

Synthetic Minor Determination and/or Netting Determination

Permit To Install 14-05031

AK Steel Corp

A. Source Description

This emissions unit is a Backup Coke Quench Station (F021) at AK Steel's Middletown Works integrated steel plant. The emissions unit consists of water piping and spray nozzles used for quenching coke in the quench car following the No. 2 Wilputte Coke Oven. The emissions point is fugitive and uncontrolled.

B. Facility Emissions and Attainment Status

Based on the facility potential emissions, AK Steel is classified as a major facility for New Source Review purposes and Title V. This installation will not constitute a Major Modification at a Major Source because the Synthetic Minor Potential Emissions are below the Major Modification threshold of 25 TPY of PM and 15 TPY of PM₁₀ for Major Sources. Butler County is classified as attainment for PM emissions.

C. Source Emissions

The Synthetic Minor Potential Emissions from emissions unit F021 are 24.69 TPY PM and 7.43 TPY PM₁₀. The Potential Emissions from emissions unit F021 without the rolling, 12-month Operational Restriction on the number of "pushes" are 58.6 TPY PM and 17.6 TPY PM₁₀. The Potential Emissions from emissions unit F021 without any Operational Restrictions, and assuming that emissions unit F021 operates as the only quenching station, are 791.9 TPY PM and 238.3 TPY PM₁₀.

This PTI includes a rolling, 12-month Operational Restriction stating that the maximum number of coke pushes quenched in emissions unit F021 shall not exceed 2511 pushes per year. AK Steel will maintain records of the actual number of pushes on a monthly and rolling, 12-month total basis. This PTI also includes an Operational Restriction stating that AK Steel must use only clean water in emissions unit F021 to quench the coke.

D. Conclusion

Through Operational Restrictions and emissions limits based on Best Available Technology, this permit restricts the Federally Enforceable Potential Emissions from F021 below the Significant Emission Rates of 25 TPY PM and 15 TPY PM₁₀. Therefore, this installation will not require PSD review.



State of Ohio Environmental Protection Agency

RE: DRAFT PERMIT TO INSTALL CERTIFIED MAIL
BUTLER COUNTY

Street Address:

Lazarus Gov. Center TELE: (614) 644-3020 FAX: (614) 644-2329

Mailing Address:
Lazarus Gov. Center

Application No: 14-05031

DATE: 12/21/2000

AK Steel Corp
Steve Francis
1801 Crawford St
Middletown, OH 45043

You are hereby notified that the Ohio Environmental Protection Agency has made a draft action recommending that the Director issue a Permit to Install for the air contaminant source(s) [emissions unit(s)] shown on the enclosed draft permit. This draft action is not an authorization to begin construction or modification of your emissions unit(s). The purpose of this draft is to solicit public comments on the proposed installation. A public notice concerning the draft permit will appear in the Ohio EPA Weekly Review and the newspaper in the county where the facility will be located. Public comments will be accepted by the field office within 30 days of the date of publication in the newspaper. Any comments you have on the draft permit should be directed to the appropriate field office within the comment period. A copy of your comments should also be mailed to Robert Hodanbosi, Division of Air Pollution Control, Ohio EPA, P.O. Box 1049, Columbus, OH, 43266-0149.

A Permit to Install may be issued in proposed or final form based on the draft action, any written public comments received within 30 days of the public notice, or record of a public meeting if one is held. You will be notified in writing of a scheduled public meeting. Upon issuance of a final Permit to Install a fee of \$1000 will be due. Please do not submit any payment now.

The Ohio EPA is urging companies to investigate pollution prevention and energy conservation. Not only will this reduce pollution and energy consumption, but it can also save you money. If you would like to learn ways you can save money while protecting the environment, please contact our Office of Pollution Prevention at (614) 644-3469. If you have any questions about this draft permit, please contact the field office where you submitted your application, or Mike Ahern, Field Operations & Permit Section at (614) 644-3631.

Very truly yours,

Thomas G. Rigo
Field Operations and Permit Section
Division of Air Pollution Control

CC: USEPA HCDES KY IN OH-KY IN REG COUN OF GOV
Marilyn Wall



Permit To Install

STATE OF OHIO ENVIRONMENTAL PROTECTION AGENCY

Terms and Conditions

DRAFT PERMIT TO INSTALL 14-05031

Application Number: 14-05031
APS Premise Number: 1409010006
Permit Fee: **To be entered upon final issuance**
Name of Facility: AK Steel Corp
Person to Contact: Steve Francis
Address: 1801 Crawford St
Middletown, OH 45043

Location of proposed air contaminant source(s) [emissions unit(s)]:

1801 Crawford St
Middletown, Ohio

Description of proposed emissions unit(s):

Installation of new Backup Coke Quench Station.

