LANCE R. LEFLEUR
DIRECTOR

KAY IVEY
GOVERNOR

Alabama Department of Environmental Management
adem.alabama.gov
1400 Coliseum Blvd. 36110-2400 ▪ Post Office Box 301463
Montgomery, Alabama 36130-1463
(334) 271-7700 ▪ FAX (334) 271-7950

MAY 6, 2024

KEVIN BARKSDALE
GENERAL MANAGER AND VICE PRESIDENT
NUCOR STEEL BIRMINGHAM, INC.
2301 FL SHUTTLESWORTH DRIVE
BIRMINGHAM, AL 35234

RE: REVISED DRAFT PERMIT
NPDES PERMIT NUMBER AL0003735

Dear Mr. Barksdale:

Transmitted herein is a Revised Draft of the referenced permit.

We would appreciate your comments on the permit within **30 days** of the date of this letter. Please direct any comments of a technical or administrative nature to the undersigned.

By copy of this letter and the Revised Draft permit, we are also requesting comments within the same time frame from EPA.

Our records indicate that have utilized the Department's web-based electronic environmental (E2) reporting system for submittal of discharge monitoring reports (DMRs). The Department transitioned from the E2 Reporting System to the Alabama Environmental Permitting and Compliance System (AEPACS) for the submittal of DMRs on November 15, 2021. AEPACS is an electronic system that allows facilities to apply for and maintain permits as well as submit other required applications, registrations, and certifications. In addition, the system allows facilities to submit required compliance reports or other information to the Department. The Department has used the E2 User account information to set up a similar User Profile in AEPACS based on the following criteria:

1. The user has logged in to E2 since October 1, 2019; and
2. The E2 user account is set up using a unique email address.

E2 users that met the above criteria will only need to establish an ADEM Web Portal account (https://prd.adem.alabama.gov/awp) under the same email address as their E2 account to have the same permissions in AEPACS as they did in E2. They will also automatically be linked to the same facilities they were in E2.

The Alabama Department of Environmental Management encourages you to voluntarily consider pollution prevention practices and alternatives at your facility. Pollution Prevention may assist you in complying with effluent limitations, and possibly reduce or eliminate monitoring requirements.

If you have questions regarding this permit or monitoring requirements, please contact Wayne Holt by e-mail at **WHolt@adem.alabama.gov** or by phone at **(334) 271-7847.**

Sincerely,

Scott Ramsey, Chief
Industrial Section
Industrial/Municipal Branch
Water Division

Enclosure: Revised Draft Permit

pc via website: Montgomery Field Office
EPA Region IV
U.S. Fish & Wildlife Service
AL Historical Commission
Advisory Council on Historic Preservation
Department of Conservation and Natural Resources

Birmingham Branch
110 Vulcan Road
Birmingham, AL 35209-4702
(205) 942-6168
(205) 941-1603 (FAX)

Decatur Branch
2715 Sandlin Road, S.W.
Decatur, AL 35603-1333
(256) 353-1713
(256) 340-9359 (FAX)

Mobile Branch
2204 Perimeter Road
Mobile, AL 36615-1131
(251) 450-3400
(251) 479-2593 (FAX)

Mobile-Coastal
3664 Dauphin Street, Suite B
Mobile, AL 36608
(251) 304-1176
(251) 304-1189 (FAX)

Alabama Department of Environmental Management

NATIONAL POLLUTANT DISCHARGE ELIMINATION SYSTEM PERMIT

PERMITTEE: NUCOR STEEL BIRMINGHAM, INC.

FACILITY LOCATION: NUCOR STEEL BIRMINGHAM, INC.
2301 FL SHUTTLESWORTH DRIVE
BIRMINGHAM, ALABAMA 35234
JEFFERSON COUNTY

PERMIT NUMBER: AL0003735

RECEIVING WATERS: 001 - VILLAGE CREEK
002 - VILLAGE CREEK

In accordance with and subject to the provisions of the Federal Water Pollution Control Act, as amended, 33 U.S.C. §§1251-1388 (the "FWPCA"), the Alabama Water Pollution Control Act, as amended, Code of Alabama 1975, §§ 22-22-1 to 22-22-14 (the "AWPCA"), the Alabama Environmental Management Act, as amended, Code of Alabama 1975, §§22-22A-1 to 22-22A-17, and rules and regulations adopted thereunder, and subject further to the terms and conditions set forth in this permit, the Permittee is hereby authorized to discharge into the above-named receiving waters.

ISSUANCE DATE:

EFFECTIVE DATE:

EXPIRATION DATE:

REVISED DRAFT

Alabama Department of Environmental Management

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PART I: DISCHARGE LIMITATIONS, CONDITIONS, AND REQUIREMENTS

A. DISCHARGE LIMITATIONS AND MONITORING REQUIREMENTS

DSN 001-1: Groundwater and storm water associated with steel mill operations. 3/

During the period beginning on the effective date of this permit and lasting through the expiration date of this permit, the Permittee is authorized to discharge from the outfall(s) listed above and described more fully in the Permittee's application. Such discharges shall be limited and monitored by the Permittee as specified below:

Parameter	Quantity or Loading		Units	Quality or Concentration			Units	Sample Frequency[2]	Sample Type[1]	Seasonal
pH (00400) Effluent Gross Value	*****	*****	*****	(Report) Minimum Daily	*****	(Report) Maximum Daily	S.U.	Monthly	Grab	All Months
Solids, Total Suspended (00530) Effluent Gross Value	*****	*****	*****	*****	*****	(Report) Maximum Daily	mg/l	Monthly	Grab	All Months
Oil & Grease (00556) Effluent Gross Value	*****	*****	*****	*****	*****	15 Maximum Daily	mg/l	Monthly	Grab	All Months
Cyanide, Total (As CN) (00720) Effluent Gross Value	*****	*****	*****	*****	*****	(Report) Maximum Daily	mg/l	Monthly	Grab	All Months
Zinc Total Recoverable (01094) Effluent Gross Value 5/	*****	*****	*****	*****	*****	(Report) Maximum Daily	mg/l	Monthly	Grab	All Months
Copper Total Recoverable (01119) Effluent Gross Value 5/	*****	*****	*****	*****	*****	(Report) Maximum Daily	mg/l	Monthly	Grab	All Months
Flow, In Conduit or Thru Treatment Plant (50050) Effluent Gross Value	*****	(Report) Maximum Daily	MGD	*****	*****	*****	*****	Monthly	Estimate	All Months

THE DISCHARGE SHALL HAVE NO SHEEN, AND THERE SHALL BE NO DISCHARGE OF VISIBLE OIL, FLOATING SOLIDS OR VISIBLE FOAM IN OTHER THAN TRACE AMOUNTS.

1/ Samples collected to comply with the monitoring requirements specified above shall be collected at the following location: At the nearest accessible location just prior to discharge and after final treatment. Unless otherwise specified, composite samples shall be time composite samples collected using automatic sampling equipment or a minimum of eight (8) equal volume grab samples collected over equal time intervals. All composite samples shall be collected for the total period of discharge not to exceed 24 hours.

2/ If only one sampling event occurs during a month, the sample result shall be reported on the discharge monitoring report as both the monthly average and daily maximum value for all parameters with a monthly average limitation.

3/ See Part IV.A for Best Management Practices (BMP) Plan Requirements.

4/ See Part IV.B for Stormwater Measurement and Sampling Requirements.

5/ For purposes of compliance with this parameter, "Total" and "Total Recoverable" shall be considered equivalent.

DSN 001-Q: Groundwater and storm water associated with steel mill operations. 3/

During the period beginning on the effective date of this permit and lasting through the expiration date of this permit, the Permittee is authorized to discharge from the outfall(s) listed above and described more fully in the Permittee's application. Such discharges shall be limited and monitored by the Permittee as specified below:

Parameter	Quantity or Loading		Units	Quality or Concentration			Units	Sample Frequency[2]	Sample Type[1]	Seasonal
Magnesium, Total (As Mg) (00927) Effluent Gross Value 5/	*****	*****	*****	*****	*****	(Report) Maximum Daily	mg/l	Quarterly	Grab	All Months
Iron Total Recoverable (00980) Effluent Gross Value 5/	*****	*****	*****	*****	*****	(Report) Maximum Daily	mg/l	Quarterly	Grab	All Months
Aluminum, Total Recoverable (01104) Effluent Gross Value 5/	*****	*****	*****	*****	*****	(Report) Maximum Daily	mg/l	Quarterly	Grab	All Months
Manganese, Total Recoverable (11123) Effluent Gross Value 5/	*****	*****	*****	*****	*****	(Report) Maximum Daily	mg/l	Quarterly	Grab	All Months

THE DISCHARGE SHALL HAVE NO SHEEN, AND THERE SHALL BE NO DISCHARGE OF VISIBLE OIL, FLOATING SOLIDS OR VISIBLE FOAM IN OTHER THAN TRACE AMOUNTS.

1/ Samples collected to comply with the monitoring requirements specified above shall be collected at the following location: At the nearest accessible location just prior to discharge and after final treatment. Unless otherwise specified, composite samples shall be time composite samples collected using automatic sampling equipment or a minimum of eight (8) equal volume grab samples collected over equal time intervals. All composite samples shall be collected for the total period of discharge not to exceed 24 hours.

2/ If only one sampling event occurs during a month, the sample result shall be reported on the discharge monitoring report as both the monthly average and daily maximum value for all parameters with a monthly average limitation.

3/ See Part IV.A for Best Management Practices (BMP) Plan Requirements.

4/ See Part IV.B for Stormwater Measurement and Sampling Requirements.

5/ For purposes of compliance with this parameter, "Total" and "Total Recoverable" shall be considered equivalent.

DSN 002-1: Groundwater, storm water, and process waters associated with steel mill operations. 3/

During the period beginning on the effective date of this permit and lasting through the expiration date of this permit, the Permittee is authorized to discharge from the outfall(s) listed above and described more fully in the Permittee's application. Such discharges shall be limited and monitored by the Permittee as specified below:

Parameter	Quantity or Loading		Units	Quality or Concentration			Units	Sample Frequency[2]	Sample Type[1]	Seasonal
pH (00400) Effluent Gross Value	*****	*****	*****	6.0 Minimum Daily	*****	8.5 Maximum Daily	S.U.	Weekly	Grab	All Months
Solids, Total Suspended (00530) Effluent Gross Value	448 Monthly Average	852 Maximum Daily	lbs/day	*****	*****	*****	*****	Weekly	Composite	All Months
Oil & Grease (00556) Effluent Gross Value	23.6 Monthly Average	361 Maximum Daily	lbs/day	*****	*****	*****	*****	Weekly	Grab	All Months
Nitrogen, Ammonia Total (As N) (00610) Effluent Gross Value	*****	*****	*****	*****	*****	(Report) Maximum Daily	mg/l	Monthly	Composite	All Months
Nitrogen, Nitrate Total (As N) (00620) Effluent Gross Value	*****	*****	*****	*****	*****	(Report) Maximum Daily	mg/l	Monthly	Composite	Apr, May, Jun, Jul, Aug, Sep, Oct
Phosphorus, Total (As P) (00665) Effluent Gross Value	*****	*****	*****	*****	*****	(Report) Maximum Daily	mg/l	Monthly	Composite	Apr, May, Jun, Jul, Aug, Sep, Oct
Lead, Total (As Pb) (01051) Effluent Gross Value	0.216 Monthly Average	0.381 Maximum Daily	lbs/day	*****	*****	*****	*****	Once/2 Weeks	Composite	All Months
Zinc, Total (As Zn) (01092) Effluent Gross Value	0.325 Monthly Average	0.897 Maximum Daily	lbs/day	*****	*****	*****	*****	Once/2 Weeks	Composite	All Months
Flow, In Conduit or Thru Treatment Plant (50050) Effluent Gross Value	(Report) Monthly Average	(Report) Maximum Daily	MGD	*****	*****	*****	*****	Daily	Totalizer	All Months

THE DISCHARGE SHALL HAVE NO SHEEN, AND THERE SHALL BE NO DISCHARGE OF VISIBLE OIL, FLOATING SOLIDS OR VISIBLE FOAM IN OTHER THAN TRACE AMOUNTS.

1/ Samples collected to comply with the monitoring requirements specified above shall be collected at the following location: At the nearest accessible location just prior to discharge and after final treatment. Unless otherwise specified, composite samples shall be time composite samples collected using automatic sampling equipment or a minimum of eight (8) equal volume grab samples collected over equal time intervals. All composite samples shall be collected for the total period of discharge not to exceed 24 hours.

2/ If only one sampling event occurs during a month, the sample result shall be reported on the discharge monitoring report as both the monthly average and daily maximum value for all parameters with a monthly average limitation.

3/ See Part IV.A for Best Management Practices (BMP) Plan Requirements.

DSN 002-1 (Continued): Groundwater, storm water, and process waters associated with steel mill operations. 3/

During the period beginning on the effective date of this permit and lasting through the expiration date of this permit, the Permittee is authorized to discharge from the outfall(s) listed above and described more fully in the Permittee's application. Such discharges shall be limited and monitored by the Permittee as specified below:

Parameter	Quantity or Loading		Units	Quality or Concentration			Units	Sample Frequency[2]	Sample Type[1]	Seasonal
Production Divided By Days Operated Mo. (51182) O - See Comments Below	(Report) Monthly Average	(Report) Maximum Daily	lbs/day	*****	*****	*****	*****	Daily	Calculated	All Months
Production Divided By Days Operated Mo. (51182) P - See Comments Below	(Report) Monthly Average	(Report) Maximum Daily	lbs/day	*****	*****	*****	*****	Daily	Calculated	All Months
BOD, Carbonaceous 05 Day, 20C (80082) Effluent Gross Value	*****	*****	*****	*****	*****	(Report) Maximum Daily	mg/l	Monthly	Composite	All Months

THE DISCHARGE SHALL HAVE NO SHEEN, AND THERE SHALL BE NO DISCHARGE OF VISIBLE OIL, FLOATING SOLIDS OR VISIBLE FOAM IN OTHER THAN TRACE AMOUNTS.

1/ Samples collected to comply with the monitoring requirements specified above shall be collected at the following location: At the nearest accessible location just prior to discharge and after final treatment. Unless otherwise specified, composite samples shall be time composite samples collected using automatic sampling equipment or a minimum of eight (8) equal volume grab samples collected over equal time intervals. All composite samples shall be collected for the total period of discharge not to exceed 24 hours.

2/ If only one sampling event occurs during a month, the sample result shall be reported on the discharge monitoring report as both the monthly average and daily maximum value for all parameters with a monthly average limitation.

3/ See Part IV.A for Best Management Practices (BMP) Plan Requirements.

DSN 002-Q: Groundwater, storm water, and process waters associated with steel mill operations. 3/

During the period beginning on the effective date of this permit and lasting through the expiration date of this permit, the Permittee is authorized to discharge from the outfall(s) listed above and described more fully in the Permittee's application. Such discharges shall be limited and monitored by the Permittee as specified below:

Parameter	Quantity or Loading		Units	Quality or Concentration			Units	Sample Frequency[2]	Sample Type[1]	Seasonal
Magnesium, Total (As Mg) (00927) Effluent Gross Value 4/	*****	*****	*****	*****	*****	(Report) Maximum Daily	mg/l	Quarterly	Composite	All Months
Iron Total Recoverable (00980) Effluent Gross Value 4/	*****	*****	*****	*****	*****	(Report) Maximum Daily	mg/l	Quarterly	Composite	All Months
Aluminum, Total Recoverable (01104) Effluent Gross Value 4/	*****	*****	*****	*****	*****	(Report) Maximum Daily	mg/l	Quarterly	Composite	All Months
Manganese, Total Recoverable (11123) Effluent Gross Value 4/	*****	*****	*****	*****	*****	(Report) Maximum Daily	mg/l	Quarterly	Composite	All Months

THE DISCHARGE SHALL HAVE NO SHEEN, AND THERE SHALL BE NO DISCHARGE OF VISIBLE OIL, FLOATING SOLIDS OR VISIBLE FOAM IN OTHER THAN TRACE AMOUNTS.

1/ Samples collected to comply with the monitoring requirements specified above shall be collected at the following location: At the nearest accessible location just prior to discharge and after final treatment. Unless otherwise specified, composite samples shall be time composite samples collected using automatic sampling equipment or a minimum of eight (8) equal volume grab samples collected over equal time intervals. All composite samples shall be collected for the total period of discharge not to exceed 24 hours.

2/ If only one sampling event occurs during a month, the sample result shall be reported on the discharge monitoring report as both the monthly average and daily maximum value for all parameters with a monthly average limitation.

3/ See Part IV.A for Best Management Practices (BMP) Plan Requirements.

4/ For purposes of compliance with this parameter, "Total" and "Total" Recoverable" shall be considered equivalent.

DSN 002-T: Groundwater, storm water, and process waters associated with steel mill operations.

During the period beginning on the effective date of this permit and lasting through the expiration date of this permit, the Permittee is authorized to discharge from the outfall(s) listed above and described more fully in the Permittee's application. Such discharges shall be limited and monitored by the Permittee as specified below:

Parameter	Quantity or Loading		Units	Quality or Concentration			Units	Sample Frequency[2]	Sample Type[1]	Seasonal
Toxicity, Ceriodaphnia Chronic (61426) Effluent Gross Value 3/	*****	0 Maximum Daily	pass=0; fail=1	*****	*****	*****	*****	Monthly	Composite	All Months
Toxicity, Pimephales Chronic (61428) Effluent Gross Value 3/	*****	0 Maximum Daily	pass=0; fail=1	*****	*****	*****	*****	Monthly	Composite	All Months

THE DISCHARGE SHALL HAVE NO SHEEN, AND THERE SHALL BE NO DISCHARGE OF VISIBLE OIL, FLOATING SOLIDS OR VISIBLE FOAM IN OTHER THAN TRACE AMOUNTS.

1/ Samples collected to comply with the monitoring requirements specified above shall be collected at the following location: At the nearest accessible location just prior to discharge and after final treatment. Unless otherwise specified, composite samples shall be time composite samples collected using automatic sampling equipment or a minimum of eight (8) equal volume grab samples collected over equal time intervals. All composite samples shall be collected for the total period of discharge not to exceed 24 hours.

2/ If only one sampling event occurs during a month, the sample result shall be reported on the discharge monitoring report as both the monthly average and daily maximum value for all parameters with a monthly average limitation.

3/ See Part IV.D for Effluent Toxicity Limitations and Biomonitoring Requirements.

B. Discharge Monitoring and Record Keeping Requirements

1. Representative Sampling

Samples and measurements taken as required herein shall be representative of the volume and nature of the monitored discharge and shall be in accordance with the provisions of this permit.

2. Test Procedures

For the purpose of reporting and compliance, permittees shall use one of the following procedures:

a. For parameters with an EPA established Minimum Level (ML), report the measured value if the analytical result is at or above the ML and report "0" for values below the ML. Test procedures for the analysis of pollutants shall conform to 40 CFR Part 136 and guidelines published pursuant to Section 304(h) of the FWPCA, 33 U.S.C. Section 1314(h). If more than one method for analysis of a substance is approved for use, a method having a minimum level lower than the permit limit shall be used. If the minimum level of all methods is higher than the permit limit, the method having the lowest minimum level shall be used and a report of less than the minimum level shall be reported as zero and will constitute compliance; however, should EPA approve a method with a lower minimum level during the term of this permit the permittee shall use the newly approved method.

b. For pollutants parameters without an established ML, an interim ML may be utilized. The interim ML shall be calculated as 3.18 times the Method Detection Level (MDL) calculated pursuant to 40 CFR Part 136, Appendix B.

Permittees may develop an effluent matrix-specific ML, where an effluent matrix prevents attainment of the established ML. However, a matrix specific ML shall be based upon proper laboratory method and technique. Matrix-specific MLs must be approved by the Department, and may be developed by the permittee during permit issuance, reissuance, modification, or during compliance schedule.

In either case the measured value should be reported if the analytical result is at or above the ML and "0" reported for values below the ML.

c. For parameters without an EPA established ML, interim ML, or matrix-specific ML, a report of less than the detection limit shall constitute compliance if the detection limit of all analytical methods is higher than the permit limit using the most sensitive EPA approved method. For the purpose of calculating a monthly average, "0" shall be used for values reported less than the detection limit.

The Minimum Level utilized for procedures A and B above shall be reported on the permittee's DMR. When an EPA approved test procedure for analysis of a pollutant does not exist, the Director shall approve the procedure to be used.

