

2. Monitoring and Recordkeeping Requirement

The Permittee shall keep all required records in a file. The required records shall include the "NESHAP Notification for Renovation and Demolition Activities" form and all supporting documents. [A.A.C. R18-2-306.A.3.c]

3. Permit Shield

Compliance with the conditions of this Part shall be deemed compliance with A.A.C. R18-2-1101.A.8. [A.A.C. R18-2-325]

ATTACHMENT "C": EQUIPMENT LIST

**Air Quality Control Permit No. 44141
for
Nucor Steel Kingman, LLC.**

EQUIPMENT TYPE	MAX. CAPACITY	MAKE	MODEL	SERIAL NUMBER / EQUIPMENT ID NUMBER	DATE OF MFG.
Reheat Furnace	85 MMBtu/hr	Pittsburgh Industrial Furnace Company	Custom	1	1995
Hot Rolling	85 tph	Various Equipment	Entire Roll Line	N/A	1995
Generator	2500hp or less	Not Purchased	N/a		Pre-NSPS
Space Heater	0.4 MMBtu/hr	Dayton	4E462A		1997
Space Heater	0.4 MMBtu/hr	Dayton	4E462A		1997
Space Heater	0.4 MMBtu/hr	Dayton	4E462A		1997
Space Heater	0.4 MMBtu/hr	Dayton	4E462A		1997
Space Heater	0.4 MMBtu/hr	Dayton	4E462A		1997
Space Heater	0.4 MMBtu/hr	Dayton	4E462A		1997
Hot Water Heater	1.48 MMBtu/hr	Dayton	DW1480SIOOE	F9632741	1995
Hot Water Heater	1.48 MMBtu/hr	Dayton	DW1480SIOOE	F9632822	1995
Hot Water Heater	0.495 MMBtu/hr	Lochivar	CN80495	0967695	1994
Cooling Tower (2 cells)	30,000 gal/min	Ceramic Cooling Tower Company	UL 2727-75-T 5.3	UL 2031-S1	1996
Cooling Tower (3 cells)	25,000 gal/min	Ceramic Cooling Tower Company	UL 3636-200-T 5.3	UL 2030-S1	1996
Parts Washer	10gal	Mansur	500	500022889	2000
Parts Washer	30 gal	WALTER	10-400	30953	2008
Parts Washer	10 gal	Mansur	500	5008842	1999
Parts Washer	10 gal	Mansur	500	500022915	2000
Wastewater Treatment Plant	10,000 gal	Pure Stream			1996