The above named entity is hereby granted a Permit to Install for the above described emissions unit(s) pursuant to Chapter 3745-31 of the Ohio Administrative Code. Issuance of this permit does not constitute expressed or implied approval or agreement that, if constructed or modified in accordance with the plans included in the application, the above described emissions unit(s) of environmental pollutants will operate in compliance with applicable State and Federal laws and regulations, and does not constitute expressed or implied assurance that if constructed or modified in accordance with those plans and specifications, the above described emissions unit(s) of pollutants will be granted the necessary permits to operate (air) or NPDES permits as applicable.

This permit is granted subject to the conditions attached hereto.

Ohio Environmental Protection Agency

Director

AK Steel Corp

Facility ID: 1409010006

PTI Application: 14-05031

Issued: To be entered upon final issuance

Part I - GENERAL TERMS AND CONDITIONS

A. State and Federally Enforceable Permit To Install General Terms and Conditions

1. Monitoring and Related Recordkeeping and Reporting Requirements

- a. Except as may otherwise be provided in the terms and conditions for a specific emissions unit, the permittee shall maintain records that include the following, where applicable, for any required monitoring under this permit:
 - i. The date, place (as defined in the permit), and time of sampling or measurements.
 - ii. The date(s) analyses were performed.
 - iii. The company or entity that performed the analyses.
 - iv. The analytical techniques or methods used.
 - v. The results of such analyses.
 - vi. The operating conditions existing at the time of sampling or measurement.
- b. Each record of any monitoring data, testing data, and support information required pursuant to this permit shall be retained for a period of five years from the date the record was created. Support information shall include, but not be limited to, all calibration and maintenance records and all original strip-chart recordings for continuous monitoring instrumentation, and copies of all reports required by this permit. Such records may be maintained in computerized form.
- c. Except as may otherwise be provided in the terms and conditions for a specific emissions unit, the permittee shall submit required reports in the following manner:
 - i. Reports of any required monitoring and/or recordkeeping of federally enforceable information shall be submitted to the appropriate Ohio EPA District Office or local air agency.
 - ii. Quarterly written reports of (i) any deviations from federally enforceable emission limitations, operational restrictions, and control device operating parameter limitations, excluding deviations resulting from malfunctions reported in accordance with OAC rule 3745-15-06, that have been detected by the testing, monitoring and recordkeeping requirements specified in this permit, (ii) the probable cause of such deviations, and (iii) any corrective actions or preventive measures taken, shall be made to the appropriate Ohio EPA District Office or local air agency. The written reports shall be submitted quarterly, i.e., by January 31, April 30, July 31, and October 31 of each year and shall cover the previous calendar quarters. See B.11 below if no deviations occurred during the quarter.

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- iii. Written reports, which identify any deviations from the federally enforceable monitoring, recordkeeping, and reporting requirements contained in this permit shall be submitted to the appropriate Ohio EPA District Office or local air agency every six months, i.e., by January 31 and July 31 of each year for the previous six calendar months. If no deviations occurred during a six-month period, the permittee shall submit a semi-annual report, which states that no deviations occurred during that period.
- iv. Each written report shall be signed by a responsible official certifying that, based on information and belief formed after reasonable inquiry, the statements and information in the report are true, accurate, and complete.

2. Scheduled Maintenance/Malfunction Reporting

Any scheduled maintenance of air pollution control equipment shall be performed in accordance with paragraph (A) of OAC rule 3745-15-06. The malfunction, i.e., upset, of any emissions units or any associated air pollution control system(s) shall be reported to the appropriate Ohio EPA District Office or local air agency in accordance with paragraph (B) of OAC rule 3745-15-06. (The definition of an upset condition shall be the same as that used in OAC rule 3745-15-06(B)(1) for a malfunction.) The verbal and written reports shall be submitted pursuant to OAC rule 3745-15-06.

Except as provided in that rule, any scheduled maintenance or malfunction necessitating the shutdown or bypassing of any air pollution control system(s) shall be accompanied by the shutdown of the emission unit(s) that is (are) served by such control system(s).

3. Risk Management Plans

If the permittee is required to develop and register a risk management plan pursuant to section 112(r) of the Clean Air Act, as amended, 42 U.S.C. 7401 et seq. ("Act"), the permittee shall comply with the requirement to register such a plan.

4. Title IV Provisions

If the permittee is subject to the requirements of 40 CFR Part 72 concerning acid rain, the permittee shall ensure that any affected emissions unit complies with those requirements. Emissions exceeding any allowances that are lawfully held under Title IV of the Act, or any regulations adopted thereunder, are prohibited.

5. Severability Clause

A determination that any term or condition of this permit is invalid shall not invalidate the force or effect of any other term or condition thereof, except to the extent that any other term or condition depends in whole or in part for its operation or implementation upon the term or condition declared invalid.