3. Recording of Results

For each measurement or sample taken pursuant to the requirements of this permit, the permittee shall record the following information:

a. The facility name and location, point source number, date, time and exact place of sampling;

b. The name(s) of person(s) who obtained the samples or measurements;

c. The dates and times the analyses were performed;

d. The name(s) of the person(s) who performed the analyses;

e. The analytical techniques or methods used, including source of method and method number; and

f. The results of all required analyses.

4. Records Retention and Production

The permittee shall retain records of all monitoring information, including all calibration and maintenance records and all original strip chart recordings for continuous monitoring instrumentation, copies of all reports required by the permit, and records of all data used to complete the above reports or the application for this permit, for a period of at least three years from the date of the sample measurement, report or application. This period may be extended by request of the Director at any time. If litigation or other enforcement action, under the AWPCA and/or the FWPCA, is ongoing which involves any of the above records, the records shall be kept until the litigation is resolved. Upon the written request of the Director or his designee, the

permittee shall provide the Director with a copy of any record required to be retained by this paragraph. Copies of these records shall not be submitted unless requested.

All records required to be kept for a period of three years shall be kept at the permitted facility or an alternate location approved by the Department in writing and shall be available for inspection.

5. Monitoring Equipment and Instrumentation

All equipment and instrumentation used to determine compliance with the requirements of this permit shall be installed, maintained, and calibrated in accordance with the manufacturer's instructions or, in the absence of manufacturer's instructions, in accordance with accepted practices. The permittee shall develop and maintain quality assurance procedures to ensure proper operation and maintenance of all equipment and instrumentation. The quality assurance procedures shall include the proper use, maintenance, and installation, when appropriate, of monitoring equipment at the plant site.

C. DISCHARGE REPORTING REQUIREMENTS

1. Reporting of Monitoring Requirements

a. The permittee shall conduct the required monitoring in accordance with the following schedule:

MONITORING REQUIRED MORE FREQUENTLY THAN MONTHLY AND MONTHLY shall be conducted during the first full month following the effective date of coverage under this permit and every month thereafter.

QUARTERLY MONITORING shall be conducted at least once during each calendar quarter. Calendar quarters are the periods of January through March, April through June, July through September, and October through December. The permittee shall conduct the quarterly monitoring during the first complete calendar quarter following the effective date of this permit and is then required to monitor once during each quarter thereafter. Quarterly monitoring may be done anytime during the quarter, unless restricted elsewhere in this permit, but it should be submitted with the last DMR due for the quarter, i.e., (March, June, September and December DMR's).

SEMIANNUAL MONITORING shall be conducted at least once during the period of January through June and at least once during the period of July through December. The permittee shall conduct the semiannual monitoring during the first complete calendar semiannual period following the effective date of this permit and is then required to monitor once during each semiannual period thereafter. Semiannual monitoring may be done anytime during the semiannual period, unless restricted elsewhere in this permit, but it should be submitted with the last DMR for the month of the semiannual period, i.e. (June and December DMR's).

ANNUAL MONITORING shall be conducted at least once during the period of January through December. The permittee shall conduct the annual monitoring during the first complete calendar annual period following the effective date of this permit and is then required to monitor once during each annual period thereafter. Annual monitoring may be done anytime during the year, unless restricted elsewhere in this permit, but it should be submitted with the December DMR.

b. The permittee shall submit discharge monitoring reports (DMRs) on the forms provided by the Department and in accordance with the following schedule:

REPORTS OF MORE FREQUENTLY THAN MONTHLY AND MONTHLY TESTING shall be submitted on a **monthly** basis. The first report is due on the **28th day of (MONTH, YEAR).** The reports shall be submitted so that they are received by the Department no later than the 28th day of the month following the reporting period.

REPORTS OF QUARTERLY TESTING shall be submitted on a **quarterly** basis. The first report is due on the **28th day of [Month, Year].** The reports shall be submitted so that they are received by the Department no later than the 28th day of the month following the reporting period.

REPORTS OF SEMIANNUAL TESTING shall be submitted on a semiannual basis. The reports are due on the 28th day of JANUARY and the 28th day of JULY. The reports shall be submitted so that they are received by the Department no later than the 28th day of the month following the reporting period.

REPORTS OF ANNUAL TESTING shall be submitted on an annual basis. The first report is due on the 28th day of JANUARY. The reports shall be submitted so that they are received by the Department no later than the 28th day of the month following the reporting period.

c. Except as allowed by Provision I.C.1.c.(1) or (2), the permittee shall submit all Discharge Monitoring Reports (DMRs) required by Provision I.C.1.b electronically.

(1) If the permittee is unable to complete the electronic submittal of DMR data due to technical problems originating with the Department's electronic system (this could include entry/submittal issues with an entire set of DMRs or individual parameters), the permittee is not relieved of their obligation to submit DMR data to the Department by the date specified in Provision I.C.1.b, unless otherwise directed by the Department.

If the Department's electronic system is down on the 28th day of the month in which the DMR is due or is down for an extended period of time, as determined by the Department, when a DMR is required to be submitted, the permittee may submit the data in an alternate manner and format acceptable to the Department. Preapproved alternate acceptable methods include faxing, e-mailing, mailing, or hand-delivery of data such that they are received by the required reporting date. Within 5 calendar days of the Department's electronic system resuming operation, the permittee shall enter the data into the Department's electronic system, unless an alternate timeframe is approved by the Department. A comment should be included on the electronic DMR submittal verifying the original submittal date (date of the fax, copy of the dated e-mail, or hand-delivery stamped date), if applicable.

(2) The permittee may submit a request to the Department for a temporary electronic reporting waiver for DMR submittals. The waiver request should include the permit number; permittee name; facility/site name; facility address; name, address, and contact information for the responsible official or duly authorized representative; a detailed statement regarding the basis for requesting such a waiver; and the duration for which the waiver is requested. Approved electronic reporting waivers are not transferrable.

Permittees with an approved electronic reporting waiver for DMRs may submit hard copy DMRs for the period that the approved electronic reporting waiver request is effective. The permittee shall submit the Department-approved DMR forms to the address listed in Provision I.C.1.e.

(3) If a permittee is allowed to submit a hard copy DMR, the DMR must be legible and bear an original signature. Photo and electronic copies of the signature are not acceptable and shall not satisfy the reporting requirements of this permit.

(4) If the permittee, using approved analytical methods as specified in Provision I.B.2, monitors any discharge from a point source for a limited substance identified in Provision I.A. of this permit more frequently than required by this permit, the results of such monitoring shall be included in the calculation and reporting of values on the DMR and the increased frequency shall be indicated on the DMR.

(5) In the event no discharge from a point source identified in Provision I.A. of this permit and described more fully in the permittee's application occurs during a monitoring period, the permittee shall report "No Discharge" for such period on the appropriate DMR.

d. All reports and forms required to be submitted by this permit, the AWPCA and the Department's Rules, shall be electronically signed (or, if allowed by the Department, traditionally signed) by a "responsible official" of the permittee as defined in ADEM Administrative Code Rule 335-6-6-.09 or a "duly authorized representative" of such official as defined in ADEM Administrative Code Rule 335-6-6-.09 and shall bear the following certification:

"I certify under penalty of law that this document and all attachments were prepared under my direction or supervision in accordance with a system designed to assure that qualified personnel properly gather and evaluate the information submitted. Based on my inquiry of the person or persons who manage the system, or those persons directly responsible for gathering information, the information submitted is, to the best of my knowledge and belief, true, accurate, and complete. I am aware that there are significant penalties for submitting false information, including the possibility of fine and imprisonment for knowing violations."

e. Discharge Monitoring Reports required by this permit, the AWPCA, and the Department's Rules that are being submitted in hard copy shall be addressed to:

Alabama Department of Environmental Management
Water Division
Office of Water Services
Post Office Box 301463
Montgomery, Alabama 36130-1463

Certified and Registered Mail containing Discharge Monitoring Reports shall be addressed to:

Alabama Department of Environmental Management
Water Division
Office of Water Services
1400 Coliseum Boulevard
Montgomery, Alabama 36110-2400

f. All other correspondence and reports required to be submitted by this permit, the AWPCA, and the Department's Rules shall be addressed to:

Alabama Department of Environmental Management`
Water Division
Post Office Box 301463
Montgomery, Alabama 36130-1463

Certified and Registered Mail shall be addressed to:

Alabama Department of Environmental Management
Water Division
1400 Coliseum Boulevard
Montgomery, Alabama 36110-2400

g. If this permit is a re-issuance, then the permittee shall continue to submit DMRs in accordance with the requirements of their previous permit until such time as DMRs are due as discussed in Part I.C.1.b above.

2. Noncompliance Notification

a. 24-Hour Noncompliance Reporting

The permittee shall report to the Director, within 24-hours of becoming aware of the noncompliance, any noncompliance which may endanger health or the environment. This shall include but is not limited to the following circumstances:

(1) does not comply with any daily minimum or maximum discharge limitation for an effluent characteristic specified in Provision I. A. of this permit which is denoted by an "(X)";

(2) threatens human health or welfare, fish or aquatic life, or water quality standards;

(3) does not comply with an applicable toxic pollutant effluent standard or prohibition established under Section 307(a) of the FWPCA, 33 U.S.C. Section 1317(a);

(4) contains a quantity of a hazardous substance which has been determined may be harmful to public health or welfare under Section 311(b)(4) of the FWPCA, 33 U.S.C. Section 1321(b)(4);

(5) exceeds any discharge limitation for an effluent characteristic as a result of an unanticipated bypass or upset; and

(6) is an unpermitted direct or indirect discharge of a pollutant to a water of the state (unpermitted discharges properly reported to the Department under any other requirement are not required to be reported under this provision).

The permittee shall orally report the occurrence and circumstances of such discharge to the Director within 24-hours after the permittee becomes aware of the occurrence of such discharge. In addition to the oral report, the permittee shall submit to the Director or Designee a written report as provided in Part I.C.2.c no later than five (5) days after becoming aware of the occurrence of such discharge.

b. If for any reason, the permittee's discharge does not comply with any limitation of this permit, the permittee shall submit to the Director or Designee a written report as provided in Part I.C.2.c below, such report shall be submitted with the next Discharge Monitoring Report required to be submitted by Part I.C.1 of this permit after becoming aware of the occurrence of such noncompliance.

c. Any written report required to be submitted to the Director or Designee by Part I.C.2 a. or b. shall be submitted using a Noncompliance Notification Form (ADEM Form 421) available on the Department's website (http://adem.alabama.gov/DeptForms/Form421.pdf) and include the following information:

(1) A description of the discharge and cause of noncompliance;

(2) The period of noncompliance, including exact dates and times or, if not corrected, the anticipated time the noncompliance is expected to continue; and

(3) A description of the steps taken and/or being taken to reduce or eliminate the noncomplying discharge and to prevent its recurrence.

D. OTHER REPORTING AND NOTIFICATION REQUIREMENTS

1. Anticipated Noncompliance

The permittee shall give the Director written advance notice of any planned changes or other circumstances regarding a facility which may result in noncompliance with permit requirements.

2. Termination of Discharge

The permittee shall notify the Director, in writing, when all discharges from any point source(s) identified in Provision I. A. of this permit have permanently ceased. This notification shall serve as sufficient cause for instituting procedures for modification or termination of the permit.

3. Updating Information

a. The permittee shall inform the Director of any change in the permittee's mailing address, telephone number or in the permittee's designation of a facility contact or office having the authority and responsibility to prevent and abate violations of the AWPCA, the Department's Rules, and the terms and conditions of this permit, in writing, no later than ten (10) days after such change. Upon request of the Director or his designee, the permittee shall furnish the Director with an update of any information provided in the permit application.

b. If the permittee becomes aware that it failed to submit any relevant facts in a permit application, or submitted incorrect information in a permit application or in any report to the Director, it shall promptly submit such facts or information with a written explanation for the mistake and/or omission.

4. Duty to Provide Information

The permittee shall furnish to the Director, within a reasonable time, any information which the Director or his designee may request to determine whether cause exists for modifying, revoking and re-issuing, suspending, or terminating this permit, in whole or in part, or to determine compliance with this permit.

5. Cooling Water and Boiler Water Additives

a. The permittee shall notify the Director in writing not later than thirty (30) days prior to instituting the use of any biocide corrosion inhibitor or chemical additive in a cooling or boiler system, not identified in the application for this permit, from which discharge is allowed by this permit. Notification is not required for additives that do not contain a heavy metal(s) as an active ingredient and that pass through a wastewater treatment system prior to discharge nor is notification required for additives that should not reasonably be expected to cause the cooling water or boiler water to exhibit toxicity as determined by analysis of manufacturer's data or testing by the permittee. Such notification shall include:

(1) name and general composition of biocide or chemical;

(2) 96-hour median tolerance limit data for organisms representative of the biota of the waterway into which the discharge will ultimately reach;

(3) quantities to be used;

(4) frequencies of use;

(5) proposed discharge concentrations; and

(6) EPA registration number, if applicable.

b. The use of a biocide or additive containing tributyl tin, tributyl tin oxide, zinc, chromium or related compounds in cooling or boiler system(s), from which a discharge regulated by this permit occurs, is prohibited except as exempted below. The use of a biocide or additive containing zinc, chromium or related compounds may be used in special circumstances if (1) the permit contains limits for these substances, or (2) the applicant demonstrates during the application process that the use of zinc, chromium or related compounds as a biocide or additive will not pose a reasonable potential to violate the applicable State water quality standards for these substances. The use of any additive, not identified in this permit or in the

application for this permit or not exempted from notification under this permit is prohibited, prior to a determination by the Department that permit modification to control discharge of the additive is not required or prior to issuance of a permit modification controlling discharge of the additive.

6. Permit Issued Based on Estimated Characteristics

a. If this permit was issued based on estimates of the characteristics of a process discharge reported on an EPA NPDES Application Form 2D (EPA Form 3510-2D), the permittee shall complete and submit an EPA NPDES Application Form 2C (EPA Form 3510-2C) no later than two years after the date that discharge begins. Sampling required for completion of the Form 2C shall occur when a discharge(s) from the process(s) causing the new or increased discharge is occurring. If this permit was issued based on estimates concerning the composition of a stormwater discharge(s), the permittee shall perform the sampling required by EPA NPDES Application Form 2F (EPA Form 3510-2F) no later than one year after the industrial activity generating the stormwater discharge has been fully initiated.

b. This permit shall be reopened if required to address any new information resulting from the completion and submittal of the Form 2C and or 2F.

E. SCHEDULE OF COMPLIANCE

1. The permittee shall achieve compliance with the discharge limitations specified in Provision I. A. in accordance with the following schedule:

COMPLIANCE SHALL BE ATTAINED ON THE EFFECTIVE DATE OF THIS PERMIT

2. No later than 14 calendar days following a date identified in the above schedule of compliance, the permittee shall submit either a report of progress or, in the case of specific actions being required by identified dates, a written notice of compliance or noncompliance. In the latter case, the notice shall include the cause of noncompliance, any remedial actions taken, and the probability of meeting the next scheduled requirement.

PART II: OTHER REQUIREMENTS, RESPONSIBILITIES, AND DUTIES

A. OPERATIONAL AND MANAGEMENT REQUIREMENTS

1. Facilities Operation and Maintenance

The permittee shall at all times properly operate and maintain all facilities and systems of treatment and control (and related appurtenances) which are installed or used by the permittee to achieve compliance with the conditions of the permit. Proper operation and maintenance includes effective performance, adequate funding, adequate operator staffing and training, and adequate laboratory and process controls, including appropriate quality assurance procedures. This provision requires the operation of backup or auxiliary facilities only when necessary to achieve compliance with the conditions of the permit.

2. Best Management Practices

a. Dilution water shall not be added to achieve compliance with discharge limitations except when the Director or his designee has granted prior written authorization for dilution to meet water quality requirements.

b. The permittee shall prepare, implement, and maintain a Spill Prevention, Control and Countermeasures (SPCC) Plan in accordance with 40 C.F.R. Section 112 if required thereby.

c. The permittee shall prepare, submit for approval and implement a Best Management Practices (BMP) Plan for containment of any or all process liquids or solids, in a manner such that these materials do not present a significant potential for discharge, if so required by the Director or his designee. When submitted and approved, the BMP Plan shall become a part of this permit and all requirements of the BMP Plan shall become requirements of this permit.

3. Spill Prevention, Control, and Management

The permittee shall provide spill prevention, control, and/or management sufficient to prevent any spills of pollutants from entering a water of the state or a publicly or privately owned treatment works. Any containment system used to implement this requirement shall be constructed of materials compatible with the substance(s) contained and which shall prevent the contamination of groundwater and such containment system shall be capable of retaining a volume equal to 110 percent of the capacity of the largest tank for which containment is provided.

B. OTHER RESPONSIBILITIES

1. Duty to Mitigate Adverse Impacts

The permittee shall promptly take all reasonable steps to mitigate and minimize or prevent any adverse impact on human health or the environment resulting from noncompliance with any discharge limitation specified in Provision I. A. of this permit, including such accelerated or additional monitoring of the discharge and/or the receiving waterbody as necessary to determine the nature and impact of the noncomplying discharge.

2. Right of Entry and Inspection

The permittee shall allow the Director, or an authorized representative, upon the presentation of proper credentials and other documents as may be required by law to:

a. enter upon the permittee's premises where a regulated facility or activity or point source is located or conducted, or where records must be kept under the conditions of the permit;

b. have access to and copy, at reasonable times, any records that must be kept under the conditions of the permit;

c. inspect any facilities, equipment (including monitoring and control equipment), practices, or operations regulated or required under the permit; and

d. sample or monitor, for the purposes of assuring permit compliance or as otherwise authorized by the AWPCA, any substances or parameters at any location.

C. BYPASS AND UPSET

1. Bypass

a. Any bypass is prohibited except as provided in b. and c. below:

b. A bypass is not prohibited if:

(1) It does not cause any discharge limitation specified in Provision I. A. of this permit to be exceeded;

(2) It enters the same receiving stream as the permitted outfall; and

(3) It is necessary for essential maintenance of a treatment or control facility or system to assure efficient operation of such facility or system.

c. A bypass is not prohibited and need not meet the discharge limitations specified in Provision I. A. of this permit if:

(1) It is unavoidable to prevent loss of life, personal injury, or severe property damage;

(2) There are no feasible alternatives to the bypass, such as the use of auxiliary treatment facilities, retention of untreated wastes, or maintenance during normal periods of equipment downtime (this condition is not satisfied if adequate back-up equipment should have been installed in the exercise of reasonable engineering judgment to prevent a bypass which occurred during normal periods of equipment downtime or preventive maintenance); and

(3) The permittee submits a written request for authorization to bypass to the Director at least ten (10) days prior to the anticipated bypass (if possible), the permittee is granted such authorization, and the permittee complies with any conditions imposed by the Director to minimize any adverse impact on human health or the environment resulting from the bypass.

d. The permittee has the burden of establishing that each of the conditions of Provision II.C.1.b. or c. have been met to qualify for an exception to the general prohibition against bypassing contained in a. and an exemption, where applicable, from the discharge limitations specified in Provision I. A. of this permit.

2. Upset

a. A discharge which results from an upset need not meet the discharge limitations specified in Provision I. A. of this permit if:

(1) No later than 24-hours after becoming aware of the occurrence of the upset, the permittee orally reports the occurrence and circumstances of the upset to the Director or his designee; and

(2) No later than five (5) days after becoming aware of the occurrence of the upset, the permittee furnishes the Director with evidence, including properly signed, contemporaneous operating logs, or other relevant evidence, demonstrating that (i) an upset occurred; (ii) the permittee can identify the specific cause(s) of the upset; (iii) the permittee's facility was being properly operated at the time of the upset; and (iv) the permittee promptly took all reasonable steps to minimize any adverse impact on human health or the environment resulting from the upset.

b. The permittee has the burden of establishing that each of the conditions of Provision II. C.2.a. of this permit have been met to qualify for an exemption from the discharge limitations specified in Provision I.A. of this permit.

D. DUTY TO COMPLY WITH PERMIT, RULES, AND STATUTES

1. Duty to Comply

a. The permittee must comply with all conditions of this permit. Any permit noncompliance constitutes a violation of the AWPCA and the FWPCA and is grounds for enforcement action, for permit termination, revocation and reissuance, suspension, modification; or denial of a permit renewal application.

b. The necessity to halt or reduce production or other activities in order to maintain compliance with the conditions of the permit shall not be a defense for a permittee in an enforcement action.

c. The discharge of a pollutant from a source not specifically identified in the permit application for this permit and not specifically included in the description of an outfall in this permit is not authorized and shall constitute noncompliance with this permit.

d. The permittee shall take all reasonable steps, including cessation of production or other activities, to minimize or prevent any violation of this permit or to minimize or prevent any adverse impact of any permit violation.

e. Nothing in this permit shall be construed to preclude and negate the permittee's responsibility or liability to apply for, obtain, or comply with other ADEM, Federal, State, or Local Government permits, certifications, licenses, or other approvals.

2. Removed Substances

Solids, sludges, filter backwash, or any other pollutant or other waste removed in the course of treatment or control of wastewaters shall be disposed of in a manner that complies with all applicable Department Rules.

3. Loss or Failure of Treatment Facilities

Upon the loss or failure of any treatment facilities, including but not limited to the loss or failure of the primary source of power of the treatment facility, the permittee shall, where necessary to maintain compliance with the discharge limitations specified in Provision I. A. of this permit, or any other terms or conditions of this permit, cease, reduce, or otherwise control production and/or all discharges until treatment is restored. If control of discharge during loss or failure of the primary source of power is to be accomplished by means of alternate power sources, standby generators, or retention of inadequately treated effluent, the permittee must furnish to the Director within six months a certification that such control mechanisms have been installed.

4. Compliance with Statutes and Rules

a. This permit has been issued under ADEM Administrative Code, Chapter 335-6-6. All provisions of this chapter, that are applicable to this permit, are hereby made a part of this permit. A copy of this chapter may be obtained for a small charge from the Office of General Counsel, Alabama Department of Environmental Management, 1400 Coliseum Blvd., Montgomery, AL 36130.

b. This permit does not authorize the noncompliance with or violation of any Laws of the State of Alabama or the United States of America or any regulations or rules implementing such laws. FWPCA, 33 U.S.C. Section 1319, and Code of Alabama 1975, Section 22-22-14.

E. PERMIT TRANSFER, MODIFICATION, SUSPENSION, REVOCATION, AND REISSUANCE

1. Duty to Reapply or Notify of Intent to Cease Discharge

a. If the permittee intends to continue to discharge beyond the expiration date of this permit, the permittee shall file a complete permit application for reissuance of this permit at least 180 days prior to its expiration. If the permittee does not intend to continue discharge beyond the expiration of this permit, the permittee shall submit written notification of this intent which shall be signed by an individual meeting the signatory requirements for a permit application as set forth in ADEM Administrative Code Rule 335-6-6-.09.

b. Failure of the permittee to apply for reissuance at least 180 days prior to permit expiration will void the automatic continuation of the expiring permit provided by ADEM Administrative Code Rule 335-6-6-.06 and should the permit not be reissued for any reason any discharge after expiration of this permit will be an unpermitted discharge.

2. Change in Discharge

a. The permittee shall apply for a permit modification at least 180 days in advance of any facility expansion, production increase, process change, or other action that could result in the discharge of additional pollutants or increase the quantity of a discharged pollutant such that existing permit limitations would be exceeded or that could result in an additional discharge point. This requirement applies to pollutants that are or that are not subject to discharge limitations in this permit. No new or increased discharge may begin until the Director has authorized it by issuance of a permit modification or a reissued permit.

b. The permittee shall notify the Director as soon as it is known or there is reason to believe:

(1) That any activity has occurred or will occur which would result in the discharge on a routine or frequent basis, of any toxic pollutant which is not limited in this permit, if that discharge will exceed the highest of the following notification levels:

(i) one hundred micrograms per liter;

(ii) two hundred micrograms per liter for acrolein and acrylonitrile; five hundred micrograms per liter for 2,4-dinitrophenol and for 2-methyl-4,6-dini-trophenol; and one milligram per liter for antimony;

(iii) five times the maximum concentration value reported for that pollutant in the permit application; or

(2) That any activity has occurred or will occur which would result in any discharge, on a non-routine or infrequent basis, of a toxic pollutant which is not limited in the permit, if that discharge will exceed the highest of the following notification levels:

(i) five hundred micrograms per liter;

(ii) one milligram per liter for antimony;

(iii) ten times the maximum concentration value reported for that pollutant in the permit application.

3. Transfer of Permit

This permit may not be transferred or the name of the permittee changed without notice to the Director and subsequent modification or revocation and reissuance of the permit to identify the new permittee and to incorporate any other changes as may be required under the FWPCA or AWPCA. In the case of a change in name, ownership or control of the permittee's premises only, a request for permit modification in a format acceptable to the Director is required at least 30 days prior to the change. In the case of a change in name, ownership or control of the permittee's premises accompanied by a change or proposed change in effluent characteristics, a complete permit application is required to be submitted to the Director at least 180 days prior to the change. Whenever the Director is notified of a change in name, ownership or control, he may decide not to modify the existing permit and require the submission of a new permit application.

4. Permit Modification and Revocation

a. This permit may be modified or revoked and reissued, in whole or in part, during its term for cause, including but not limited to, the following:

(1) If cause for termination under Provision II. E. 5. of this permit exists, the Director may choose to revoke and reissue this permit instead of terminating the permit;

(2) If a request to transfer this permit has been received, the Director may decide to revoke and reissue or to modify the permit; or

(3) If modification or revocation and reissuance is requested by the permittee and cause exists, the Director may grant the request.

b. This permit may be modified during its term for cause, including but not limited to, the following:

(1) If cause for termination under Provision II. E. 5. of this permit exists, the Director may choose to modify this permit instead of terminating this permit;

(2) There are material and substantial alterations or additions to the facility or activity generating wastewater which occurred after permit issuance which justify the application of permit conditions that are different or absent in the existing permit;

(3) The Director has received new information that was not available at the time of permit issuance and that would have justified the application of different permit conditions at the time of issuance;

(4) A new or revised requirement(s) of any applicable standard or limitation is promulgated under Sections 301(b)(2)(C), (D), (E), and (F), and 307(a)(2) of the FWPCA;

(5) Errors in calculation of discharge limitations or typographical or clerical errors were made;

(6) To the extent allowed by ADEM Administrative Code, Rule 335-6-6-.17, when the standards or regulations on which the permit was based have been changed by promulgation of amended standards or regulations or by judicial decision after the permit was issued;

(7) To the extent allowed by ADEM Administrative Code, Rule 335-6-6-.17, permits may be modified to change compliance schedules;

(8) To agree with a granted variance under 30l(c), 30l(g), 30l(h), 30l(k), or 3l6(a) of the FWPCA or for fundamentally different factors;

(9) To incorporate an applicable 307(a) FWPCA toxic effluent standard or prohibition;

(10) When required by the reopener conditions in this permit;

(11) When required under 40 CFR 403.8(e) (compliance schedule for development of pretreatment program);

(12) Upon failure of the state to notify, as required by Section 402(b)(3) of the FWPCA, another state whose waters may be affected by a discharge permitted by this permit;

(13) When required to correct technical mistakes, such as errors in calculation, or mistaken interpretations of law made in determining permit conditions; or

(14) When requested by the permittee and the Director determines that the modification has cause and will not result in a violation of federal or state law, regulations or rules.

5. Permit Termination

This permit may be terminated during its term for cause, including but not limited to, the following:

a. Violation of any term or condition of this permit;

b. The permittee's misrepresentation or failure to disclose fully all relevant facts in the permit application or during the permit issuance process or the permittee's misrepresentation of any relevant facts at any time;

c. Materially false or inaccurate statements or information in the permit application or the permit;

d. A change in any condition that requires either a temporary or permanent reduction or elimination of the permitted discharge;

e. The permittee's discharge threatens human life or welfare or the maintenance of water quality standards;

f. Permanent closure of the facility generating the wastewater permitted to be discharged by this permit or permanent cessation of wastewater discharge;

g. New or revised requirements of any applicable standard or limitation that is promulgated under Sections 301(b)(2)(C), (D), (E), and (F), and 307(a)(2) of the FWPCA that the Director determines cannot be complied with by the permittee; or

h. Any other cause allowed by the ADEM Administrative Code, Chapter 335-6-6.

6. Permit Suspension

This permit may be suspended during its term for noncompliance until the permittee has taken action(s) necessary to achieve compliance.

7. Request for Permit Action Does Not Stay Any Permit Requirement

The filing of a request by the permittee for modification, suspension or revocation of this permit, in whole or in part, does not stay any permit term or condition.

F. Compliance with Toxic Pollutant Standard or Prohibition

If any applicable effluent standard or prohibition (including any schedule of compliance specified in such effluent standard or prohibition) is established under Section 307(a) of the FWPCA, 33 U.S.C. Section 1317(a), for a toxic pollutant discharged by the permittee and such standard or prohibition is more stringent than any discharge limitation on the pollutant specified in Provision I. A. of this permit, or controls a pollutant not limited in Provision I. A. of this permit, this permit shall be modified to conform to the toxic pollutant effluent standard or prohibition and the permittee shall be notified of such modification. If this permit has not been modified to conform to the toxic pollutant effluent standard or prohibition before the effective date of such standard or prohibition, the permittee shall attain compliance with the requirements of the standard or prohibition within the time period required by the standard or prohibition and shall continue to comply with the standard or prohibition until this permit is modified or reissued.

G. Discharge of Wastewater Generated by Others

The discharge of wastewater, generated by any process, facility, or by any other means not under the operational control of the permittee or not identified in the application for this permit or not identified specifically in the description of an outfall in this permit is not authorized by this permit.

PART III: OTHER PERMIT CONDITIONS

A. CIVIL AND CRIMINAL LIABILITY

1. Tampering

Any person who falsifies, tampers with, or knowingly renders inaccurate any monitoring device or method required to be maintained or performed under the permit shall, upon conviction, be subject to penalties as provided by the AWPCA.

2. False Statements

Any person who knowingly makes any false statement, representation, or certification in any record or other document submitted or required to be maintained under this permit, including monitoring reports or reports of compliance or noncompliance shall, upon conviction, be subject to penalties as provided by the AWPCA.

3. Permit Enforcement

a. Any NPDES permit issued or reissued by the Department is a permit for the purpose of the AWPCA and the FWPCA and as such any terms, conditions, or limitations of the permit are enforceable under state and federal law.

b. Any person required to have a NPDES permit pursuant to ADEM Administrative Code Chapter 335-6-6 and who discharges pollutants without said permit, who violates the conditions of said permit, who discharges pollutants in a manner not authorized by the permit, or who violates applicable orders of the Department or any applicable rule or standard of the Department, is subject to any one or combination of the following enforcement actions under applicable state statutes.

(1) An administrative order requiring abatement, compliance, mitigation, cessation, clean-up, and/or penalties;

(2) An action for damages;

(3) An action for injunctive relief; or

(4) An action for penalties.

c. If the permittee is not in compliance with the conditions of an expiring or expired permit the Director may choose to do any or all of the following provided the permittee has made a timely and complete application for reissuance of the permit:

(1) initiate enforcement action based upon the permit which has been continued;

(2) issue a notice of intent to deny the permit reissuance. If the permit is denied, the owner or operator would then be required to cease the activities authorized by the continued permit or be subject to enforcement action for operating without a permit;

(3) reissue the new permit with appropriate conditions; or

(4) take other actions authorized by these rules and AWPCA.

4. Relief from Liability

Except as provided in Provision II.C.1 (Bypass) and Provision II.C.2 (Upset), nothing in this permit shall be construed to relieve the permittee of civil or criminal liability under the AWPCA or FWPCA for noncompliance with any term or condition of this permit.

B. OIL AND HAZARDOUS SUBSTANCE LIABILITY

Nothing in this permit shall be construed to preclude the institution of any legal action or relieve the permittee from any responsibilities, liabilities or penalties to which the permittee is or may be subject under Section 311 of the FWPCA, 33 U.S.C. Section 1321.

C. PROPERTY AND OTHER RIGHTS

This permit does not convey any property rights in either real or personal property, or any exclusive privileges, nor does it authorize any injury to persons or property or invasion of other private rights, trespass, or any infringement of federal, state, or local laws or regulations, nor does it authorize or approve the construction of any physical structures or facilities or the undertaking of any work in any waters of the state or of the United States.

D. AVAILABILITY OF REPORTS

Except for data determined to be confidential under Code of Alabama 1975, Section 22-22-9(c), all reports prepared in accordance with the terms of this permit shall be available for public inspection at the offices of the Department. Effluent data shall not be considered confidential.

E. EXPIRATION OF PERMITS FOR NEW OR INCREASED DISCHARGES

1. If this permit was issued for a new discharger or new source, this permit shall expire eighteen months after the issuance date if construction of the facility has not begun during the eighteen-month period.

2. If this permit was issued or modified to allow the discharge of increased quantities of pollutants to accommodate the modification of an existing facility and if construction of this modification has not begun during the eighteen month period after issuance of this permit or permit modification, this permit shall be modified to reduce the quantities of pollutants allowed to be discharged to those levels that would have been allowed if the modification of the facility had not been planned.

3. Construction has begun when the owner or operator has:

   a. begun, or caused to begin as part of a continuous on-site construction program:

      (1) any placement, assembly, or installation of facilities or equipment; or

      (2) significant site preparation work including clearing, excavation, or removal of existing buildings, structures, or facilities which is necessary for the placement, assembly, or installation of new source facilities or equipment; or

   b. entered into a binding contractual obligation for the purpose of placement, assembly, or installation of facilities or equipment which are intended to be used in its operation within a reasonable time. Options to purchase or contracts which can be terminated or modified without substantial loss, and contracts for feasibility, engineering, and design studies do not constitute a contractual obligation under the paragraph. The entering into a lease with the State of Alabama for exploration and production of hydrocarbons shall also be considered beginning construction.

F. COMPLIANCE WITH WATER QUALITY STANDARDS

1. On the basis of the permittee's application, plans, or other available information, the Department has determined that compliance with the terms and conditions of this permit should assure compliance with the applicable water quality standards.

2. Compliance with permit terms and conditions notwithstanding, if the permittee's discharge(s) from point sources identified in Provision I. A. of this permit cause or contribute to a condition in contravention of state water quality standards, the Department may require abatement action to be taken by the permittee in emergency situations or modify the permit pursuant to the Department's Rules, or both.

3. If the Department determines, on the basis of a notice provided pursuant to this permit or any investigation, inspection or sampling, that a modification of this permit is necessary to assure maintenance of water quality standards or compliance with other provisions of the AWPCA or FWPCA, the Department may require such modification and, in cases of emergency, the Director may prohibit the discharge until the permit has been modified.

G. GROUNDWATER

Unless specifically authorized under this permit, this permit does not authorize the discharge of pollutants to groundwater. Should a threat of groundwater contamination occur, the Director may require groundwater monitoring to properly assess the degree of the problem and the Director may require that the Permittee undertake measures to abate any such discharge and/or contamination.

H. DEFINITIONS

1. Average monthly discharge limitation - means the highest allowable average of "daily discharges" over a calendar month, calculated as the sum of all "daily discharges" measured during a calendar month divided by the number of "daily discharges" measured during that month (zero discharge days shall not be included in the number of "daily discharges" measured and a less than detectable test result shall be treated as a concentration of zero if the most sensitive EPA approved method was used).

2. Average weekly discharge limitation - means the highest allowable average of "daily discharges" over a calendar week, calculated as the sum of all "daily discharges" measured during a calendar week divided by the number of "daily discharges" measured during that week (zero discharge days shall not be included in the number of "daily discharges" measured and a less than detectable test result shall be treated as a concentration of zero if the most sensitive EPA approved method was used).

3. Arithmetic Mean – means the summation of the individual values of any set of values divided by the number of individual values.

4. AWPCA - means the Alabama Water Pollution Control Act.

5. BOD – means the five-day measure of the pollutant parameter biochemical oxygen demand.

6. Bypass - means the intentional diversion of waste streams from any portion of a treatment facility.

7. CBOD – means the five-day measure of the pollutant parameter carbonaceous biochemical oxygen demand.

8. Daily discharge - means the discharge of a pollutant measured during any consecutive 24-hour period in accordance with the sample type and analytical methodology specified by the discharge permit.

9. Daily maximum - means the highest value of any individual sample result obtained during a day.

10. Daily minimum - means the lowest value of any individual sample result obtained during a day.

11. Day - means any consecutive 24-hour period.

12. Department - means the Alabama Department of Environmental Management.

13. Director - means the Director of the Department.

14. Discharge - means "[t]he addition, introduction, leaking, spilling or emitting of any sewage, industrial waste, pollutant or other wastes into waters of the state". Code of Alabama 1975, Section 22-22-1(b)(8).

15. Discharge Monitoring Report (DMR) - means the form approved by the Director to accomplish reporting requirements of an NPDES permit.

16. DO – means dissolved oxygen.

17. 8HC – means 8-hour composite sample, including any of the following:

    a. The mixing of at least 5 equal volume samples collected at constant time intervals of not more than 2 hours over a period of not less than 8 hours between the hours of 6:00 a.m. and 6:00 p.m. If the sampling period exceeds 8 hours, sampling may be conducted beyond the 6:00 a.m. to 6:00 p.m. period.

    b. A sample continuously collected at a constant rate over period of not less than 8 hours between the hours of 6:00 a.m. and 6:00 p.m. If the sampling period exceeds 8 hours, sampling may be conducted beyond the 6:00 a.m. to 6:00 p.m. period.

18. EPA - means the United States Environmental Protection Agency.

19. FC – means the pollutant parameter fecal coliform.

20. Flow – means the total volume of discharge in a 24-hour period.

21. FWPCA - means the Federal Water Pollution Control Act.

22. Geometric Mean – means the Nth root of the product of the individual values of any set of values where N is equal to the number of individual values. The geometric mean is equivalent to the antilog of the arithmetic mean of the logarithms of the individual values. For purposes of calculating the geometric mean, values of zero (0) shall be considered one (1).

23. Grab Sample – means a single influent or effluent portion which is not a composite sample. The sample(s) shall be collected at the period(s) most representative of the discharge.

24. Indirect Discharger – means a nondomestic discharger who discharges pollutants to a publicly owned treatment works or a privately owned treatment facility operated by another person.

25. Industrial User – means those industries identified in the Standard Industrial Classification manual, Bureau of the Budget 1967, as amended and supplemented, under the category "Division D – Manufacturing" and such other classes of significant waste producers as, by regulation, the Director deems appropriate.

26. MGD – means million gallons per day.

27. Monthly Average – means, other than for fecal coliform bacteria, the arithmetic mean of the entire composite or grab samples taken for the daily discharges collected in one month period. The monthly average for fecal coliform bacteria is the geometric mean of daily discharge samples collected in a one month period. The monthly average for flow is the arithmetic mean of all flow measurements taken in a one month period.

28. New Discharger – means a person, owning or operating any building, structure, facility or installation:

    a. from which there is or may be a discharge of pollutants;

    b. that did not commence the discharge of pollutants prior to August 13, 1979, and which is not a new source; and

    c. which has never received a final effective NPDES permit for dischargers at that site.

29. NH3-N – means the pollutant parameter ammonia, measured as nitrogen.

30. Permit application - means forms and additional information that is required by ADEM Administrative Code Rule 335-6-6-.08 and applicable permit fees.

31. Point source - means "any discernible, confined and discrete conveyance, including but not limited to any pipe, channel, ditch, tunnel, conduit, well, discrete fissure, container, rolling stock, concentrated animal feeding operation, or vessel or other floating craft, . . . from which pollutants are or may be discharged." Section 502(14) of the FWPCA, 33 U.S.C. Section 1362(14).

32. Pollutant - includes for purposes of this permit, but is not limited to, those pollutants specified in Code of Alabama 1975, Section 22-22-1(b)(3) and those effluent characteristics specified in Provision I. A. of this permit.

33. Privately Owned Treatment Works – means any devices or system which is used to treat wastes from any facility whose operator is not the operator of the treatment works, and which is not a "POTW".

34. Publicly Owned Treatment Works – means a wastewater collection and treatment facility owned by the State, municipality, regional entity composed of two or more municipalities, or another entity created by the State or local authority for the purpose of collecting and treating municipal wastewater.

35. Receiving Stream – means the "waters" receiving a "discharge" from a "point source".

36. Severe property damage - means substantial physical damage to property, damage to the treatment facilities which causes them to become inoperable, or substantial and permanent loss of natural resources which can reasonably be expected to occur in the absence of a bypass. Severe property damage does not mean economic loss caused by delays in production.

37. Significant Source – means a source which discharges 0.025 MGD or more to a POTW or greater than five percent of the treatment work's capacity, or a source which is a primary industry as defined by the U.S. EPA or which discharges a priority or toxic pollutant.