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6. General Requirements

- a. The permittee must comply with all terms and conditions of this permit. Any noncompliance with the federally enforceable terms and conditions of this permit constitutes a violation of the Act, and is grounds for enforcement action or for permit revocation, revocation and reissuance, or modification, or for denial of a permit renewal application.
- b. It shall not be a defense for the 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 federally enforceable terms and conditions of this permit.
- c. This permit may be modified, reopened, revoked, or revoked and reissued, for cause. The filing of a request by the permittee for a permit modification, revocation and reissuance, or revocation, or of a notification of planned changes or anticipated noncompliance does not stay any term and condition of this permit.
- d. This permit does not convey any property rights of any sort, or any exclusive privilege.
- e. The permittee shall furnish to the Director of the Ohio EPA, or an authorized representative of the Director, upon receipt of a written request and within a reasonable time, any information that may be requested to determine whether cause exists for modifying, reopening or revoking this permit or to determine compliance with this permit. Upon request, the permittee shall also furnish to the Director or an authorized representative of the Director, copies of records required to be kept by this permit. For information claimed to be confidential in the submittal to the Director, if the Administrator of the U.S. EPA requests such information, the permittee may furnish such records directly to the Administrator along with a claim of confidentiality.

7. Fees

The permittee shall pay fees to the Director of the Ohio EPA in accordance with ORC section 3745.11 and OAC Chapter 3745-78. The permittee shall pay all applicable Permit To Install fees within 30 days after the issuance of this Permit To Install.

8. Federal and State Enforceability

Only those terms and conditions designated in this permit as federally enforceable, that are required under the Act, or any of its applicable requirements, including relevant provisions designed to limit the potential to emit of a source, are enforceable by the Administrator of the U.S. EPA, the State, and citizens under the Act. All other terms and conditions of this permit shall not be federally enforceable and shall be enforceable under State law only.

9. Compliance Requirements

- a. Any document (including reports) required to be submitted and required by a federally

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applicable requirement in this permit shall include a certification by a responsible official that, based on information and belief formed after reasonable inquiry, the statements in the document are true, accurate, and complete.

- b. Upon presentation of credentials and other documents as may be required by law, the permittee shall allow the Director of the Ohio EPA or an authorized representative of the Director to:
 - i. At reasonable times, enter upon the permittee's premises where a source is located or the emissions-related activity is conducted, or where records must be kept under the conditions of this permit.
 - ii. Have access to and copy, at reasonable times, any records that must be kept under the conditions of this permit, subject to the protection from disclosure to the public of confidential information consistent with ORC section 3704.08.
 - iii. Inspect at reasonable times any facilities, equipment (including monitoring and air pollution control equipment), practices, or operations regulated or required under this permit.
 - iv. As authorized by the Act, sample or monitor at reasonable times substances or parameters for the purpose of assuring compliance with the permit and applicable requirements.
- c. The permittee shall submit progress reports to the appropriate Ohio EPA District Office or local air agency concerning any schedule of compliance for meeting an applicable requirement. Progress reports shall be submitted semiannually, or more frequently if specified in the applicable requirement or by the Director of the Ohio EPA. Progress reports shall contain the following:
 - i. Dates for achieving the activities, milestones, or compliance required in any schedule of compliance, and dates when such activities, milestones, or compliance were achieved.
 - ii. An explanation of why any dates in any schedule of compliance were not or will not be met, and any preventive or corrective measures adopted.

10. Permit To Operate Application

- a. If the permittee is required to apply for a Title V permit pursuant to OAC Chapter 3745-77, the permittee shall submit a complete Title V permit application or a complete Title V permit modification application within twelve (12) months after commencing operation of the emissions units covered by this permit. However, if the proposed new or modified source(s) would be prohibited by the terms and conditions of an existing Title V permit, a Title V permit modification must be obtained before the operation of such new or modified source(s) pursuant to OAC rule 3745-77-04(D) and OAC rule

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3745-77-08(C)(3)(d).

- b. If the permittee is required to apply for permit(s) pursuant to OAC Chapter 3745-35 , the source(s) identified in this Permit To Install is (are) permitted to operate for a period of up to one year from the date the source(s) commenced operation. Permission to operate is granted only if the facility complies with all requirements contained in this permit and all applicable air pollution laws, regulations, and policies. Pursuant to OAC Chapter 3745-35, the permittee shall submit a complete operating permit application within thirty (30) days after commencing operation of the source(s) covered by this permit.

11. Best Available Technology

As specified in OAC Rule 3745-31-05, all new sources must employ Best Available Technology (BAT). Compliance with the terms and conditions of this permit will fulfill this requirement.