38. Solvent – means any virgin, used or spent organic solvent(s) identified in the F-Listed wastes (F001 through F005) specified in 40 CFR 261.31 that is used for the purpose of solubilizing other materials.

39. TKN – means the pollutant parameter Total Kjeldahl Nitrogen.

40. TON – means the pollutant parameter Total Organic Nitrogen.

41. TRC – means Total Residual Chlorine.

42. TSS – means the pollutant parameter Total Suspended Solids.

43. 24HC – means 24-hour composite sample, including any of the following:

    a. the mixing of at least 12 equal volume samples collected at constant time intervals of not more than 2 hours over a period of 24 hours;

    b. a sample collected over a consecutive 24-hour period using an automatic sampler composite to one sample. As a minimum, samples shall be collected hourly and each shall be no more than one twenty-fourth (1/24) of the total sample volume collected; or

    c. a sample collected over a consecutive 24-hour period using an automatic composite sampler composited proportional to flow.

44. Upset - means an exceptional incident in which there is an unintentional and temporary noncompliance with technology-based permit discharge limitations because of factors beyond the reasonable control of the permittee. An upset does not include noncompliance to the extent caused by operational error, improperly designed treatment facilities, inadequate treatment facilities, lack of preventive maintenance, or careless or improper operation.

45. Waters - means "[a]ll waters of any river, stream, watercourse, pond, lake, coastal, ground or surface water, wholly or partially within the state, natural or artificial. This does not include waters which are entirely confined and retained completely upon the property of a single individual, partnership or corporation unless such waters are used in interstate commerce." Code of Alabama 1975, Section 22-22-1(b)(2). Waters "include all navigable waters" as defined in Section 502(7) of the FWPCA, 22 U.S.C. Section 1362(7), which are within the State of Alabama.

46. Week - means the period beginning at twelve midnight Saturday and ending at twelve midnight the following Saturday.

47. Weekly (7-day and calendar week) Average – is the arithmetic mean of all samples collected during a consecutive 7-day period or calendar week, whichever is applicable. The calendar week is defined as beginning on Sunday and ending on Saturday. Weekly averages shall be calculated for all calendar weeks with Saturdays in the month. If a calendar week overlaps two months (i.e., the Sunday is in one month and the Saturday in the following month), the weekly average calculated for the calendar week shall be included in the data for the month that contains the Saturday.18. EPA - means the United States Environmental Protection Agency.

I. SEVERABILITY

The provisions of this permit are severable, and if any provision of this permit or the application of any provision of this permit to any circumstance is held invalid, the application of such provision to other circumstances, and the remainder of this permit, shall not be affected thereby.

PART IV: ADDITIONAL REQUIREMENTS, CONDITIONS, AND LIMITATIONS

A. BEST MANAGEMENT PRACTICES (BMP) PLAN REQUIREMENTS

1. BMP Plan

The permittee shall develop and implement a Best Management Practices (BMP) Plan which prevents, or minimizes the potential for, the release of pollutants from ancillary activities, including material storage areas; plant site runoff; in-plant transfer, process and material handling areas; loading and unloading operations, and sludge and waste disposal areas, to the waters of the State through plant site runoff; spillage or leaks; sludge or waste disposal; or drainage from raw material storage.

2. Plan Content

The permittee shall prepare and implement a best management practices (BMP) plan, which shall:

a. Establish specific objectives for the control of pollutants:

(1) Each facility component or system shall be examined for its potential for causing a release of significant amounts of pollutants to waters of the State due to equipment failure, improper operation, natural phenomena such as rain or snowfall, etc.

(2) Where experience indicates a reasonable potential for equipment failure (e.g., a tank overflow or leakage), natural condition (e.g. precipitation), or circumstances to result in significant amounts of pollutants reaching surface waters, the plan should include a prediction of the direction, rate of flow, and total quantity of pollutants which could be discharged from the facility as a result of each condition or circumstance.

b. Establish specific best management practices to meet the objectives identified under paragraph a. of this section, addressing each component or system capable of causing a release of significant amounts of pollutants to the waters of the State, and identifying specific preventative or remedial measures to be implemented;

c. Establish a program to identify and repair leaking equipment items and damaged containment structures, which may contribute to contaminated stormwater runoff. This program must include regular visual inspections of equipment, containment structures and of the facility in general to ensure that the BMP is continually implemented and effective;

d. Prevent the spillage or loss of fluids, oil, grease, gasoline, etc. from vehicle and equipment maintenance activities and thereby prevent the contamination of stormwater from these substances;

e. Prevent or minimize stormwater contact with material stored on site;

f. Designate by position or name the person or persons responsible for the day to day implementation of the BMP;

g. Provide for routine inspections, on days during which the facility is manned, of any structures that function to prevent stormwater pollution or to remove pollutants from stormwater and of the facility in general to ensure that the BMP is continually implemented and effective;

h. Provide for the use and disposal of any material used to absorb spilled fluids that could contaminate stormwater;

i. Develop a solvent management plan, if solvents are used on site. The solvent management plan shall include as a minimum lists of the solvents on site; the disposal method of solvents used instead of dumping, such as reclamation, contract hauling; and the procedures for assuring that solvents do not routinely spill or leak into the stormwater;

j. Provide for the disposal of all used oils, hydraulic fluids, firefighting foams, solvent degreasing material, etc. in accordance with good management practices and any applicable state or federal regulations;

k. Include a diagram of the facility showing the locations where stormwater exits the facility, the locations of any structure or other mechanisms intended to prevent pollution of stormwater or to remove pollutants from stormwater, the locations of any collection and handling systems;

l. Provide control sufficient to prevent or control pollution of stormwater by soil particles to the degree required to maintain compliance with the water quality standard for turbidity applicable to the waterbody(s) receiving discharge(s) under this permit;

m. Provide spill prevention, control, and/or management sufficient to prevent or minimize contaminated stormwater runoff. Any containment system used to implement this requirement shall be constructed of materials compatible with the

substance(s) contained and shall prevent the contamination of groundwater. The containment system shall also be capable of retaining a volume equal to 110 percent of the capacity of the largest tank for which containment is provided;

n. Provide and maintain curbing, diking or other means of isolating process areas to the extent necessary to allow segregation and collection for treatment of contaminated stormwater from process areas;

o. Be reviewed by plant engineering staff and the plant manager; and

p. Bear the signature of the plant manager.

3. Compliance Schedule

The permittee shall have reviewed (and revised if necessary) and fully implemented the BMP plan as soon as practicable but no later than six months after the effective date of this permit.

4. Department Review

a. When requested by the Director or his designee, the permittee shall make the BMP available for Department review.

b. The Director or his designee may notify the permittee at any time that the BMP is deficient and require correction of the deficiency.

c. The permittee shall correct any BMP deficiency identified by the Director or his designee within 30 days of receipt of notification and shall certify to the Department that the correction has been made and implemented.

5. Administrative Procedures

a. A copy of the BMP shall be maintained at the facility and shall be available for inspection by representatives of the Department.

b. A log of the routine inspection required above shall be maintained at the facility and shall be available for inspection by representatives of the Department. The log shall contain records of all inspections performed for the last three years and each entry shall be signed by the person performing the inspection.

c. The permittee shall provide training for any personnel required to implement the BMP and shall retain documentation of such training at the facility. This documentation shall be available for inspection by representatives of the Department. Training shall be performed prior to the date that implementation of the BMP is required.

d. BMP Plan Modification. The permittee shall amend the BMP plan whenever there is a change in the facility or change in operation of the facility which materially increases the potential for the ancillary activities to result in a discharge of significant amounts of pollutants.

e. BMP Plan Review. The permittee shall complete a review and evaluation of the BMP plan at least once every three years from the date of preparation of the BMP plan. Documentation of the BMP Plan review and evaluation shall be signed and dated by the Plant Manager.

B. STORMWATER FLOW MEASUREMENT AND SAMPLING REQUIREMENTS

1. Stormwater Flow Measurement

a. All stormwater samples shall be collected from the discharge resulting from a storm event that is greater than 0.1 inches.

b. The total volume of stormwater discharged for the event must be monitored, including the date and duration (in hours) and rainfall (in inches) for storm event(s) sampled. The duration between the storm event sampled and the end of the previous measurable (greater than 0.1 inch rainfall) storm event must be a minimum of 72 hours. This information must be recorded as part of the sampling procedure and records retained according to Part I.B. of this permit.

c. The volume may be measured using flow measuring devices, or estimated based on a modification of the Rational Method using total depth of rainfall, the size of the drainage area serving a stormwater outfall, and an estimate of the runoff coefficient of the drainage area. This information must be recorded as part of the sampling procedure and records retained according to Part I.B. of this permit.

2. Stormwater Sampling

a. A grab sample, if required by this permit, shall be taken during the first thirty minutes of the discharge (or as soon thereafter as practicable); and a flow-weighted composite sample, if required by this permit, shall be taken for the entire event or for the first three hours of the event.

b. All test procedures will be in accordance with part I.B. of this permit.

C. COOLING WATER INTAKE STRUCTURE (CWIS) REQUIREMENTS

The entity providing water to the permittee is a public water system in accordance with Section 1401 of the Safe Drinking Water Act or the water used for cooling consists of effluent, which would otherwise be discharged; therefore, the permittee is exempt from this permit condition.

D. EFFLUENT TOXICITY LIMITATIONS AND BIOMONITORING REQUIREMENTS

1. The permittee shall perform short-term chronic toxicity tests on the wastewater discharges required to be tested for chronic toxicity by Part I of this permit.

a. Test Requirements (Screening Test)

(1) The samples shall be diluted using appropriate control water, to the Instream Waste Concentration (IWC) which is **4% effluent**. The IWC is the actual concentration of effluent, after mixing, in the receiving stream during a 7-day, 10-year flow period.

(2) Any test result that shows a statistically significant reduction in survival, growth, or reproduction between the control and the test at the 95% confidence level indicates chronic toxicity and constitutes noncompliance with this permit.

b. General Test Requirements

(1) A minimum of three (3) 24-hour composite samples shall be obtained for use in the above biomonitoring tests and collected every other day so that the laboratory receives water samples on the first, third, and fifth day of the seven-day test period. The holding time for each composite sample shall not exceed 36 hours. The control water shall be a water prepared in the laboratory in accordance with the EPA procedure described in EPA 821-R-02-013 or the most current edition or another control water selected by the permittee and approved by the Department.

(2) Effluent toxicity tests in which the control survival is less than 80%, P. promelas dry weight per surviving control organism is less than 0.25 mg, Ceriodaphnia number of young per surviving control organism is less than 15, Ceriodaphnia reproduction where less than 60% of surviving control females produce three broods or in which the other requirements of the EPA Test Procedure are not met shall be unacceptable and the permittee shall rerun the tests as soon as practical within the monitoring period.

(3) In the event of an invalid test, upon subsequent completion of a valid test, the results of all tests, valid and invalid, are reported with an explanation of the tests performed and results.

c. Reporting Requirements

(1) The permittee shall notify the Department in writing within 48 hours after toxicity has been demonstrated by the scheduled test(s).

(2) Biomonitoring test results obtained during each monitoring period shall be summarized and reported using the appropriate Discharge Monitoring Report (DMR) form approved by the Department. In accordance with Section 2 of this part, an effluent toxicity report containing the information in Section 2 shall be included with the DMR. Two copies of the test results must be submitted to the Department no later than 28 days after the month in which the tests were performed.

d. Additional Testing Requirements

(1) If chronic toxicity is indicated (noncompliance with permit limit), the permittee shall perform two additional valid chronic toxicity tests in accordance with these procedures to determine the extent and duration of the toxic condition. The toxicity tests shall run consecutively beginning on the first calendar week following the date on which the permittee became aware of the permit noncompliance and the results of these tests shall be submitted no later than 28 days following the month in which the tests were performed.

(2) After evaluation of the results of the follow-up tests, the Department will determine if additional action is appropriate and may require additional testing and/or toxicity reduction measures. The permittee may be required to perform a Toxicity Identification Evaluation (TIE) and/or a Toxicity Reduction Evaluation (TRE). The TIE/TRE shall be performed in accordance with the most recent protocols/guidance outlined by EPA (e.g., EPA/600/2-88/062, EPA/600/R-92/080, EPA/600/R-91-003, EPA/600/R-92/081, EPA/833/B-99/022 and/or EPA/600/6-91/005F, etc.)

e. Test Methods

The tests shall be performed in accordance with the latest edition of the "EPA Short-Term Methods for Estimating the Chronic Toxicity of Effluents and Receiving Water to Freshwater Organisms". The Larval Survival and Growth Test, Methods 1000.0, shall be used for the fathead minnow (*Pimephales promelas*) test and the Survival and Reproduction Test, Method 1002.0, shall be used for the cladoceran (*Ceriodaphnia dubia*) test.

2. Effluent Toxicity Testing Reports

The following information shall be submitted with each discharge monitoring report unless otherwise directed by the Department. The Department may at any time suspend or reinstate these requirements or may decrease or increase the frequency of submittals.

a. Introduction

(1) Facility name, location, and county

(2) Permit number

(3) Toxicity testing requirements of permit

(4) Name of receiving water body

(5) Contract laboratory information (if tests are performed under contract)

(a) Name of firm

(b) Telephone number

(c) Address

(6) Objective of test

b. Plant Operation

(1) Discharge Operating schedule (if other than continuous)

(2) Volume of discharge during sample collection to include Mean daily discharge on sample collection dates (MGD, CFS, GPM)

(3) Design flow of treatment facility at time of sampling

c. Source of Effluent and Dilution Water

(1) Effluent samples

(a) Sampling point

(b) Sample collection dates and times (to include composite sample start and finish times)

(c) Sample collection method

(d) Physical and chemical data of undiluted effluent samples (water temperature, pH, alkalinity, hardness, specific conductance, total residual chlorine (if applicable), etc.)

(e) Lapsed time from sample collection to delivery

(f) Lapsed time from sample collection to test initiation

(g) Sample temperature when received at the laboratory

(2) Dilution Water

(a) Source

(b) Collection/preparation date(s) and time(s)

(c) Pretreatment (if applicable)

(d) Physical and chemical characteristics (water temperature, pH, alkalinity, hardness, specific conductance, etc.)

d. Test Conditions

(1) Toxicity test method utilized

(2) End point(s) of test

(3) Deviations from referenced method, if any, and reason(s)

(4) Date and time test started

(5) Date and time test terminated

(6) Type and volume of test chambers

(7) Volume of solution per chamber

(8) Number of organisms per test chamber

(9) Number of replicate test chambers per treatment

(10) Test temperature, pH, and dissolved oxygen as recommended by the method (to include ranges)

(11) Specify if aeration was needed

(12) Feeding frequency, amount, and type of food

(13) Specify if (and how) pH control measures were implemented

(14) Light intensity (mean)

e. Test Organisms

(1) Scientific name

(2) Life stage and age

(3) Source

(4) Disease(s) treatment (if applicable)

f. Quality Assurance

(1) Reference toxicant utilized and source

(2) Date and time of most recent chronic reference toxicant test(s), raw data and current control chart(s). The most recent chronic reference toxicant test shall be conducted within 30 days of the routine.

(3) Dilution water utilized in reference toxicant test

(4) Results of reference toxicant test(s) (NOEC, IC25, PASS/FAIL, etc.), report concentration response relationship and evaluate test sensitivity

(5) Physical and chemical methods utilized

g. Results

(1) Provide raw toxicity data in tabular form, including daily records of affected organisms in each concentration (including controls) and replicate

(2) Provide table of endpoints: NOECs, IC25s, PASS/FAIL, etc. (as required in the applicable NPDES permit)

(3) Indicate statistical methods used to calculate endpoints

(4) Provide all physical and chemical data required by method

(5) Results of test(s) (NOEC, IC25, PASS/FAIL, etc.), report concentration-response relationship (definitive test only), report percent minimum significant difference (PMSD) calculated for sub-lethal endpoints determined by hypothesis testing.

h. Conclusions and Recommendations

(1) Relationship between test endpoints and permit limits

(2) Actions to be taken

Adapted from "Short-Term Methods for Estimating the Chronic Toxicity of Effluents and Receiving Waters to Freshwater Organisms", Fourth Edition, October 2002 (EPA 821-R-02-013), Section 10, Report Preparation

ADEM PERMIT RATIONALE

PREPARED DATE: October 20, 2023
PREPARED BY: Wayne Holt
REVISION DATE: February 15, 2024
REVISION PREPARED BY: Wayne Holt

Permittee Name: Nucor Steel Birmingham, Inc.

Facility Name: Nucor Steel Birmingham, Inc.

Permit Number: AL0003735

PERMIT IS REISSUANCE DUE TO EXPIRATION

DISCHARGE SERIAL NUMBERS (DSN) & DESCRIPTIONS:

DSN001: Groundwater and storm water associated with steel mill operations
DSN002: Groundwater, storm water, and process waters associated with steel mill operations

INDUSTRIAL CATEGORY: 40 CFR 420 – Iron and Steel Manufacturing Category:
Subpart F – Continuous Casting Subcategory
Subpart G – Hot Forming Subcategory

MAJOR: No

STREAM INFORMATION:

Receiving Stream:	Village Creek
Classification:	Limited Warmwater Fishery
River Basin:	Black Warrior River Basin
7Q10:	8.0 CFS
7Q2:	11.7 CFS
1Q10:	4.1 CFS
Annual Average Flow:	54.3 CFS
303(d) List:	YES - Pathogens, Pesticides (Dieldrin)
TMDL:	YES – Metal (Zinc), pH, Siltation

DISCUSSION:
Nucor Steel Birmingham, Inc. is primarily a rebar production facility. Scrap steel is collected and segregated on site. Scrap is introduced to an electric arc furnace (EAF), melted down, and transferred to a continuous caster to produce billets. Billets are stored in the billet yard until introduced to the natural gas-fired reheat furnace. Heated billets are then run through a rolling mill to produce the finished product. Limited amounts of finished product are stored predominantly on site until shipped out. Co-products produced at the plant include slag and mill scale.

ADEM Administrative Rule 335-6-10-.12 requires applicants to new or expanded discharges to Tier II waters demonstrate that the proposed discharge is necessary for important economic or social development in the area in which the waters are located. The application submitted by the facility is not for a discharge to a Tier II water body. Therefore, anti-degradation requirements do not apply.