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B. State Only Enforceable Permit To Install General Terms and Conditions

1. Compliance Requirements

The emissions unit(s) identified in this Permit to Install shall remain in full compliance with all applicable State laws and regulations and the terms and conditions of this permit.

2. Reporting Requirements Related to Monitoring and Recordkeeping Requirements

The permittee shall submit required reports in the following manner:

- a. Reports of any required monitoring and/or recordkeeping of state-only enforceable information shall be submitted to the appropriate Ohio EPA District Office or local air agency.
- b. Except as otherwise may be provided in the terms and conditions for a specific emissions unit, quarterly written reports of (a) any deviations (excursions) from state-only required emission limitations, operational restrictions, and control device operating parameter limitations that have been detected by the testing, monitoring, and recordkeeping requirements specified in this permit, (b) the probable cause of such deviations, and (c) any corrective actions or preventive measures which have been or will be taken, shall be submitted to the appropriate Ohio EPA District Office or local air agency. If no deviations occurred during a calendar quarter, the permittee shall submit a quarterly report, which states that no deviations occurred during that quarter. The reports shall be submitted quarterly, i.e., by January 31, April 30, July 31, and October 31 of each year and shall cover the previous calendar quarters. (These quarterly reports shall exclude deviations resulting from malfunctions reported in accordance with OAC rule 3745-15-06.)

3. Permit Transfers

Any transferee of this permit shall assume the responsibilities of the prior permit holder. The appropriate Ohio EPA District Office or local air agency must be notified in writing of any transfer of this permit.

4. Air Pollution Nuisance

The air contaminants emitted by the emissions units covered by this permit shall not cause a public nuisance, in violation of OAC rule 3745-15-07.

5. Termination of Permit To Install

This permit to install shall terminate within eighteen months of the effective date of the permit to install if the owner or operator has not undertaken a continuing program of installation or modification or has not entered into a binding contractual obligation to undertake and complete within a reasonable time a continuing program of installation or modification. This deadline may

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be extended by up to 12 months if application is made to the Director within a reasonable time before the termination date and the party shows good cause for any such extension.

6. Construction of New Sources(s)

The proposed emissions unit(s) shall be constructed in strict accordance with the plans and application submitted for this permit to the Director of the Ohio Environmental Protection Agency. There may be no deviation from the approved plans without the express, written approval of the Agency. Any deviations from the approved plans or the above conditions may lead to such sanctions and penalties as provided under Ohio law. Approval of these plans does not constitute an assurance that the proposed facilities will operate in compliance with all Ohio laws and regulations. Additional facilities shall be installed upon orders of the Ohio Environmental Protection Agency if the proposed sources are inadequate or cannot meet applicable standards.

If the construction of the proposed emissions unit(s) has already begun or has been completed prior to the date the Director of the Environmental Protection Agency approves the permit application and plans, the approval does not constitute expressed or implied assurance that the proposed facility has been constructed in accordance with the approved plans. The action of beginning and/or completing construction prior to obtaining the Director's approval constitutes a violation of OAC rule 3745-31-02. Furthermore, issuance of the Permit to Install does not constitute an assurance that the proposed source will operate in compliance with all Ohio laws and regulations. Approval of the plans in any case is not to be construed as an approval of the facility as constructed and/or completed. Moreover, issuance of the Permit to Install is not to be construed as a waiver of any rights that the Ohio Environmental Protection Agency (or other persons) may have against the applicant for starting construction prior to the effective date of the permit. Additional facilities shall be installed upon orders of the Ohio Environmental Protection Agency if the proposed facilities prove to be inadequate or cannot meet applicable standards.

7. Public Disclosure

The facility is hereby notified that this permit, and all agency records concerning the operation of this permitted source, are subject to public disclosure in accordance with OAC rule 3745-49-03.

8. Applicability

This Permit to Install is applicable only to the emissions unit(s) identified in the Permit To Install. Separate application must be made to the Director for the installation or modification of any other emissions unit(s).

9. Construction Compliance Certification

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The applicant shall provide Ohio EPA with a written certification (see enclosed form) that the facility has been constructed in accordance with the Permit To Install application and the terms and conditions of the Permit to Install. The certification shall be provided to Ohio EPA upon completion of construction but prior to startup of the source.

10. Additional Reporting Requirements When There Are No Deviations of Federally Enforceable Emission Limitations, Operational Restrictions, or Control Device Operating Parameter Limitations (See Section A of This Permit)

If no deviations occurred during a calendar quarter, the permittee shall submit a quarterly report, which states that no deviations occurred during that quarter. The reports shall be submitted quarterly, i.e., by January 31, April 30, July 31, and October 31 of each year and shall cover the previous calendar quarters.

C. Permit To Install Summary of Allowable Emissions

The following information summarizes the total allowable emissions, by pollutant, based on the individual allowable emissions of each air contaminant source identified in this permit.

**SUMMARY (for informational purposes only)
TOTAL PERMIT TO INSTALL ALLOWABLE EMISSIONS**

<u>Pollutant</u>	<u>Tons Per Year</u>
PM	24.69
PM10	7.43

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Part II - FACILITY SPECIFIC TERMS AND CONDITIONS

A. State and Federally Enforceable Permit To Install Facility Specific Terms and Conditions

None

B. State Only Enforceable Permit To Install Facility Specific Terms and Conditions

None

Part III - SPECIAL TERMS AND CONDITIONS FOR SPECIFIC EMISSIONS UNIT(S)

A. State and Federally Enforceable Section

I. Applicable Emissions Limitations and/or Control Requirements

1. The specific operations(s), property, and/or equipment which constitute this emissions unit are listed in the following table along with the applicable rules and/or requirements and with the applicable emissions limitations and/or control measures. Emissions from this unit shall not exceed the listed limitations, and the listed control measures shall be specified in narrative form following the table.

<u>Operations, Property, and/or Equipment</u>	<u>Applicable Rules/Requirements</u>	<u>Applicable Emissions Limitations/Control Measures</u>
F021 - 112 TPH Backup Coke Quench Station	OAC rule 3745-31-05(A)(3)	180.8 lbs/hr PM 54.4 lbs/hr PM ₁₀ See Terms and Conditions A.2.a., A.2.b. and A.II.2. The requirements of this rule also include compliance with the requirements of OAC rule 3745-17-07(B)(1), OAC rule 3745-17-08(B) and OAC rule 3745-31-05(D).
	OAC rule 3745-31-05(D) (Synthetic Minor to avoid PSD)	24.69 TPY PM and 7.43 TPY PM ₁₀ , based upon rolling, 12-month summation.
	OAC rule 3745-17-07(B)(1)	See Term and Condition A.II.1. Visible particulate emissions of fugitive dust from this emissions unit shall not exceed 20 percent opacity, as a three-minute average, except as specified by rule.
	OAC rule 3745-17-08(B)	The permittee shall minimize visible emissions of fugitive dust such that this emissions unit demonstrates compliance with OAC rule 3745-17-07(B)(1).

2. Additional Terms and Conditions

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- 2.a** The permittee shall restrict the operation of this emissions unit to only those times when the Wilputte Quench Tower (emissions unit P043) is out of service due to repairs or maintenance subject to OAC rule 3745-15-06(A) or malfunctions subject to OAC rule 3745-15-06(B).
- 2.b** Compliance with OAC rule 3745-31-05(A)(3) shall be demonstrated by compliance with the visible emission limitations, Operational Restrictions in Terms A.II.1. and A.II.2. and compliance with Additional Term and Condition A.2.a.
- 2.c** The hourly emission limitation(s) outlined are based upon the emissions unit’s Potential to Emit (PTE). Therefore, no hourly records are required to demonstrate compliance with these limits.

II. Operational Restrictions

- 1. The maximum number of pushes from the No. 2 Coke Oven (emissions unit B918) quenched in this emissions unit shall not exceed 2511 pushes per year, based upon a rolling, 12-month summation.

To ensure enforceability during the first 12 calendar months of operation following the issuance of this permit, the permittee shall not exceed the production levels specified in the following table:

<u>Month</u>	<u>Production (number of pushes)</u>	Maximum Allowable Cumulative
1	1256	
1-2	1256	
1-3	1256	
1-4	1256	
1-5	1256	
1-6	1256	

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Emissions Unit ID: F021

1-7	1465
1-8	1674
1-9	1883
1-10	2093
1-11	2302
1-12	2511

After the first 12 calendar months of operation following the issuance of this permit, compliance with the annual production rate limitation shall be based upon a rolling, 12-month summation of the production rates.

2. The permittee shall employ clean quench water with a total dissolved solids concentration of equal to or less than 1500 mg/L during the coke quenching operation. The permittee shall not employ direct by-product contact water in the quenching operation.

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III. Monitoring and/or Recordkeeping Requirements

1. The permittee shall maintain monthly records of the following information:
 - a. the number of pushes from the No. 2 Coke Oven (B918) quenched in this emissions unit;
 - b. beginning after the first 12 calendar months of operation following the issuance of this permit, the rolling, 12-month summation of the number of pushes from the No. 2 Coke Oven quenched in this emissions unit; and
 - c. beginning after the first 12 calendar months of operation following the issuance of this permit, the rolling, 12-month summation of the PM and PM₁₀ emissions.

Also during the first 12 calendar months of operation following issuance of this permit, the permittee shall record the cumulative production rate for each calendar month.