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DSN 001-1: Groundwater and storm water associated with steel mill operations

Parameter	Quantity or Loading		Units	Quality or Concentration			Units	Sample Freq	Sample Type	Seasonal	Basis
pH (00400) Effluent Gross Value	*****	*****	*****	(Report) Minimum Daily	*****	(Report) Maximum Daily	S.U.	Monthly	Grab	All Months	BPJ
Solids, Total Suspended (00530) Effluent Gross Value	*****	*****	*****	*****	*****	(Report) Maximum Daily	mg/l	Monthly	Grab	All Months	BPJ
Oil & Grease (00556) Effluent Gross Value	*****	*****	*****	*****	*****	15 Maximum Daily	mg/l	Monthly	Grab	All Months	BPJ
Cyanide, Total (As CN) (00720) Effluent Gross Value	*****	*****	*****	*****	*****	(Report) Maximum Daily	mg/l	Monthly	Grab	All Months	BPJ
Zinc Total Recoverable (01094) Effluent Gross Value	*****	*****	*****	*****	*****	(Report) Maximum Daily	mg/l	Monthly	Grab	All Months	BPJ
Copper Total Recoverable (01119) Effluent Gross Value	*****	*****	*****	*****	*****	(Report) Maximum Daily	mg/l	Monthly	Grab	All Months	BPJ
Flow, In Conduit or Thru Treatment Plant (50050) Effluent Gross Value	*****	(Report) Maximum Daily	MGD	*****	*****	*****	*****	Monthly	Estimate	All Months	BPJ

DSN 001-Q: Groundwater and storm water associated with steel mill operations

Parameter	Quantity or Loading		Units	Quality or Concentration			Units	Sample Freq	Sample Type	Seasonal	Basis
Magnesium, Total (As Mg) (00927) Effluent Gross Value	*****	*****	*****	*****	*****	(Report) Maximum Daily	mg/l	Quarterly	Grab	All Months	BPJ
Iron Total Recoverable (00980) Effluent Gross Value	*****	*****	*****	*****	*****	(Report) Maximum Daily	mg/l	Quarterly	Grab	All Months	BPJ
Aluminum, Total Recoverable (01104) Effluent Gross Value	*****	*****	*****	*****	*****	(Report) Maximum Daily	mg/l	Quarterly	Grab	All Months	BPJ
Manganese, Total Recoverable (11123) Effluent Gross Value	*****	*****	*****	*****	*****	(Report) Maximum Daily	mg/l	Quarterly	Grab	All Months	BPJ

DSN 002-1: Groundwater, storm water, and process waters associated with steel mill operations

Parameter	Quantity or Loading		Units	Quality or Concentration			Units	Sample Freq	Sample Type	Seasonal	Basis
pH (00400) Effluent Gross Value	*****	*****	*****	6.0 Minimum Daily	*****	8.5 Maximum Daily	S.U.	Weekly	Grab	All Months	WQBEL
Solids, Total Suspended (00530) Effluent Gross Value	448 Monthly Average	852 Maximum Daily	lbs/day	*****	*****	*****	*****	Weekly	Composite	All Months	EGL/ BPJ
Oil & Grease (00556) Effluent Gross Value	23.6 Monthly Average	361 Maximum Daily	lbs/day	*****	*****	*****	*****	Weekly	Grab	All Months	EGL
Nitrogen, Ammonia Total (As N) (00610) Effluent Gross Value	*****	*****	*****	*****	*****	(Report) Maximum Daily	mg/l	Monthly	Composite	All Months	BPJ
Nitrogen, Nitrate Total (As N) (00620) Effluent Gross Value	*****	*****	*****	*****	*****	(Report) Maximum Daily	mg/l	Monthly	Composite	Apr, May, Jun, Jul, Aug, Sep, Oct	BPJ
Phosphorus, Total (As P) (00665) Effluent Gross Value	*****	*****	*****	*****	*****	(Report) Maximum Daily	mg/l	Monthly	Composite	Apr, May, Jun, Jul, Aug, Sep, Oct	BPJ
Lead, Total (As Pb) (01051) Effluent Gross Value	0.216 Monthly Average	0.381 Maximum Daily	lbs/day	*****	*****	*****	*****	Once/2 Weeks	Composite	All Months	EGL
Zinc, Total (As Zn) (01092) Effluent Gross Value	0.325 Monthly Average	0.897 Maximum Daily	lbs/day	*****	*****	*****	*****	Once/2 Weeks	Composite	All Months	EGL
Flow, In Conduit or Thru Treatment Plant (50050) Effluent Gross Value	(Report) Monthly Average	(Report) Maximum Daily	MGD	*****	*****	*****	*****	Daily	Totalizer	All Months	BPJ
Production Divided By Days Operated Mo. (51182) O - See Comments Below	(Report) Monthly Average	(Report) Maximum Daily	lbs/day	*****	*****	*****	*****	Daily	Calculated	All Months	BPJ
Production Divided By Days Operated Mo. (51182) P - See Comments Below	(Report) Monthly Average	(Report) Maximum Daily	lbs/day	*****	*****	*****	*****	Daily	Calculated	All Months	BPJ
BOD, Carbonaceous 05 Day, 20C (80082) Effluent Gross Value	*****	*****	*****	*****	*****	(Report) Maximum Daily	mg/l	Monthly	Composite	All Months	BPJ

O- Continuous Casting Production
P- Total Production

DSN 002-Q: Groundwater, storm water, and process waters associated with steel mill operations

Parameter	Quantity or Loading		Units	Quality or Concentration			Units	Sample Freq	Sample Type	Seasonal	Basis
Magnesium, Total (As Mg) (00927) Effluent Gross Value	*****	*****	*****	*****	*****	(Report) Maximum Daily	mg/l	Quarterly	Composite	All Months	BPJ
Iron Total Recoverable (00980) Effluent Gross Value	*****	*****	*****	*****	*****	(Report) Maximum Daily	mg/l	Quarterly	Composite	All Months	BPJ
Aluminum, Total Recoverable (01104) Effluent Gross Value	*****	*****	*****	*****	*****	(Report) Maximum Daily	mg/l	Quarterly	Composite	All Months	BPJ
Manganese, Total Recoverable (11123) Effluent Gross Value	*****	*****	*****	*****	*****	(Report) Maximum Daily	mg/l	Quarterly	Composite	All Months	BPJ

DSN 002-T: Groundwater, storm water, and process waters associated with steel mill operations

Parameter	Quantity or Loading		Units	Quality or Concentration			Units	Sample Freq	Sample Type	Seasonal	Basis
Toxicity, Ceriodaphnia Chronic (61426) Effluent Gross Value	*****	0 Maximum Daily	pass=0; fail=1	*****	*****	*****	*****	Quarterly	Composite	All Months	BPJ
Toxicity, Pimephales Chronic (61428) Effluent Gross Value	*****	0 Maximum Daily	pass=0; fail=1	*****	*****	*****	*****	Quarterly	Composite	All Months	BPJ

*Basis for Permit Limitation

- BPJ – Best Professional Judgment
- WQBEL – Water Quality Based Effluent Limits
- EGL – Federal Effluent Guideline Limitations
- 303(d) – 303(d) List of Impaired Waters
- TMDL – Total Maximum Daily Load Requirements

Discussion

DSN001: Groundwater and storm water associated with steel mill operations

Flow
Monitoring for flow will be continue in this permit issuance.

Oil and Grease
The daily maximum limitation of 15.0 mg/L for Oil and Grease will be continued in this permit issuance. This limitation has been shown to prevent the occurrence of sheen on the surface of the receiving water and should be achievable using BMPs.

pH
The receiving stream is classified as Limited Warmwater Fishery, which relies on the Fish and Wildlife requirements for pH. ADEM Administrative Code, Division 6 Regulations, specifically 335-6-10-.09(5)(e)2 – Specific Water Quality for Fish and Wildlife classified streams states: "Sewage, industrial waste or other wastes shall not cause the pH to deviate more than one unit from then normal or natural pH, nor be less than 6.0, nor greater than 8.5 standard units." The receiving stream also has a TMDL for pH, which states that "NPDES regulated storm water sources may be controlled using BMPs"; therefore, monitoring requirements will be continued in this permit issuance since the facility's discharge is not expected to influence the pH of the receiving stream.

Total Suspended Solids
The receiving stream has a developed TMDL for Total Suspended Solids; however, contributions from the facility were found to be insignificant during the development of the TMDL; therefore, monitoring requirements will be continued in this permit issuance.

Total Recoverable Aluminum, Total Recoverable Iron, Total Recoverable Manganese, Total Recoverable Copper, Total Recoverable Zinc, Total Magnesium, Total Cyanide
Based on the nature of the operations at the facility, monitoring for these parameters will be continued in this permit issuance. The analytical data provided can be used to determine the effectiveness of the facility's BMPs.

DSN002: Groundwater, storm water, and process wastewater associated with steel mill operations

Discussion
The facility's discharge from DSN002 consists of process wastewater. A portion of this process wastewater is storm water and ground water from the DSN002 drainage area that has been collected, treated, and beneficially reused throughout the process. The volume of non-process waters that are collected and reused throughout the manufacturing process have allowed the facility to discharge only intermittently throughout the year, typically during and shortly after periods of heavy rains.

Best Professional Judgment
The parameters of concern for this facility are based on the parameters of concern listed in EPA form 2F and from the current permit. These parameters are consistent with similar facilities in the state and have been proven to be reflective of the operations at this facility. The parameters with specific limits are discussed below:

Flow
Flow monitoring will be continued as daily totalized readings.

Nutrients (Nitrogen, Ammonia Total; Nitrogen, Nitrate Total, and Phosphorus, Total)
The facility is required to monitor the nutrients of Total Ammonia Nitrogen, Total Nitrate Nitrogen, and Total Phosphorus, in the discharge to provide information to the Department for use in developing nutrient criteria in the future, if necessary. This monitoring requirement will remain in the permit; however, the frequency of monitoring will be changed to *once per month for Ammonia and once per month during the*

growing season (April to October) for the others. This sampling frequency is consistent with the monitoring requirements of other facilities.

Carbonaceous Biochemical Oxygen Demand (5-day)
Monitoring for CBOD is proposed to replace the BOD monitoring required in the previous permit issuance. This monitoring will provide loading information to the Department for use in developing water quality models.

Water Quality Based Effluent Limits (WQBEL)
A reasonable potential analysis was performed for the discharge and no parameters indicated a reasonable potential to violate the water quality standards. Discharges from DSN002 usually occur during or after a heavy rain; therefore, it is not expected that the discharge would violate in-stream water quality standards.

pH
The receiving stream is classified as Limited Warmwater Fishery (LWF) which, based on ADEM Admin Code r. 335-6-10-.09(6)(a), relies on the Fish and Wildlife rule 335-6-10-.09(5) except for given parameters in subsection (e) of the LWF subpart. ADEM Administrative Code, Division 6 Regulations, specifically 335-6-10-.09(5)(e)2 – Specific Water Quality for Fish and Wildlife classified streams states: "Sewage, industrial waste or other wastes shall not cause the pH to deviate more than one unit from then normal or natural pH, nor be less than 6.0, nor greater than 8.5 standard units." This standard will continue to be applied in this permit issuance and is consistent with the TMDL.

Toxicity Testing Requirements
In order to ensure that aquatic life is not being impacted by the synergistic effects of the discharge, it is necessary to require biomonitoring. The facility discharges to a Limited Warmwater Fishery and the dilution ratio using the 7Q2 flow is less than 100:1; therefore, chronic testing is required. The Instream Waste Concentration (IWC) is based on the 7Q2 of the receiving stream at the discharge point.

7Q2 of Village Creek at discharge point = 11.7 CFS (7.56 MGD)
Facility Long Term Average Flow = 0.313 MGD

$$IWC = \frac{0.313\ MGD}{0.313\ MGD + 7.56\ MGD}\ X\ 100\% = 3.98\%\ [4\%]$$

Federal Effluent Guideline Limitations (EGL)
The facility operates two processes identified in 40 CFR 420, Continuous Casting (40 CFR 420.62) and Hot Forming (40 CFR 420.72(c)(1)). The effluent guidelines for this facility are determined using reasonable measures of production for each process and combining the totals for compliance prior to discharge through DSN002. As discussed above, for this permit issuance, production tiers will be implemented due to expected increases in production. Effluent guideline calculations can be seen in Attachment A to this rationale.

Production-Based Effluent Guidelines (40 CFR 420.62, 40 CFR 420.72(c)(1))
The facility requested two tier permit limits for continuous casting based on fluctuations in production of more than 20% over the lifetime of a permit due to shifts in market demand. The request is denied at this time since 1) the request is not due to an expansion, and 2) the facility reported higher production in the past and were able to meet their permit limits. The proposed EGL limits are based on a production of 2,403,251 lbs/day.

Stormwater Allocation (40 CFR 420.08)
40 CFR 420.08 provides a mechanism for the Department to include additional allocations based on stormwater collection from the immediate process areas, but only to the extent that the stormwater collection increases the discharge flow. Based on a water balance at the facility, the facility uses more water than they purchase from the city in the manufacturing process, therefore, any water discharged is due to the collection, reuse, recycle, and treatment of stormwater and the long-term average flow, not including zero-discharge days, at DSN002 can be used to determine stormwater allocations.

To determine the stormwater allocations, the development document provides production-normalized concentration-based limitations for use in determining mass-based limitations based on the increase in flow due to the treatment of stormwater; however, these values are not provided for lead and zinc. In order to develop a concentration-basis for additional stormwater allocations, the 95% and 99% upper confidence level based on the last 5 years of analytical data for the monthly average and daily maximum, respectively, will be used.

$$Monthly\ Avg.Stormwater\ Allocation\ (\frac{lbs}{day}) = 95\%\ UCL * 8.34 * DSN002\ LTA\ Flow$$

$$Daily\ Max.Stormwater\ Allocation\ (\frac{lbs}{day}) = 99\%\ UCL * 8.34 * DSN002\ LTA\ Flow$$

Anti-backsliding

For this permit issuance, the facility's production-based effluent guidelines are decreasing; however, the additional stormwater allocation is increasing resulting in some calculated limits being higher than the previous permit issuance. In order to prevent backsliding, the previous permit limits will be used as a backstop for any permit limits that are higher due to the facility's continued ability to meet those permit limits in its current configuration and at higher recorded productions (3,827,611 lbs/day for Continuous Casting and 3,939,819 lbs/day for Hot Forming).

Total Suspended Solids

Total Suspended Solids is a regulated parameter under the subpart listed above. The previous permit limitations are more stringent than the effluent guideline limitations using a reasonable measure of production and have been maintained through several permit issuances based on the facility's ability to consistently meet these limitations. These limitations are proposed to be continued in this permit issuance.

Total Lead, Total Zinc

Total Lead and Total Zinc are regulated parameters under the subparts listed above. The Total Lead and Total Zinc limitations for each tier will be the sum of the allowable loading for each applicable Subpart and according to 40 CFR 420.08, additional allocation for stormwater in the drainage area for DSN002 collected and treated with process wastewater.

The monthly average and daily maximum limits for lead will be maintained at the current permit limits to satisfy the anti-backsliding requirement described above. The monthly average and daily maximum limits for zinc has become more restrictive using the updated DMR reported results and the stormwater flows for DSN002. See Attachments A.1 to A.3 for revised calculations and comparisons to current limits.

Oil & Grease

Limitations for Oil & Grease are determined at each tier as the sum of the effluent guideline limitations allowed for each process and will be applied as end-of-pipe requirements.

303(d) List of Impaired Waters/Total Maximum Daily Load (TMDL)

The receiving stream is listed on the 2016 303(d) List of Impaired Waters for Pathogens and Pesticides (Dieldrin). The discharge from this facility is not expected to cause or contribute to the impairment in the receiving stream; therefore, no additional monitoring is required for this permit issuance.

The receiving stream has a developed TMDL for pH, Siltation, and Metals (Zinc).

pH

The TMDL requires limitations of 6.0 to 8.5 S.U. for point sources to the receiving stream. DSN002 includes these limitations as required by the TMDL and the effluent guidelines. The TMDL allows for storm water only sources to be controlled by BMPs; therefore, monitoring only requirements are required at DSN0011.

Siltation
Total Suspended Solids is included in the TMDL for Village Creek; however, during the development of the TMDL, the TSS loading from existing point source discharges was found to be insignificant. Therefore, monitoring requirements at DSN0011 are appropriate to provide a measure of the facility's contribution and the effectiveness of their BMPs. Effluent guidelines at DSN002 are required and is expected to be protective of the load allocations set forth in the TMDL.

Metals (Zinc)
Nucor Steel is identified as a point source in the TMDL and is allowed a 2.40 mg/L concentration of Zinc. Limitations at DSN002 are set by effluent guidelines as mass-based limitations, which are more stringent than the TMDL requirements based on the long-term average flow.

Best Management Practices (BMPs) are believed to be the most effective way to control the contamination of stormwater from areas of industrial activities. This facility is required to maintain a BMP plan. The requirements of the BMP plan call for minimization of stormwater contact with waste materials, products and by-products, and for prevention of spills or loss of fluids from equipment maintenance activities. The effectiveness of the BMPs will be measured through the monitoring of the pollutants of concern.

316(b) Cooling Water Intake Structure (CWIS) Information
The entity providing water to the permittee is a public water system in accordance with Section 1401 of the Safe Drinking Water Act or the water used for cooling consists of effluent, which would otherwise be discharged.

Revision: February 15, 2024
Some administrative errors in the permit were corrected that did not affect the permit overall. The administrative errors and changes made that affected the revised permit are discussed below.

An administrative error was noted for Total Lead and Total Zinc for Outfall DSN002. The values from the DMRs had been transcribed incorrectly for the calculations used in the Attachments. The data has been corrected and updated to reflect the most current five years of sampling reported on the DMRs.

Productions were also updated to reflect the last five years of production data. Over the five-year period, the productions increased for both the continuous casting and the hot forming processes. The increases in production allowed for a slight increase in limits for Total Lead and Total Zinc while still satisfying the anti-backsliding requirements. The productions used were based on updated values provided by the facility. The new productions used for the calculations are shown in the table below. Typically, ADEM uses either the highest production month in the last 12 months, or the highest year of the last 5 years. Per EPA Guidance, the production used for calculations shouldn't be higher than 20% of the long-term average (LTA) production over the five-year period. Based on the productions provided, the continuous casting 12 month-highest month production was within 20% of the 5-year LTA production. The Hot Forming Rebar production for the highest month in the past 12 months was more than 20% of the LTA. The Hot Forming production used for limit calculations was reduced using a factor of *1.2 x LTA* to be within the EPA guidance.

Process Description	Last 12 Months (PPD) Highest Production	Long Term Average Production (ppd) of Past 5 years	Is 12-month max within 20% of LTA	Recommended Production to use for calculations
Continuous Casting - Billets	3,031,325	2,634,176	Yes	3,031,325
Hot Forming - Rebar	3,253,320	2,663,635	No	3,196,362 (1.2x LTA)

Attachment A.1
Limitations Summary

ELG Guideline Limitations - 3.1M CC Prod		
Parameter	Daily Max (ppd)	Monthly Average (ppd)
Total Suspended Solids	1601.3	590.2
Oil & Grease	412.94	23.64
Total Lead	0.2846	0.0949
Total Zinc	0.4274	0.1422

Stormwater Allocation		
Parameter	Daily Max (ppd)	Monthly Average (ppd)
Total Suspended Solids	-	-
Oil & Grease	-	-
Total Lead	0.0960	0.1282
Total Zinc	0.4697	0.3743

	3.1 M CC Production w/ SW Allocation	
Parameter	Daily Max (ppd)	Monthly Average (ppd)
Total Suspended Solids	1601	590
Oil & Grease	413	23.6
Total Lead	0.381	0.223
Total Zinc	0.897	0.516

	Current Permit Limits	
Parameter	Daily Max (ppd)	Monthly Average (ppd)
Total Suspended Solids	852	448
Oil & Grease	361	29.8
Total Lead	0.649	0.216
Total Zinc	0.975	0.325

Final Proposed Permit Limitations		
	3.1 MM CC Production	
	Daily Max (ppd)	Monthly Average (ppd)
Total Suspended Solids	852	448
Oil & Grease	361	23.6
Total Lead	0.381	0.216
Total Zinc	0.897	0.325

Concentration using Long-Term Average Flow vs. WQBEL/TMDL				
	EGL Concentration (mg/L)		WQBEL/TMDL (mg/L)	
	Daily Max	Monthly Average	Daily Max	Monthly Average
Total Lead	0.267	0.152	4.158	0.3368
Total Zinc	0.630	0.228	2.247/2.45	22.37

Attachment A.3

Effluent Limitation Calculations

Production Basis	2016 Application updated date Dec 2023
Continuous Casting	3,031,325 lbs/day
Hot Forming - Rebar	3,196,362 lbs/day

DSN002	Wastewater from steelmaking and casting	2016 Permit Application

Continuous Casting

Subpart F (Continuous Casting) BPT/BAT
NSPS - 40 CFR 420.62

		Production[1] (1000 lbs/day)	x	GL Factor (lb/1000lb of product)	=	Guideline Effluent Limitation (ppd)
TSS	daily max.	3031		0.078		236.44
	monthly avg.	3031		0.026		78.81
Oil and Grease	daily max.	3031		0.0234		70.93
	monthly avg.	3031		0.0078		23.64
Total Lead	daily max.	3031		0.0000939		0.285
	monthly avg.	3031		0.0000313		0.095
Total Zinc	daily max.	3031		0.000141		0.427
	monthly avg.	3031		0.0000469		0.142

Hot Forming

Subpart G (Hot Forming) BPT/BAT
NSPS - 40 CFR 420.72(c)(1)

		Production[1] (1000 lbs/day)	x	GL Factor (lb/1000lb of product)	=	Guideline Effluent Limitation (ppd)
TSS	daily max.	3196		0.427		1365
	monthly avg.	3196		0.16		511
Oil and Grease	daily max.	3196		0.107		342
	monthly avg.	3196		-		-

Totals	Daily Max (lbs/day)	Monthy Average (lbs/day)
TSS	1601	590.23
Oil and Grease	413	23.64
Total Lead	0.285	0.095
Total Zinc	0.427	0.142

Attachment A.3

Stormwater Allocation Calculations

The facility is allocated additional loadings for Lead and Zinc based on the stormwater that falls in the drainage area for DSN002 since that stormwater is collected and reused throughout the process and is cotreated with process wastewater from DSN002.