2. The permittee shall collect a monthly sample of the water employed in this emissions unit which shall be analyzed for concentration of total dissolved solids, in mg/L. If the emissions unit does not operate during that month, no sample is required.

IV. Reporting Requirements

1. The permittee shall notify HCDES, in writing, of any time this emissions unit is operated in place of the Wilputte Quench Tower (P043). The notification may coincide with the report required by OAC rule 3745-15-06(A) or OAC rule 3745-15-06(B) for the scheduled maintenance or malfunction of the Wilputte Coke Tower (P043). The notification shall be made at least two weeks prior to any scheduled maintenance on emissions unit P043. The notification shall be made immediately in cases where a malfunction of emissions unit P043 has taken place. The notification shall include an estimate of the number of days the Backup Coke Quench Station will be employed in place of the Wilputte Coke Tower. A written record shall be sent to the Hamilton County Department of Environmental Services.
2. During operation of this emissions unit in place of emissions unit P043, the permittee shall submit weekly reports to the Hamilton County Department of Environmental Services documenting the amount of PM and PM₁₀ emissions, in tons.
3. The permittee shall submit deviation (excursion) reports that identify all exceedances of the rolling, 12-month limitation on the number of pushes and, for the first 12 calendar months of

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operation following the issuance of this permit, all exceedances of the maximum allowable cumulative number of pushes. If no exceedances occurred, then the permittee shall state so in the report. The permittee shall submit the reports to the Hamilton County Department of Environmental Services.

4. The permittee shall submit deviation (excursion) reports that identify any records showing that the total dissolved solids concentration exceeds the allowable limit in Additional Term and Condition A.II.2. If no deviations occurred, then the permittee shall state so in the report. The permittee shall submit the reports to the Hamilton County Department of Environmental Services.
5. The deviation reports shall be submitted in accordance with the reporting requirements of the General Terms and Conditions of this permit.

V. Testing Requirements

1. Emissions Limits

180.8 lbs/hr PM
54.4 lbs/hr PM₁₀

Compliance with the mass PM and PM₁₀ emissions limits shall be demonstrated by using emission factors from AP-42 Tables 12.2-2 and 12.2-4, Coke Production, September 2000 and information supplied by the permittee in the following equations:

actual coke production (tons coke /hr) x coke yield (tons coal/ton coke) x E.F. (1.13 lb PM/ton coal) = lbs/hr PM

actual coke production (tons coke /hr) x coke yield (tons coal/ton coke) x E.F. (0.34 lb PM₁₀/ton coal) = lbs/hr PM₁₀

2. Emissions Limits

24.69 TPY PM (rolling, 12-month summation)
7.43 TPY PM₁₀ (rolling, 12-month summation)

Compliance with the mass PM and PM₁₀ emissions limits shall be demonstrated by using emission factors from AP-42 Tables 12.2-2 and 12.2-4, Coke Production, September 2000 and information supplied by the permittee in the following equations:

actual coke production (number of pushes/yr) x coal input (tons coal/push) x E.F. (1.13 lb PM/ton coal) x ton/2000 lbs = TPY PM

Emissions Unit ID: F021

actual coke production (number of pushes/yr) x coal input (tons coal/push) x E.F. (0.34 lb PM₁₀/ton coal) x ton/2000 lbs = TPY PM₁₀.

3. Compliance with the production limitation in term A.II.1 shall be demonstrated by the recordkeeping in term A.III.1.
4. Compliance with the total dissolved limitation in term A.II.2 shall be demonstrated by the recordkeeping in term A.III.2.

VI. Miscellaneous Requirements

1. If probable cause exists indicating this emissions unit is causing or contributing to a nuisance in violation of Ohio Administrative Code rule 3745-15-07, the owner or operator of this emissions unit shall be required to submit and implement a control program which will bring this source into compliance.

AK St
PTI A

Emissions Unit ID: F021

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B. State Only Enforceable Section

I. Applicable Emissions Limitations and/or Control Requirements

- 1. The specific operations(s), property, and/or equipment which constitute this emissions unit are listed in the following table along with the applicable rules and/or requirements and with the applicable emissions limitations and/or control measures. Emissions from this unit shall not exceed the listed limitations, and the listed control measures shall be specified in narrative form following the table.