Increased Flow at DSN002 due to stormwater collection 0.1708 MGD

**In the absence of stormwater collection, DSN002 would not have a discharge, therefore, 100% of the flow at DSN002 is due to stormwater and the increased flow is the long-term average flow at DSN002, not including zero-discharge days*

Parameter	Limit	UCL (mg/L)	Stormwater Flow (MGD)	Additional Allocation (lbs/day)
Total Lead	Daily Maximum (99% UCL)	0.0674	0.17080	0.0960
	Monthly Average (95% UCL)	0.0900	0.17080	0.1282
Total Zinc	Daily Maximum (99% UCL)	0.3297	0.17080	0.4697
	Monthly Average (95% UCL)	0.2628	0.17080	0.3743

*The Upper 95% Confidence interval was determined using data available from May 2010 reporting period through January 2024 reporting period as the average of each respective category (daily maximum, monthly average) plus the t-value.

Total Zinc (1/1/19 - Present)

Report End Date	Monthly Average (lbs/day)	Monthly Average (mg/L)	Maximum Daily (lbs/day)	Maximum Daily (mg/L)
1/31/19	0.121	0.0924	0.121	0.0780
2/28/19	0.203	0.1581	0.203	0.1132
3/31/19	0.241	0.2094	0.348	0.2097
4/30/19				
5/31/19				
6/30/19				
7/31/19				
8/31/19				
9/30/19				
10/31/19	0.157	0.1199	0.313	0.1443
11/30/19	0.14	0.0907	0.14	0.0907
12/31/19	0.274	0.2567	0.536	0.3455
1/31/20	0.166	0.1144	0.166	0.0774
2/29/20	2.497	1.2220	4.972	1.4684
3/31/20	0.17	0.1324	0.184	0.0735
4/30/20	0.09	0.0475	0.09	0.0157
5/31/20				
6/30/20	0.308	0.9233	1.926	2.0257
7/31/20	0.237	0.1536	0.412	0.1123
8/31/20	0.017	0.0204	0.017	0.0204
9/30/20				
10/31/20	0.082	0.0993	0.082	0.0993
11/30/20				
12/31/20	0.243	0.2698	0.243	0.2698
1/31/21				
2/28/21	0.238	0.2212	0.361	0.1711
3/31/21	0.282	0.1510	0.333	0.0722
4/30/21				
5/31/21	0.11	0.1199	0.172	0.0838
6/30/21	0.027	0.0268	0.053	0.0193
7/31/21	0.173	0.1365	0.173	0.1027
8/31/21	0.038	0.0208	0.038	0.0115
9/30/21	0.18	0.2372	0.18	0.1206
10/31/21	0.037	0.0122	0.037	0.0058
11/30/21				
12/31/21	0.175	0.2306	0.175	0.1418
1/31/22	0.138	0.0919	0.138	0.0445
2/28/22	0.099	0.0678	0.138	0.0500
3/31/22	0.053	0.0187	0.074	0.0074
4/30/22				
5/31/22				
6/30/22	0.011	0.0040	0.013	0.0021
7/31/22				
8/31/22				
9/30/22				
10/31/22				
11/30/22	0.262	0.1795	0.262	0.1795
12/31/22	0.239	0.2924	0.426	0.2003
1/31/23	0.054	0.0264	0.07	0.0210
2/28/23	0.1535	0.0850	0.199	0.0423
3/31/23	0.0925	0.0569	0.143	0.0456
4/30/23	0.022	0.0338	0.022	0.0208
5/31/23				
6/30/23				
7/31/23	0.20		0.20	
8/31/23				
9/30/23				
10/31/23				
11/30/23	0.064	0.2646	0.064	0.2646
12/31/23	0.107	0.4277	0.107	0.4277
	95% Confidence	0.0790	99% Confidence	0.1303
	Average	0.1837	Average	0.1994
Monthly Avg. Con	Average + 95% Conf. Int.	0.2628	Average + 99% Conf. Int.	0.3297

Total Lead (1/1/19 - Present)

Report End Date	Monthly Average (lbs/day)	Monthly Average (mg/L)	Maximum Daily (lbs/day)	Maximum Daily (mg/L)
1/31/19				
2/28/19	0.029	0.0226	0.029	0.0162
3/31/19				
4/30/19				
5/31/19				
6/30/19				
7/31/19				
6/31/19				
9/30/19				
10/31/19				
11/30/19				
12/31/19				
1/31/20				
2/29/20	0.177	0.0866	0.353	0.1043
3/31/20	0.013	0.0101	0.018	0.0072
4/30/20				
5/31/20				
6/30/20	0.143	0.4287	0.285	0.2998
7/31/20				
8/31/20				
9/30/20				
10/31/20	0.004	0.0048	0.004	0.0048
11/30/20				
12/31/20	0.014	0.0155	0.014	0.0155
1/31/21				
2/28/21				
3/31/21				
4/30/21				
5/31/21	0.001	0.0011	0.001	0.0005
6/30/21				
7/31/21				
8/31/21				
9/30/21	0.004	0.0053	0.004	0.0027
10/31/21				
11/30/21				
12/31/21				
1/31/22				
2/28/22				
3/31/22	0.002	0.0007	0.003	0.0003
4/30/22				
5/31/22				
6/30/22				
7/31/22				
8/31/22				
9/30/22				
10/31/22				
11/30/22	0.004	0.0027	0.004	0.0027
12/31/22	0.002	0.0024	0.003	0.0014
1/31/23	0.002	0.0010	0.002	0.0006
2/28/23				
3/31/23	0.0005	0.0003	0.00093	0.0003
4/30/23	0.001	0.0015	0.001	0.0009
5/31/23				
6/30/23				
7/31/23				
8/31/23	0.0023	0.0089	0.0023	0.0089
9/30/23				
10/31/23				
11/30/23				
12/31/23	0.0036	0.0144	0.0036	0.0144
	95% Confidence	0.0521	99% Confidence	0.0374
	Average	0.0379	Average	0.0300
	Average + 95% Conf. Int.	0.0900	Average + 99% Conf. Int.	0.0674

Historical Flow (1/1/19 - Present)

Report End Date	Monthly Average (MGD)	Maximum Daily (MGD)
1/31/19	0.157	0.186
2/28/19	0.154	0.215
3/31/19	0.138	0.199
4/30/19		
5/31/19		
6/30/19		
7/31/19		
8/31/19		
9/30/19		
10/31/19	0.157	0.26
11/30/19	0.185	0.185
12/31/19	0.128	0.186
1/31/20	0.174	0.257
2/29/20	0.245	0.406
3/31/20	0.154	0.3
4/30/20	0.227	0.687
5/31/20	0.1	0.137
6/30/20	0.04	0.114
7/31/20	0.185	0.44
8/31/20	0.1	0.1
9/30/20		
10/31/20	0.099	0.099
11/30/20		
12/31/20	0.108	0.108
1/31/21	0.131	0.21
2/28/21	0.129	0.253
3/31/21	0.224	0.553
4/30/21		
5/31/21	0.11	0.246
6/30/21	0.121	0.329
7/31/21	0.152	0.202
8/31/21	0.219	0.396
9/30/21	0.091	0.179
10/31/21	0.363	0.77
11/30/21		
12/31/21	0.091	0.148
1/31/22	0.18	0.372
2/28/22	0.175	0.331
3/31/22	0.34	1.194
4/30/22		
5/31/22		
6/30/22	0.332	0.744
7/31/22		
8/31/22		
9/30/22		
10/31/22		
11/30/22	0.175	0.175
12/31/22	0.098	0.255
1/31/23	0.245	0.4
2/28/23	0.2166	0.564
3/31/23	0.195	0.376
4/30/23	0.078	0.127
5/31/23		
6/30/23		
7/31/23	0.099	0.033
8/31/23	0.031156	0.031156
9/30/23		
10/31/23		
11/30/23	0.029	0.029
12/31/23	0.03	0.03
Averages	0.1551	0.2957

Facility Name: **Nucor Steel**

NPDES No.: **AL0003735**

2/15/2024

$$Q_d * C_d + Q_{d2} * C_{d2} + Q_s * C_s = Q_r * C_r$$

ID	Pollutant	Carcinogen "yes"	Type	Background conc. from upstream source (C_{d2}) Daily Max	Background conc. from upstream source (C_{d2}) Monthly Ave	Receiving Stream conc. (C_s) Daily Max	Receiving Stream conc. (C_s) Monthly Ave	Enter the Daily Discharge as reported by Applicant (C_d) Max	Enter the Avg Daily Discharge as reported by Applicant (C_d) Ave	Partition Coefficient (Organic) (Koc)
				µg/l	µg/l	µg/l	µg/l	µg/l	µg/l	
1	Antimony		Metals	0	0	0	0	0	0	-
2	**Arsenic*, ** **	YES	Metals	0	0	0	0	0	0	0.574
3	Beryllium		Metals	0	0	0	0	0	0	-
4	Cadmium**		Metals	0	0	0	0	0	0	0.236
5	Chromium / Chromium III**		Metals	0	0	0	0	0	0	0.210
6	Chromium / Chromium VI**		Metals	0	0	0	0	0	0	
7	Copper**		Metals	0	0	0	0	0	0	0.388
8	Lead**		Metals	108	13	0	0	67.4	37.9	0.467
9	Mercury**		Metals	0	0	0	0	0	0	0.302
10	Nickel**		Metals	0	0	0	0	0	0	0.505
11	Selenium		Metals	0	0	0	0	0	0	-
12	Silver		Metals	0	0	0	0	0	0	-
13	Thallium		Metals	0	0	0	0	0	0	-
14	Zinc**		Metals	192	152	0	0	329.7	183.7	0.330
15	Cyanide		Metals	0	0	0	0	0	0	-
16	Total Phenolic Compounds		Metals	0	0	0	0	0	0	-
17	Hardness (As CaCO3)		Metals	0	0	0	0	0	0	-
18	Acrolein		VOC	0	0	0	0	0	0	-
19	**Acrylonitrile***	YES	VOC	0	0	0	0	0	0	-
20	**Aldrin**	YES	VOC	0	0	0	0	0	0	-
21	**Benzene***	YES	VOC	0	0	0	0	0	0	-
22	**Bromoform***	YES	VOC	0	0	0	0	0	0	-
23	**Carbon Tetrachloride***	YES	VOC	0	0	0	0	0	0	-
24	**Chlordane**	YES	VOC	0	0	0	0	0	0	-
25	Chlorobenzene		VOC	0	0	0	0	0	0	-
26	**Chloro-Dibromo-Methane***	YES	VOC	0	0	0	0	0	0	-
27	Chloroethane		VOC	0	0	0	0	0	0	-
28	2-Chloro-Ethylvinyl Ether		VOC	0	0	0	0	0	0	-
29	**Chloroform***	YES	VOC	0	0	0	0	0	0	-
30	**4,4'-DDD**	YES	VOC	0	0	0	0	0	0	-
31	**4,4'-DDE**	YES	VOC	0	0	0	0	0	0	-
32	**4,4'-DDT**	YES	VOC	0	0	0	0	0	0	-
33	**Dichlorobrom-Methane***	YES	VOC	0	0	0	0	0	0	-
34	1, 1-Dichloroethane		VOC	0	0	0	0	0	0	-
35	**1, 2-Dichloroethane***	YES	VOC	0	0	0	0	0	0	-
36	Trans-1, 2-Dichloro-Ethylene		VOC	0	0	0	0	0	0	-
37	**1, 1-Dichloroethylene***	YES	VOC	0	0	0	0	0	0	-
38	1, 2-Dichloropropane		VOC	0	0	0	0	0	0	-
39	1, 3-Dichloro-Propylene		VOC	0	0	0	0	0	0	-
40	**Dieldrin**	YES	VOC	0	0	0	0	0	0	-
41	Ethylbenzene		VOC	0	0	0	0	0	0	-
42	Methyl Bromide		VOC	0	0	0	0	0	0	-
43	Methyl Chloride		VOC	0	0	0	0	0	0	-
44	**Methylene Chloride***	YES	VOC	0	0	0	0	0	0	-
45	**1, 1, 2, 2-Tetrachloro-Ethane***	YES	VOC	0	0	0	0	0	0	-
46	**Tetrachloro-Ethylene***	YES	VOC	0	0	0	0	0	0	-
47	Toluene		VOC	0	0	0	0	0	0	-
48	**Toxaphene**	YES	VOC	0	0	0	0	0	0	-
49	**Tributyltin (TBT)**	YES	VOC	0	0	0	0	0	0	-
50	1, 1, 1-Trichloroethane		VOC	0	0	0	0	0	0	-
51	**1, 1, 2-Trichloroethane***	YES	VOC	0	0	0	0	0	0	-
52	**Trichloroethylene***	YES	VOC	0	0	0	0	0	0	-
53	**Vinyl Chloride***	YES	VOC	0	0	0	0	0	0	-
54	2-Chloro-Phenol		Acids	0	0	0	0	0	0	-
55	2-Chlorophenol		Acids	0	0	0	0	0	0	-
56	2, 4-Dichlorophenol		Acids	0	0	0	0	0	0	-
57	2, 4-Dimethylphenol		Acids	0	0	0	0	0	0	-
58	4, 6-Dinitro-O-Cresol		Acids	0	0	0	0	0	0	-
59	2, 4-Dinitrophenol		Acids	0	0	0	0	0	0	-
60	**4,6 -Dinitro- 2-methylphenol**	YES	Acids	0	0	0	0	0	0	-
61	**Dioxin (2,3,7,8-TCDD)**	YES	Acids	0	0	0	0	0	0	-
62	2-Nitrophenol		Acids	0	0	0	0	0	0	-
63	4-Nitrophenol		Acids	0	0	0	0	0	0	-
64	**Pentachlorophenol***	YES	Acids	0	0	0	0	0	0	-
65	Phenol		Acids	0	0	0	0	0	0	-
66	**2, 4, 6-Trichlorophenol***	YES	Acids	0	0	0	0	0	0	-
67	Acenaphthene		Base/n	0	0	0	0	0	0	-
68	Acenaphthylene		Base/n	0	0	0	0	0	0	-
69	Anthracene		Base/n	0	0	0	0	0	0	-
70	Benzidine		Base/n	0	0	0	0	0	0	-
71	**Benzo(A)Anthracene***	YES	Base/n	0	0	0	0	0	0	-
72	**Benzo(A)Pyrene***	YES	Base/n	0	0	0	0	0	0	-
73	3, 4-Benzo-Fluoranthene		Base/n	0	0	0	0	0	0	-
74	Benzo(GHI)Perylene		Base/n	0	0	0	0	0	0	-
75	Benzo(K)Fluoranthene		Base/n	0	0	0	0	0	0	-
76	Bis (2-Chloroethoxy) Methane		Base/n	0	0	0	0	0	0	-
77	**Bis (2-Chloroethyl)-Ether***	YES	Base/n	0	0	0	0	0	0	-
78	Bis (2-Chloroiso-Propyl) Ether		Base/n	0	0	0	0	0	0	-
79	**Bis (2-Ethylhexyl) Phthalate***	YES	Base/n	0	0	0	0	0	0	-
80	4-Bromophenyl Phenyl Ether		Base/n	0	0	0	0	0	0	-
81	Butyl Benzyl Phthalate		Base/n	0	0	0	0	0	0	-
82	2-Chloronaphthalene		Base/n	0	0	0	0	0	0	-
83	4-Chlorophenyl Phenyl Ether		Base/n	0	0	0	0	0	0	-
84	**Chrysene***	YES	Base/n	0	0	0	0	0	0	-
85	Di-N-Butyl Phthalate		Base/n	0	0	0	0	0	0	-
86	Di-N-Octyl Phthalate		Base/n	0	0	0	0	0	0	-
87	**Dibenzo(A,H)Anthracene***	YES	Base/n	0	0	0	0	0	0	-
88	1, 2-Dichlorobenzene		Base/n	0	0	0	0	0	0	-
89	1, 3-Dichlorobenzene		Base/n	0	0	0	0	0	0	-
90	1, 4-Dichlorobenzene		Base/n	0	0	0	0	0	0	-
91	**3, 3-Dichlorobenzidine***	YES	Base/n	0	0	0	0	0	0	-
92	Diethyl Phthalate		Base/n	0	0	0	0	0	0	-
93	Dimethyl Phthalate		Base/n	0	0	0	0	0	0	-
94	**2, 4-Dinitrotoluene***	YES	Base/n	0	0	0	0	0	0	-
95	2, 6-Dinitrotoluene		Base/n	0	0	0	0	0	0	-
96	1,2-Diphenylhydrazine		Base/n	0	0	0	0	0	0	-
97	**Endosulfan (alpha)**	YES	Ether	0	0	0	0	0	0	-
98	**Endosulfan (beta)**	YES	Ether	0	0	0	0	0	0	-
99	**Endosulfan sulfate**	YES	Ether	0	0	0	0	0	0	-
100	**Endrin**	YES	Ether	0	0	0	0	0	0	-
101	**Endrin Aldehyde**	YES	Ether	0	0	0	0	0	0	-
102	Fluoranthene		Base/n	0	0	0	0	0	0	-
103	Fluorene		Base/n	0	0	0	0	0	0	-
104	Heptachlor	YES	Ether	0	0	0	0	0	0	-
105	Heptachlor Epoxide	YES	Base/n	0	0	0	0	0	0	-
106	**Hexachlorobenzene***	YES	Base/n	0	0	0	0	0	0	-
107	**Hexachlorobutadiene***	YES	Base/n	0	0	0	0	0	0	-
108	**Hexachlorocyclohexane (alpa)**	YES	Base/n	0	0	0	0	0	0	-
109	**Hexachlorocyclohexane (beta)**	YES	Base/n	0	0	0	0	0	0	-
110	**Hexachlorocyclohexane (gamma)**	YES	Base/n	0	0	0	0	0	0	-
111	Hexachlorocyclopentadiene		Base/n	0	0	0	0	0	0	-
112	Hexachloroethane		Base/n	0	0	0	0	0	0	-
113	**Indeno(1, 2, 3-Cd)Pyrene***	YES	Base/n	0	0	0	0	0	0	-
114	Isophorone		Base/n	0	0	0	0	0	0	-
115	Naphthalene		Base/n	0	0	0	0	0	0	-
116	Nitrobenzene		Base/n	0	0	0	0	0	0	-
117	**N-Nitrosodi-N-Propylamine***	YES	Base/n	0	0	0	0	0	0	-
118	**N-Nitrosodi-N-Methylamine***	YES	Base/n	0	0	0	0	0	0	-
119	**N-Nitrosodi-N-Phenylamine***	YES	Base/n	0	0	0	0	0	0	-
120	**PCB-1016**	YES	Pesticide	0	0	0	0	0	0	-
121	**PCB-1221**	YES	Pesticide	0	0	0	0	0	0	-
122	**PCB-1232**	YES	Pesticide	0	0	0	0	0	0	-
123	**PCB-1242**	YES	Pesticide	0	0	0	0	0	0	-
124	**PCB-1248**	YES	Ether	0	0	0	0	0	0	-
125	**PCB-1254**	YES	Ether	0	0	0	0	0	0	-
126	**PCB-1260**	YES	Ether	0	0	0	0	0	0	-
127	Pentachloroethane		Base/n	0	0	0	0	0	0	-
128	Pyrene		Base/n	0	0	0	0	0	0	-
129	1, 2, 4-Trichlorobenzene		Base/n	0	0	0	0	0	0	-

0.1156	Enter Q_d = wastewater discharge flow from facility (MGD)
0.17885967	Q_d = wastewater discharge flow (cfs) (this value is caluclated from the MGD)
0	Enter flow from upstream discharge Qd2 = background stream flow in MGD above point of discharge
0	Qd2 = background stream flow from upstream source (cfs)
8	Enter 7Q10, Q_s = background stream flow in cfs above point of discharge
4.1	Enter or estimated, 1Q10, Q_s = background stream flow in cfs above point of discharge (1Q10 estimated at 75% of 7Q10)
54.3	Enter Mean Annual Flow, Q_s = background stream flow in cfs above point of discharge
11.7	Enter 7Q2, Q_s = background stream flow in cfs above point of discharge (For LWF class streams)
Enter to Edit	Enter C_s = background in-stream pollutant concentration in µg/l (assuming this is zero "0" unless there is data)
Q_d +Qd2+Q_s	Q_r = resultant in-stream flow, after discharge
Calculated on other	C_r = resultant in-stream pollutant concentration in µg/l in the stream (after complete mixing occurs)
100	Enter, Background Hardness above point of discharge (assumed 50 South of Birmingham and 100 North of
7.00 s.u.	Enter, Background pH above point of discharge
YES	Enter, Is discharge to a stream? "YES" Other option would be to a Lake. (This changes the partition coefficients for the metals)