<u>Operations, Property, and/or Equipment</u>	<u>Applicable Rules/Requirements</u>	<u>Applicable Emissions Limitations/Control Measures</u>
F021 - 112 TPH Backup Coke Quench Station	None	

2. Additional Terms and Conditions

2.a None

II. Operational Restrictions

None

III. Monitoring and/or Recordkeeping Requirements

None

IV. Reporting Requirements

None

V. Testing Requirements

None

VI. Miscellaneous Requirements

None

NEW SOURCE REVIEW FORM B

PTI Number: 14-05031 Facility ID: 1409010006

FACILITY NAME AK Steel Corp

FACILITY DESCRIPTION Installation of new Backup Coke Quench Station. CITY/TWP Middletown

SIC CODE 3312 SCC CODE 3-03-003-04 EMISSIONS UNIT ID F021

EMISSIONS UNIT DESCRIPTION 112 TPH Backup Coke Quench Station

DATE INSTALLED December 2000

EMISSIONS: (Click on bubble help for Air Quality Descriptions)

Pollutants	Air Quality Description	Actual Emissions Rate		PTI Allowable	
		Short Term Rate	Tons Per Year	Short Term Rate	Tons Per Year
Particulate Matter	Attainment	180.8	24.69	180.8	24.69
PM ₁₀	Attainment	54.4	7.43	54.4	7.43
Sulfur Dioxide					
Organic Compounds					
Nitrogen Oxides					
Carbon Monoxide					
Lead					
Other: Air Toxics					

APPLICABLE FEDERAL RULES:

NSPS? NESHAP? PSD? OFFSET POLICY?

WHAT IS THE BAT DETERMINATION, AND WHAT IS THE BASIS FOR THE DETERMINATION?

Enter Determination Compliance with OAC rule 3745-31-05(A)(3) shall be demonstrated by compliance with the opacity limitation, Operational Restrictions in Terms A.II.1. and A.II.2. and compliance with Additional Term and Condition A.2.a.

IS THIS SOURCE SUBJECT TO THE AIR TOXICS POLICY? No

OPTIONAL: WHAT IS THE CAPITAL COST OF CONTROL EQUIPMENT? \$0

TOXIC AIR CONTAMINANTS

Ohio EPA's air toxics policy applies to contaminants for which the American Conference of Governmental Industrial Hygienists (ACGIH) has a listed threshold limit value.

AIR TOXICS MODELING PERFORMED*? _____ YES _____ NO

IDENTIFY THE AIR CONTAMINANTS: _____

NEW SOURCE REVIEW FORM B

PTI Number: 14-05031

Facility ID: 1409010006

FACILITY NAME AK Steel Corp

FACILITY DESCRIPTION Installation of new Backup Coke Quench Station. CITY/TWP Middletown

Ohio EPA Permit to Install Information Form Please describe below any documentation which is being submitted with this recommendation (must be sent the same day). Electronic items should be submitted with the e-mail transmitting the PTI terms, and in software that CO can utilize. If mailing any hard copy, this section must be printed as a cover page. All items must be clearly labeled indicating the PTI name and number. Submit **hard copy items to Pam McGraner**, AQM&P, DAPC, Central Office, and electronic files to airpti@epa.state.oh.us

Please fill out the following. If the checkbox does not work, replace it with an 'X'

	Electronic	<u>Additional information</u> File Name Convention (your PTI # plus this letter)	<u>Hard Copy</u>	<u>None</u>
Calculations (required)	<input type="checkbox"/>	0000000c.wpd	<input checked="" type="checkbox"/>	
Modeling form/results	<input type="checkbox"/>	0000000s.wpd	<input type="checkbox"/>	<input checked="" type="checkbox"/>
PTI Application (complete or partial)*	<input type="checkbox"/>	0000000a.wpd	<input type="checkbox"/>	<input checked="" type="checkbox"/>
BAT Study	<input type="checkbox"/>	0000000b.wpd	<input type="checkbox"/>	<input checked="" type="checkbox"/>
Other/misc.	<input type="checkbox"/>	0000000t.wpd	<input type="checkbox"/>	<input checked="" type="checkbox"/>

* Mandatory for netting, PSD, nonattainment NSR, 112(g), 21-07(G)(9)(g) and 21-09(U)(2)(f) - 2 complete copies.

Please complete (see comment bubble to the left for additional instructions):

[NSR Discussion](#)

Permit to Install Narrative
PTI 14-05031

AK Steel Corporation
Middletown Works
1801 Crawford Street
Middletown, Ohio 45043

OEPA Premise #: 1409010006

This Permit to Install allows AK Steel to install a 112 TPH Backup Coke Quench Station at the facility's Middletown Works. This quench station (F021) will act as source to quench hot coke from AK Steel's No. 2 Coke Oven (B918) when the primary Wilputte Quench Tower (P043) is out of service.

AK Steel installed emissions unit F021 prior to obtaining a PTI in compliance with OAC rule 3745-31-03(A)(3)(b) - Director's exemption. The facility complied with the requirements of the Director's letter dated September 5, 2000. This PTI is for the continued operation of emissions unit F021 as a backup quench station since the repairs to emissions unit P043 have been completed.

Emissions unit F021 will operate as an uncontrolled fugitive emissions unit. BAT will require compliance with the annual Operational Restriction on number of pushes and compliance with the Additional Term and Condition stipulating that AK Steel may operate emissions unit F021 only if emissions unit P043 is out of service for repairs or maintenance subject to OAC rule 3745-15-06(A) or malfunctions subject to OAC rule 3745-15-06(B).

Emissions unit F021 will be limited to quenching 2511 pushes per year (approximately 27 days at full capacity of the

NEW SOURCE REVIEW FORM B

PTI Number: 14-05031 Facility ID: 1409010006

FACILITY NAME AK Steel Corp

FACILITY DESCRIPTION	CITY/TWP
Installation of new Backup Coke Quench Station.	Middletown

coke oven) based on a rolling, 12-month summation. AK Steel will record rolling, 12-month summation of the number of pushes per year when operating emissions unit F021. The facility must also notify HCDES when emissions unit F021 is operating in place of emissions unit P043.

Applicable rules: OAC rules 3745-17-07(B)(1), 17-08(B), 31-05(A)(3), 31-05(D).

OAC rule 3745-31-28 does not apply since this is a modification of an existing emissions unit.

Allowable Emissions (Synthetic Minor): 180.8 lbs/hr PM, 24.69 TPY PM; 54.4 lbs/hr PM₁₀, 7.43 TPY PM₁₀. Potential Emissions: 58.6 TPY PM, 17.6 TPY PM₁₀ without Operational Restriction; 791.9 TPY PM, 238.3 TPY PM₁₀ assuming 8760 hours/year. Since AK Steel is classified as a Title V facility, the Terms and Conditions are classified as State/Federal. This PTI will be a Synthetic Minor PTI so that the installation will not constitute a "Major Modification" at a Major Source, thus avoiding PSD review.

Fee Calculation: 112 TPH = 224,000 lbs/hr Process Weight Rate

According to Fee Schedule PWR > 50000 lbs/hr = \$1000

Prepared by: Kurt Smith

Date prepared: November 6, 2000

Please complete for these type permits (For PSD/NSR Permit, place mouse over this text):

Synthetic Minor Determination and/or **Netting Determination**

Permit To Install ENTER PTI NUMBER HERE

A. Source Description

This emissions unit is a Backup Coke Quench Station (F021) at AK Steel's Middletown Works integrated steel plant. The emissions unit consists of water piping and spray nozzles used for quenching coke in the quench car following the No. 2 Wilputte Coke Oven. The emissions point is fugitive and uncontrolled.

B. Facility Emissions and Attainment Status

Based on the facility potential emissions, AK Steel is classified as a major facility for New Source Review purposes and Title V. This installation will not constitute a Major Modification at a Major Source because the Synthetic Minor Potential Emissions are below the Major Modification threshold of 25 TPY of PM and 15 TPY of PM₁₀ for Major Sources. Butler County is classified as attainment for PM emissions.

C. Source Emissions

The Synthetic Minor Potential Emissions from emissions unit F021 are 24.69 TPY PM and 7.43 TPY PM₁₀. The Potential Emissions from emissions unit F021 without the rolling, 12-month Operational Restriction on the number of "pushes" are 58.6 TPY PM and 17.6 TPY PM₁₀. The Potential Emissions from emissions unit F021

NEW SOURCE REVIEW FORM B

PTI Number: 14-05031 Facility ID: 1409010006

FACILITY NAME AK Steel Corp

FACILITY DESCRIPTION	Installation of new Backup Coke Quench Station.	CITY/TWP	Middletown
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without any Operational Restrictions, and assuming that emissions unit F021 operates as the only quenching station, are 791.9 TPY PM and 238.3 TPY PM₁₀.

This PTI includes a rolling, 12-month Operational Restriction stating that the maximum number of coke pushes quenched in emissions unit F021 shall not exceed 2511 pushes per year. AK Steel will maintain records of the actual number of pushes on a monthly and rolling, 12-month total basis. This PTI also includes an Operational Restriction stating that AK Steel must use only clean water in emissions unit F021 to quench the coke.

D. Conclusion

Through Operational Restrictions and emissions limits based on Best Available Technology, this permit restricts the Federally Enforceable Potential Emissions from F021 below the Significant Emission Rates of 25 TPY PM and 15 TPY PM₁₀. Therefore, this installation will not require PSD review.

PLEASE PROVIDE ADDITIONAL NOTES OR COMMENTS AS NECESSARY:

NONE

Please complete:

SUMMARY (for informational purposes only)	
TOTAL PERMIT TO INSTALL ALLOWABLE EMISSIONS	
<u>Pollutant</u>	<u>Tons Per Year</u>
PM	24.69
PM10	7.43