** Using Partition Coefficients

February 16, 2024

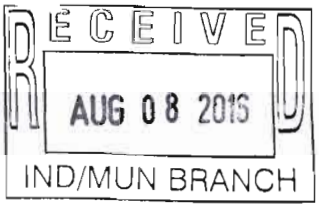
Facility Name: Nucor Steel

NPDES No.: AL0003738

						Freshwater Acute (µg/l) Q_s =1Q10					Freshwater Chronic (µg/l) Q_s = 7Q2				Human Health Consumption Fish only (µg/l) Carcinogen Q_s = Annual Average Non-Carcinogen Q_s = 7Q10			
	Freshwater LWF classification																	
ID	Pollutant	RP?	Carcinogen yes	Background from upstream source (Cd2) Daily Max	Max Daily Discharge as reported by Applicant (C_{max})	Water Quality Criteria (C_d)	Draft Permit Limit (C_{max})	20% of Draft Permit Limit	RP?	Background from upstream source (Cd2) Monthly Ave	Avg Daily Discharge as reported by Applicant (C_{avg})	Water Quality Criteria (C_d)	Draft Permit Limit (C_{max})	20% of Draft Permit Limit	RP?	Water Quality Criteria (C_d)	Draft Permit Limit (C_{max})	20% of Draft Permit Limit	RP?
1	Antimony			0	0	-	-	-	-	0	0	-	-	-	-	3.73E+02	1.71E+04	3.41E+03	No
2	Arsenic		YES	0	0	592.334	14170.417	2834.083445	No	0	0	261.324	17355.682	3471.136428	No	3.03E-01	9.23E+01	1.85E+01	No
3	Beryllium			0	0	-	-	-	-	0	0	-	-	-	-	-	-	-	-
4	Cadmium			0	0	8.533	204.129	40.8257773	No	0	0	1.042	69.228	13.84551014	No	-	-	-	-
5	Chromium/ Chromium III			0	0	2713.159	64906.908	12981.38165	No	0	0	352.926	23439.392	4687.878362	No	-	-	-	-
6	Chromium/ Chromium VI			0	0	15.000	382.768	76.55359516	No	0	0	11.000	730.559	146.1117027	No	-	-	-	-
7	Copper			0	0	34.637	828.618	165.7236526	No	0	0	23.082	1532.966	306.5932689	No	-	-	-	-
8	Lead			108	67.4	138.290	3308.309	661.6617961	No	12.5	37.9	5.389	357.905	71.58090318	No	-	-	-	-
9	Mercury			0	0	2.400	57.415	11.48303927	No	0	0	0.012	0.797	0.159394585	No	4.24E-02	1.94E+00	3.88E-01	No
10	Nickel			0	0	927.200	22181.394	4436.278765	No	0	0	102.983	6839.572	1367.914316	No	9.93E+02	4.54E+04	9.08E+03	No
11	Selenium			0	0	20.000	478.460	95.69199395	No	0	0	5.000	332.072	66.41441032	No	2.43E+03	1.11E+05	2.22E+04	No
12	Silver			0	0	3.217	76.954	15.39089582	No	0	0	-	-	-	-	-	-	-	-
13	Thallium			0	0	-	-	-	-	0	0	-	-	-	-	2.74E-01	1.25E+01	2.50E+00	No
14	Zinc			192	329.7	355.092	1847.203	369.4405284	No	151.85	183.7	357.997	21879.137	4375.827362	No	1.49E+04	6.80E+05	1.36E+06	No
15	Cyanide			0	0	22.000	526.306	105.2611933	No	0	0	5.200	345.355	69.07098673	No	9.33E+03	4.27E+05	8.54E+04	No
16	Total Phenolic Compounds			0	0	-	-	-	-	0	0	-	-	-	-	-	-	-	-
17	Hardness (As CaCO3)			0	0	-	-	-	-	0	0	-	-	-	-	-	-	-	-
18	Acrolein			0	0	-	-	-	-	0	0	-	-	-	-	5.43E+00	2.48E+02	4.96E+01	No
19	Acrylonitrile		YES	0	0	-	-	-	-	0	0	-	-	-	-	1.44E-01	4.39E+01	8.77E+00	No
20	Aldrin		YES	0	0	3.000	71.769	14.35379909	No	0	0	-	-	-	-	2.94E-05	8.95E-03	1.79E-03	No
21	Benzene		YES	0	0	-	-	-	-	0	0	-	-	-	-	1.55E+01	4.71E+03	9.43E+02	No
22	Bromoform		YES	0	0	-	-	-	-	0	0	-	-	-	-	7.88E+01	2.40E+04	4.80E+03	No
23	Carbon Tetrachloride		YES	0	0	-	-	-	-	0	0	-	-	-	-	9.57E-01	2.92E+02	5.83E+01	No
24	Chlordane		YES	0	0	2.400	57.415	11.48303927	No	0	0	0.0043	0.286	0.057116393	No	4.73E-04	1.44E-01	2.88E-02	No
25	Clorobenzene			0	0	-	-	-	-	0	0	-	-	-	-	9.06E+02	4.14E+04	8.29E+03	No
26	Chlorodibromo-Methane		YES	0	0	-	-	-	-	0	0	-	-	-	-	7.41E+00	2.26E+03	4.51E+02	No
27	Chloroethane			0	0	-	-	-	-	0	0	-	-	-	-	-	-	-	-
28	2-Chloro-Ethylvinyl Ether			0	0	-	-	-	-	0	0	-	-	-	-	-	-	-	-
29	ChloroForm		YES	0	0	-	-	-	-	0	0	-	-	-	-	1.02E+02	3.11E+04	6.21E+03	No
30	4,4' - DDD		YES	0	0	-	-	-	-	0	0	-	-	-	-	1.81E-04	5.52E-02	1.10E-02	No
31	4,4' - DDE		YES	0	0	-	-	-	-	0	0	-	-	-	-	1.28E-04	3.90E-02	7.80E-03	No
32	4,4' - DDT		YES	0	0	1.100	26.315	5.263059667	No	0	0	0.001	0.066	0.013282882	No	1.28E-04	3.90E-02	7.80E-03	No
33	Dichlorobromo-Methane		YES	0	0	-	-	-	-	0	0	-	-	-	-	1.00E+01	3.06E+03	6.11E+02	No
34	1, 1-Dichloroethene			0	0	-	-	-	-	0	0	-	-	-	-	-	-	-	-
35	1, 2-Dichloroethane		YES	0	0	-	-	-	-	0	0	-	-	-	-	2.14E+01	6.51E+03	1.30E+03	No
36	Trans-1, 2-Dichloro-Ethylene			0	0	-	-	-	-	0	0	-	-	-	-	5.91E+03	2.70E+05	5.40E+04	No
37	1, 1-Dichloroethylene		YES	0	0	-	-	-	-	0	0	-	-	-	-	4.17E+03	1.27E+06	2.54E+05	No
38	1, 2-Dichloropropane			0	0	-	-	-	-	0	0	-	-	-	-	8.49E+00	3.88E+02	7.77E+01	No
39	1, 3-Dichloro-Propylene			0	0	-	-	-	-	0	0	-	-	-	-	1.23E+01	5.62E+02	1.12E+02	No
40	Dieldrin		YES	0	0	0.240	5.742	1.148303927	No	0	0	0.056	3.719	0.743841396	No	3.12E-05	9.51E-03	1.90E-03	No
41	Ethylbenzene			0	0	-	-	-	-	0	0	-	-	-	-	1.24E+03	5.69E+04	1.14E+04	No
42	Methyl Bromide			0	0	-	-	-	-	0	0	-	-	-	-	8.71E+02	3.98E+04	7.97E+03	No
43	Methyl Chloride			0	0	-	-	-	-	0	0	-	-	-	-	-	-	-	-
44	Methylene Chloride		YES	0	0	-	-	-	-	0	0	-	-	-	-	3.46E+02	1.05E+05	2.11E+04	No
45	1, 1, 2, 2-Tetrachloro-Ethane		YES	0	0	-	-	-	-	0	0	-	-	-	-	2.33E+00	7.11E+02	1.42E+02	No
46	Tetrachloro-Ethylene		YES	0	0	-	-	-	-	0	0	-	-	-	-	1.92E+00	5.84E+02	1.17E+02	No
47	Toluene			0	0	-	-	-	-	0	0	-	-	-	-	8.72E+03	3.99E+05	7.98E+04	No
48	Toxaphene		YES	0	0	0.730	17.464	3.492757779	No	0	0	0.0002	0.013	0.002656576	No	1.62E-04	4.93E-02	9.86E-03	No
49	Tributyltin (TBT)		YES	0	0	0.460	11.005	2.200915861	No	0	0	0.072	4.782	0.956367509	No	-	-	-	-
50	1, 1, 1-Trichloroethane			0	0	-	-	-	-	0	0	-	-	-	-	-	-	-	-
51	1, 1, 2-Trichloroethane		YES	0	0	-	-	-	-	0	0	-	-	-	-	9.10E+00	2.77E+03	5.54E+02	No
52	Trichlorethylene		YES	0	0	-	-	-	-	0	0	-	-	-	-	1.75E+01	5.32E+03	1.06E+03	No
53	Vinyl Chloride		YES	0	0	-	-	-	-	0	0	-	-	-	-	1.42E+00	4.34E+02	8.68E+01	No
54	P-Chloro-M-Cresol			0	0	-	-	-	-	0	0	-	-	-	-	-	-	-	-
55	2-Chlorophenol			0	0	-	-	-	-	0	0	-	-	-	-	8.71E+01	3.98E+03	7.96E+02	No
56	2, 4-Dichlorophenol			0	0	-	-	-	-	0	0	-	-	-	-	1.72E+02	7.86E+03	1.57E+03	No
57	2, 4-Dimethylphenol			0	0	-	-	-	-	0	0	-	-	-	-	4.98E+02	2.28E+04	4.55E+03	No
58	4, 6-Dinitro-O-Cresol			0	0	-	-	-	-	0	0	-	-	-	-	-	-	-	-
59	2, 4-Dinitrophenol			0	0	-	-	-	-	0	0	-	-	-	-	3.11E+03	1.42E+05	2.85E+04	No
60	4,6-Dinitro-2-methylphenol		YES	0	0	-	-	-	-	0	0	-	-	-	-	1.65E+02	5.04E+04	1.01E+04	No
61	Dioxin (2,3,7,8-TCDD)		YES	0	0	-	-	-	-	0	0	-	-	-	-	2.67E-08	8.12E-06	1.62E-06	No
62	2-Nitrophenol			0	0	-	-	-	-	0	0	-	-	-	-	-	-	-	-
63	4-Nitrophenol			0	0	-	-	-	-	0	0	-	-	-	-	-	-	-	-
64	Pentachlorophenol		YES	0	0	8.723	208.688	41.73759843	No	0	0	6.693	444.484	88.89679973	No	1.77E+00	5.38E+02	1.08E+02	No
65	Phenol			0	0	-	-	-	-	0	0	-	-	-	-	5.00E+05	2.29E+07	4.57E+06	No
66	2, 4, 6-Trichlorophenol		YES	0	0	-	-	-	-	0	0	-	-	-	-	1.41E+00	4.31E+02	8.61E+01	No
67	Acenaphthene			0	0	-	-	-	-	0	0	-	-	-	-	5.79E+02	2.65E+04	5.29E+03	No
68	Acenaphthylene			0	0	-	-	-	-	0	0	-	-	-	-	-	-	-	-
69	Anthracene			0	0	-	-	-	-	0	0	-	-	-	-	2.33E+04	1.07E+06	2.13E+05	No
70	Benzidine			0	0	-	-	-	-	0	0	-	-	-	-	1.16E-04	5.30E-03	1.06E-03	No
71	Benzo(A)Anthracene		YES	0	0	-	-	-	-	0	0	-	-	-	-	1.07E-02	3.25E+00	6.49E-01	No
72	Benzo(A)Pyrene		YES	0	0	-	-	-	-	0	0	-	-	-	-	1.07E-02	3.25E+00	6.49E-01	No
73	Benzo(b)fluoranthene			0	0	-	-	-	-	0	0	-	-	-	-	1.07E-02	4.87E-01	9.74E-02	No
74	Benzo(GHI)Perylene			0	0	-	-	-	-	0	0	-	-	-	-	-	-	-	-
75	Benzo(K)Fluoranthene			0	0	-	-	-	-	0	0	-	-	-	-	1.07E-02	4.87E-01	9.74E-02	No
76	Bis (2-Chloroethoxy) Methane			0	0	-	-	-	-	0	0	-	-	-	-	-	-	-	-
77	Bis (2-Chloroethyl)-Ether		YES	0	0	-	-	-	-	0	0	-	-	-	-	3.07E-01	9.36E+01	1.87E+01	No
78	Bis (2-Chloroiso-Propyl) Ether			0	0	-	-	-	-	0	0	-	-	-	-	3.78E+04	1.73E+06	3.46E+05	No
79	Bis (2-Ethylhexyl) Phthalate		YES	0	0	-	-	-	-	0	0	-	-	-	-	1.26E+00	3.90E+02	7.81E+01	No
80	4-Bromophenyl Phenyl Ether			0	0	-	-	-	-	0	0	-	-	-	-	-	-	-	-
81	Butyl Benzyl Phthalate			0	0	-	-	-	-	0	0	-	-	-	-	1.13E+03	5.15E+04	1.03E+04	No
82	2-Chloronaphthalene			0	0	-	-	-	-	0	0	-	-	-	-	9.24E+02	4.23E+04	8.45E+03	No
83	4-Chlorophenyl Phenyl Ether			0	0	-	-	-	-	0	0	-	-	-	-	-	-	-	-
84	Chrysene		YES	0	0	-	-	-	-	0	0	-	-	-	-	1.07E-02	3.25E+00	6.49E-01	No
85	Di-N-Butyl Phthalate			0	0	-	-	-	-	0	0	-	-	-	-	2.62E+03	1.20E+05	2.40E+04	No
86	Di-N-Octyl Phthalate			0	0	-	-	-	-	0	0	-	-	-	-	-	-	-	-
87	Dibenzo(A,H)Anthracene		YES	0	0	-	-	-	-	0	0	-	-	-	-	1.07E-02	3.25E+00	6.49E-01	No
88	1, 2-Dichlorobenzene			0	0	-	-	-	-	0	0	-	-	-	-	7.55E+02	3.45E+04	6.91E+03	No
89	1, 3-Dichlorobenzene			0	0	-	-	-	-	0	0	-	-	-	-	5.62E+02	2.57E+04	5.14E+03	No
90	1, 4-Dichlorobenzene			0	0	-	-	-	-	0	0	-	-	-	-	1.12E+02	5.14E+03	1.03E+03	No
91	3, 3-Dichlorobenzidine		YES	0	0	-	-	-	-	0	0	-	-	-	-	1.66E-02	5.06E+00	1.01E+00	No
92	Diethyl Phthalate			0	0	-	-	-	-	0	0	-	-	-	-	2.56E+04	1.17E+06	2.34E+05	No
93	Dimethyl Phthalate			0	0	-	-	-	-	0	0	-	-	-	-	6.48E+05	2.96E+07	5.93E+06	No
94	2, 4-Dinitrotoluene		YES	0	0	-	-	-	-	0	0	-	-	-	-	1.98E+00	6.03E+02	1.21E+02	No
95	2, 6-Dinitrotoluene			0	0	-	-	-	-	0	0	-	-	-	-	-	-	-	-
96	1,2-Diphenylhydrazine			0	0	-	-	-	-	0	0	-	-	-	-	1.17E-01	5.36E+00	1.07E+00	No
97	Endosulfan (alpha)		YES	0	0	0.22	5.263	1.052611933	No	0	0	0.056	3.719	0.743841396	No	5.19E+01	1.58E+04	3.16E+03	No
98	Endosulfan (beta)		YES	0	0	0.22	5.263	1.052611933	No	0	0	0.056	3.719	0.743841396	No	5.19E+01	1.58E+04	3.16E+03	No
99	Endosulfan sulfate		YES	0	0	-	-	-	-	0	0	-	-	-	-	5.19E+01	1.58E+04	3.16E+03	No
100	Endrin		YES	0	0	0.086	2.057	0.411475574	No	0	0	0.036	2.391	0.478183754	No	3.53E-02	1.07E+01	2.15E+00	No
101	Endrin Aldeyhde		YES	0	0	-	-	-	-	0	0	-	-	-	-	1.76E-01	5.37E+01	1.07E+01	No
102	Fluoranthene			0	0	-	-	-	-	0	0	-	-	-	-	8.12E+01	3.71E+03	7.42E+02	No
103	Fluorene			0	0	-	-	-	-	0	0	-	-	-	-	3.11E+03	1.42E+05	2.85E+04	No
104	Heptochlor		YES	0	0	0.52	12.440	2.487991843	No	0	0	0.004	0.252	0.050474952	No	4.63E-05	1.41E-02	2.82E-03	No
105	Heptachlor Epoxide		YES	0	0	0.52	12.440	2.487991843	No	0	0	0.004	0.252	0.050474952	No	2.29E-05	6.97E-03	1.39E-03	No
106	Hexachlorobenzene		YES	0	0	-	-	-	-	0	0	-	-	-	-	1.68E-04	5.11E-02	1.02E-02	No
107	Hexachlorobutadiene		YES	0	0	-	-	-	-	0	0	-	-	-	-	1.08E+01	3.28E+03	6.56E+02	No
108	Hexachlorocyclohexan (alpha)		YES	0	0	-	-	-	-	0	0	-	-	-	-	2.85E-03	8.68E-01	1.74E-01	No
109	Hexachlorocyclohexan (beta)		YES	0	0	-	-	-	-	0	0	-	-	-	-	9.97E-03	3.04E+00	6.07E-01	No
110	Hexachlorocyclohexan (gamma)		YES	0	0	0.95	22.727	4.545369713	No	0	0	-	-	-	-	1.08E+00	3.28E+02	6.56E+01	No
111	HexachlorocyclоPentadiene			0	0	-	-	-	-	0	0	-	-	-	-	6.45E+02	2.95E+04	5.90E+03	No
112	Hexachloroethane			0	0	-	-	-	-	0	0	-	-	-	-	1.92E+00	8.77E+01	1.75E+01	No
113	Indeno(1, 2, 3-CK)Pyrene		YES	0	0	-	-	-	-	0	0	-	-	-	-	1.07E-02	3.25E+00	6.49E-01	No
114	Isophorone			0	0	-	-	-	-	0	0	-	-	-	-	5.61E+02	2.56E+04	5.13E+03	No
115	Naphthalene			0	0	-	-	-	-	0	0	-	-	-	-	-	-	-	-
116	Nitrobenzene			0	0	-	-	-	-	0	0	-	-	-	-	4.04E+02	1.85E+04	3.69E+03	No
117	N-Nitrosodi-N-Propylamine		YES	0	0	-	-	-	-	0	0	-	-	-	-	2.95E-01	8.98E+01	1.80E+01	No
118	N-Nitrosodimethylamine		YES	0	0	-	-	-	-	0	0	-	-	-	-	1.76E+00	5.36E+02	1.07E+02	No
119	N-Nitrosodiphenylamine		YES	0	0	-	-	-	-	0	0	-	-	-	-	3.50E+00	1.07E+03	2.13E+02	No
120	PCB-1016		YES	0	0	-	-	-	-	0	0	0.014	0.930	0.185960349	No	3.74E-05	1.14E-02	2.28E-03	No
121	PCB-1221		YES	0	0	-	-	-	-	0	0	0.014	0.930	0.185960349	No	3.74E-05	1.14E-02	2.28E-03	No
122	PCB-1232		YES	0	0	-	-	-	-	0	0	0.014	0.930	0.185960349	No	3.74E-05	1.14E-02	2.28E-03	No
123	PCB-1242		YES	0	0	-	-	-	-	0	0	0.014	0.930	0.185960349	No	3.74E-05	1.14E-02	2.28E-03	No
124	PCB-1248		YES	0	0	-	-	-	-	0	0	0.014	0.930	0.185960349	No	3.74E-05	1.14E-02	2.28E-03	No
125	PCB-1254		YES	0	0	-	-	-	-	0	0	0.014	0.930	0.185960349	No	3.74E-05	1.14E-02	2.28E-03	No
126	PCB-1260		YES	0	0	-	-	-	-	0	0	0.014	0.930	0.185960349	No	3.74E-05	1.14E-02	2.28E-03	No
127	Phenanthrene			0	0	-	-	-	-	0	0	-	-	-	-	-	-	-	-
128	Pyrene			0	0	-	-	-	-	0	0	-	-	-	-	2.33E+03	1.07E+05	2.13E+04	No
129	1, 2, 4-Trichlorobenzene			0	0	-	-	-	-	0	0	-	-	-	-	4.09E+01	1.87E+03	3.74E+02	No

NATIONAL POLLUTANT DISCHARGE ELIMINATION SYSTEM (NPDES)
PERMIT APPLICATION SUPPLEMENTARY INFORMATION

ALABAMA DEPARTMENT OF ENVIRONMENTAL MANAGEMENT
WATER DIVISION – INDUSTRIAL / MINING PERMIT SECTION
POST OFFICE BOX 301463
MONTGOMERY, ALABAMA 36130-1463



INSTRUCTIONS: **APPLICATIONS SHOULD BE TYPED OR PRINTED IN INK AND SUBMITTED TO THE DEPARTMENT IN DUPLICATE. IF INSUFFICIENT SPACE IS AVAILABLE TO ADDRESS ANY ITEM, PLEASE CONTINUE ON AN ATTACHED SHEET OF PAPER. PLEASE MARK N/A IN THE APPROPRIATE BOX WHEN AN ITEM IS NON-APPLICABLE TO THE APPLICANT.**

PURPOSE OF THIS APPLICATION

- ☐ INITIAL PERMIT APPLICATION FOR NEW FACILITY
- ☐ INITIAL PERMIT APPLICATION FOR EXISTING FACILITY
- ☐ MODIFICATION OF EXISTING PERMIT
- ☑ REISSUANCE OF EXISTING PERMIT
- ☐ REVOCATION & REISSUANCE OF EXISTING PERMIT

1. Facility Name: Nucor Steel Birmingham, Inc.

   a. Operator Name: Nucor Steel Birmingham, Inc.

   b. Is the operator identified in 1.a., the owner of the facility? Yes ☑ No ☐
   If no, provide the name and address of the operator and submit information indicating the operator's scope of responsibility for the facility.

2. NPDES Permit Number AL 0 0 0 3 7 3 5

3. SID Permit Number (if applicable): IU ___ ___ - ___ ___ - ___ ___ ___ ___ ___

4. NPDES General Permit Number (if applicable) ALG 1 2 0 6 7 0 ___

5. Facility Physical Location: (Attach a map with location marked; street, route no. or other specific identifier)

   Street: 2301 FL Shuttlesworth Drive

   City: Birmingham County: Jefferson State: AL Zip: 35234

   Facility (Front Gate) Latitude: 33 deg 32' 45.64" N Longitude: 86 deg 48' 27.72" W

6. Facility Mailing Address (Street or Post Office Box): PO Box 2764

   City: Birmingham State: Alabama Zip: 35202-2764

7. Responsible Official (as described on page 13 of this application):

Name and Title: Francis W. Griggs, General Manager

Address: 2301 FL Shuttlesworth Drive

City: Birmingham State: AL Zip: 35234

Phone Number: (205) 250-7400

EMAIL Address: franky.griggs@nucor.com

8. Designated Facility Contact:

Name and Title: Steve Messier, Environmental Manager

Phone Number: (205) 250-7474

EMAIL Address: steve.messier@nucor.com

9. Designated Discharge Monitoring Report Contact:

Name and Title: Sam Price, Environmental Coordinator

Phone Number: (205) 250-7407

EMAIL Address: sam.price@nucor.com

10. Type of Business Entity:

☑ Corporation ☐ General Partnership ☐ Limited Partnership

☐ Sole Proprietorship ☐ Other (Please Specify) _____

11. Complete this section if the Applicant's business entity is a Corporation

a) Location of Incorporation:

Address: 1209 Orange Street

City: Wilmington County: _____ State: DE Zip: 19801

b) Parent Corporation of Applicant:

Name: Nucor Corporation

Address: 1915 Rexford Road

City: Charlotte State: North Carolina Zip: 28211

c) Subsidiary Corporation(s) of Applicant:

Name: N/A

Address: _____

City: _____ State: _____ Zip: _____

d) Corporate Officers:

Name: See Supplement to ADEM Form 187 Section A, Part 11 (d)

Address: _____

City: _____ State: _____ Zip: _____

Name: _____

Address: _____

City: _____ State: _____ Zip: _____

e) Agent designated by the corporation for purposes of service:

Name: N/A

Address: _____

City: _____ State: _____ Zip: _____

12. If the Applicant's business entity is a Partnership, please list the general partners.

Name: _____

Address: _____

City: _____ State: _____ Zip: _____

Name: _____

Address: _____

City: _____ State: _____ Zip: _____

13. If the Applicant's business entity is a Proprietorship, please enter the proprietor's information.

Name: _____

Address: _____

City: _____ State: _____ Zip: _____

14. Permit numbers for Applicant's previously issued NPDES Permits and identification of any other State of Alabama Environmental Permits presently held by the Applicant, its parent corporation, or subsidiary corporations within the State of Alabama:

Permit Name	Permit Number	Held By
See Supplement to ADEM Form 187 Section A	Part 14	

15. Identify all Administrative Complaints, Notices of Violation, Directives, Administrative Orders, or Litigation concerning water pollution, if any, against the Applicant, its parent corporation or subsidiary corporations within the State of Alabama within the past five years (attach additional sheets if necessary):

Facility Name	Permit Number	Type of Action	Date of Action
None			

SECTION B – BUSINESS ACTIVITY

1. Indicate applicable Standard Industrial Classification (SIC) Codes for all processes (If more than one applies, list in order of importance:

a. 3312 - Blast Furnace and Steel Mills

b. _____

c. _____

d. _____

e. _____

2. If your facility conducts or will be conducting any of the processes listed below (regardless of whether they generate wastewater, waste sludge, or hazardous waste), place a check beside the category of business activity (check all that apply):

Industrial Categories

[ ]	Aluminum Forming	[ ]	Metal Molding and Casting
[ ]	Asbestos Manufacturing	[ ]	Metal Products
[ ]	Battery Manufacturing	[ ]	Nonferrous Metals Forming
[ ]	Can Making	[ ]	Nonferrous Metals Manufacturing
[ ]	Canned and Preserved Fruit and Vegetables	[ ]	Oil and Gas Extraction
[ ]	Canned and Preserved Seafood	[ ]	Organic Chemicals Manufacturing
[ ]	Cement Manufacturing	[ ]	Paint and Ink Formulating
[ ]	Centralized Waste Treatment	[ ]	Paving and Roofing Manufacturing
[ ]	Carbon Black	[ ]	Pesticides Manufacturing
[ ]	Coal Mining	[ ]	Petroleum Refining
[ ]	Coil Coating	[ ]	Phosphate Manufacturing
[ ]	Copper Forming	[ ]	Photographic
[ ]	Electric and Electronic Components Manufacturing	[ ]	Pharmaceutical
[ ]	Electroplating	[ ]	Plastic & Synthetic Materials
[ ]	Explosives Manufacturing	[ ]	Plastics Processing Manufacturing
[ ]	Feedlots	[ ]	Porcelain Enamel
[ ]	Ferroalloy Manufacturing	[ ]	Pulp, Paper, and Fiberboard Manufacturing
[ ]	Fertilizer Manufacturing	[ ]	Rubber
[ ]	Foundries (Metal Molding and Casting)	[ ]	Soap and Detergent Manufacturing
[ ]	Glass Manufacturing	[ ]	Steam and Electric
[ ]	Grain Mills	[ ]	Sugar Processing
[ ]	Gum and Wood Chemicals Manufacturing	[ ]	Textile Mills
[ ]	Inorganic Chemicals	[ ]	Timber Products
[✓]	Iron and Steel	[ ]	Transportation Equipment Cleaning
[ ]	Leather Tanning and Finishing	[ ]	Waste Combustion
[ ]	Metal Finishing	[ ]	Other (specify)_____
[ ]	Meat Products		

A facility with processes inclusive in these business areas may be covered by Environmental Protection (EPA) categorical standards. These facilities are termed "categorical users" and should skip to question 2 of Section C.

3. Give a brief description of all operations at this facility including primary products or services (attach additional sheets if necessary):

Scrap steel is collected and segregated on site. Scrap is introduced to an electric arc furnace (EAF), melted down, and transferred to a continuous caster to produce billets. Billets are stored in the billet yard until introduced to the natural gas-fired re-heat furnace. Heated billets are then run through a rolling mill to produce the finished product. Limited amounts of finished product are stored predominantly on site until shipped out. The primary product is rebar. Co-products produced at the plant include slag and mill scale.

SECTION C – WASTEWATER DISCHARGE INFORMATION

Facilities that checked activities in question 2 of Section B and are considered Categorical Industrial Users should skip to question 2 of this section.

1. **For Non-Categorical Users Only**: Provide wastewater flows for each of the processes or proposed processes. Using the process flow schematic (Figure 1, pg 14), enter the description that corresponds to each process. [New facilities should provide estimates for each discharge.]

Process Description	Last 12 Months (gals/day) Highest Month Avg. Flow	Highest Flow Year of Last 5 (gals/day) Monthly Avg. Flow	Discharge Type (batch, continuous, intermittent)
NA			

If batch discharge occurs or will occur, indicate: [New facilities may estimate.]

a. Number of batch discharges: _____ per day

b. Average discharge per batch: _____ (GPD)

c. Time of batch discharges _____ at _____
(days of week) (hours of day)

d. Flow rate: _____ gallons/minute

e. Percent of total discharge: _____

Non-Process Discharges (e.g. non-contact cooling water)	Last 12 Months (gals/day) Highest Month Avg. Flow	Highest Flow Year of Last 5 (gals/day) Monthly Avg. Flow

2. **Complete this Section only if you are subject to Categorical Standards and plan to directly discharge the associated wastewater to a water of the State.** If Categorical wastewater is discharged exclusively via an indirect discharge to a public or privately-owned treatment works, check "Yes" in the appropriate space below and proceed directly to part 2.c .

[ ] Yes

For Categorical Users: Provide the wastewater discharge flows or production (whichever is applicable by the effluent guidelines) for each of your processes or proposed processes. Using the process flow schematic (Figure 1, pg 14), enter the description that corresponds to each process. [New facilities should provide estimates for each discharge.]

2a.

Regulated Process	Applicable Category	Applicable Subpart	Type of Discharge Flow (batch, continuous, intermittent)
Continuous Casting	40 CFR 420	Subpart F	Intermittent
Hotforming	40 CFR 420	Subpart G	Intermittent

2b.

Process Description	Last 12 Months (gals/day) Highest Month Average*	Highest Flow Year of Last 5 (gals/day) Monthly Average*	Discharge Type (batch, continuous, intermittent)
Continuous Casting -Billets	2,403,251 ppd	1,982,736 ppd	intermittent
Hot Forming -Rebar	2,682,869 ppd	1,935,628 ppd	intermittent

*** Reported values should be expressed in units of the applicable Federal production-based standard. For example, flow (MGD), production (pounds per day), etc.**

If batch discharge occurs or will occur, indicate: [New facilities may estimate.]

a. Number of batch discharges: _____ per day

b. Average discharge per batch: _____ (GPD)

c. Time of batch discharges _____ (days of week) at _____ (hours of day)

d. Flow rate: _____ gallons/minute

Percent of total discharge: _____

2c.

Non categorical Process Description	Last 12 Months (gals/day) Highest Month Avg. Flow	Highest Flow Year of Last 5 (gals/day) Monthly Avg. Flow	Discharge Type (batch, continuous, intermittent)
NA			

If batch discharge occurs or will occur, indicate: [New facilities may estimate.]

a. Number of batch discharges: _____ per day

b. Average discharge per batch: _____ (GPD)

c. Time of batch discharges _____ (days of week) at _____ (hours of day)

d. Flow rate: _____ gallons/minute

Percent of total discharge: _____

2d.

Non-Process Discharges (e.g. non-contact cooling water)	Last 12 Months (gals/day) Highest Month Avg. Flow	Highest Flow Year of Last 5 (gals/day) Monthly Avg. Flow
NA		

All Applicants must complete Questions 3 – 5.

3. Do you have, or plan to have, automatic sampling equipment or continuous wastewater flow metering equipment at this facility?

Flow Metering	Yes ✓	No ___	N/A ___
Sampling Equipment	Yes ✓	No ___	N/A ___

If so, please indicate the present or future location of this equipment on the sewer schematic and describe the equipment below:

Outfall 001 is equiped with continuous flow metering equipment and an ISCO automatic sampler. Outfall 002 is equipped with continuous metering equipment and samples are collected manually at the outfall.

4. Are any process changes or expansions planned during the next three years that could alter wastewater volumes or characteristics? Yes ✓ No ___ (If no, skip Question 5)

Briefly describe these changes and their anticipated effects on the wastewater volume and characteristics:

The facility is currently replacing a 100 micron filter at Outfall 001 with a 50 micron filter; and replacing a 150 gpm pump with a 1000 gpm pump. The prior configuration required more bypasses of the filter due to the lower capacity of the primary pump. The new pump and filter will be commissioned in the coming months, which is anticipated to reduce TSS loading.

5. List the trade name and chemical composition of all biocides and corrosion inhibitors used:

Trade Name	Chemical Composition
See Supplement to ADEM Form 187, Section C, Part 5	

For each biocide and/or corrosion inhibitor used, please include the following information:

(1) 96-hour median tolerance limit data for organisms representative of the biota of the waterway into which the discharge will ultimately reach,
(2) quantities to be used,
(3) frequencies of use,
(4) proposed discharge concentrations, and
(5) EPA registration number, if applicable

SECTION D – WATER SUPPLY

Water Sources (check as many as are applicable):

[ ] Private Well [ ] Surface Water

[✓] Municipal Water Utility (Specify City): Birmingham [✓] Other (Specify): rain , recycled process water

IF MORE THAN ONE WELL OR SURFACE INTAKE, PROVIDE DATA FOR EACH ON AN ATTACHMENT

City: *0.146 *MGD Well: _____ *MGD Well Depth: ____ Ft. Latitude: _____ Longitude: _____

Surface Intake Volume: _____ *MGD Intake Elevation in Relation to Bottom _____ Ft.

Intake Elevation: _____ Ft. Latitude: _____ Longitude: _____

Name of Surface Water Source: See Supplement to Form 187, Section D

*** MGD – Million Gallons per Day**

Cooling Water Intake Structure Information

Complete questions 1 and 2 if your water supply is provided by an outside source and not by an onsite water intake structure? (e.g., another industry, municipality, etc...)

1. Does the provider of your source water operate a surface water intake? Yes [☑] No [☐]
   (If yes, continue, if no, go to Section E.)

   a) Name of Provider Birmingham Water Works Board b)Location of Provider 3600 1st Ave N, Birmingham AL 35222

   c) Latitude: 33°31'29.76"N Longitude: 86°47'1.12"W

2. Is the provider a public water system (defined as a system which provides water to the public for human consumption or which provides only treated water, not raw water)? Yes [☐] No [☑]
   (If yes, go to Section E, if no, continue.)

Only to be completed if you have a cooling water intake structure or the provider of your water supply uses an intake structure and does not treat the raw water. See supplemental information provided by ADEM.

3. Is any water withdrawn from the source water used for cooling? Yes ☐ No ☐

4. Using the average monthly measurements over any 12-month period, approximately what percentage of water withdrawn is used exclusively for cooling purposes? 0 %

5. Does the cooling water consist of treated effluent that would otherwise be discharged? Yes [☐] No [☐]
   (If yes, go to Section E, if no, complete questions 6 – 17.)

6. Is the cooling water used in a once-through or closed cycle cooling system? Yes [☐] No [☐]

7. When was the intake installed?
   (Please provide dates for all major construction/installation of intake components including screens)

8. What is the maximum intake volume?
   (maximum pumping capacity in gallons per day)

9. What is the average intake volume?
   (average intake pump rate in gallons per day average in any 30-day period)

10. How is the intake operated? (e.g., continuously, intermittently, batch)

11. What is the mesh size of the screen on your intake?

12. What is the intake screen flow-through area?

13. What is the through screen design intake flow velocity? _____ft/sec

14. What is the mechanism for cleaning the screen? (e.g., does it rotate for cleaning)

15. Do you have any additional fish detraction technology on your intake? Yes [ ] No [ ]

16. Have there been any studies to determine the impact of the intake on aquatic organisms? Yes [ ] No [ ] (If yes please provide.)

17. Attach a site map showing the location of the water intake in relation to the facility, shoreline, water depth, etc.

SECTION E – WASTE STORAGE AND DISPOSAL INFORMATION

Provide a description of the location of all sites involved in the storage of solids or liquids that could be accidentally discharged to a water of the state, either directly or indirectly via such avenues as storm water drainage, municipal wastewater systems, etc., which are located at the facility for which the NPDES application is being made. Where possible, the location should be noted on a map and included with this application:

Description of Waste	Description of Storage Location
See Supplement to ADEM Form 187 Section E	
(Tables 1 and 2; and Figures 1, 2 and 3)	

Provide a description of the location of the ultimate disposal sites of solid or liquid waste by-products (such as sludges) from any wastewater treatment system located at the facility.

Description of Waste	Quantity (lbs/day)	Disposal Method*
Baghouse Dust (K061)	66,000	Steel Dust Recycling; Zinc Nacional, S.A.;
		and Chemical Waste Management

***Indicate which wastes identified above are disposed of at an off-site treatment facility and which are disposed of on-site. If any wastes are sent to an off-site centralized waste treatment facility, identify the waste and the facility.**

SECTION F – COASTAL ZONE INFORMATION

Is the discharge(s) located within 10-foot elevation of Mobile or Baldwin County?

Yes [ ] No [✓] If yes, then complete items A through M below:

	YES	NO
A. Does the project require new construction?	☐	☐
B. Will the project be a source of new air emissions?	☐	☐
C. Does the project involve dredging and/or filling?	☐	☐
Has the Corps of Engineers (COE) permit been received?	☐	☐
Corps Project Number _____		
D. Does the project involve wetlands and/or submersed grassbeds?	☐	☐
E. Are oyster reefs located near the project site? (Include a map showing project and discharge location with respect to oyster reefs)	☐	☐
F. Does the project involve the siting, construction and operation of an energy facility as defined in ADEM Admin. Code R. 335-8-1-.02(bb)?	☐	☐
G. Does the project involve shoreline erosion mitigation?	☐	☐
H. Does the project involve construction on beaches and dunes?	☐	☐
I. Will the project interfere with public access to coastal waters?	☐	☐
J. Does the project lie within the 100-year floodplain?	☐	☐
K. Does the project involve the registration, sale, use, or application of pesticides?	☐	☐
L. Does the project propose to construct a new well or alter an existing well to pump more than 50 GPD?	☐	☐
M. Has the applicable permit been obtained?	☐	☐

SECTION G – ANTI-DEGRADATION EVALUATION

In accordance with 40 CFR 131.12 and the Alabama Department of Environmental Management Administrative Code, Section 335-6-10-.04 for antidegradation, the following information must be provided, if applicable. It is the applicant's responsibility to demonstrate the social and economic importance of the proposed activity. If further information is required to make this demonstration, attach additional sheets to the application.

1. Is this a new or increased discharge that began after April 3, 1991? Yes [ ] No [✓]
   If yes, complete question 2 below. If no, go to Section H.

2. Has an Anti-Degradation Analysis been previously conducted and submitted to the Department for the new or increased discharge referenced in question 1? Yes [ ] No [ ]

   If yes, do not complete this section.

If no, and the discharge is to a Tier II waterbody as defined in ADEM Admin. Code r. 335-6-10-.12(4), complete questions A through F below and ADEM forms 311 and 313 (attached). Form 313 must be provided for each alternative considered technically viable.

Information required for new or increased discharges to high quality waters:

A. What environmental or public health problem will the discharger be correcting?

B. How much will the discharger be increasing employment (at its existing facility or as the result of locating a new facility)?

C. How much reduction in employment will the discharger be avoiding?

D. How much additional state or local taxes will the discharger be paying?

E. What public service to the community will the discharger be providing?

F. What economic or social benefit will the discharger be providing to the community?

SECTION H – EPA Application Forms

All Applicants must submit EPA permit application forms. More than one application form may be required from a facility depending on the number and types of discharges or outfalls found there. The EPA application forms are found on the Department's website at http://www.adem.state.al.us/. The EPA application forms must be submitted in duplicate as follows:

1. All applicants must submit Form 1.
2. Applicants for existing industrial facilities (including manufacturing facilities, commercial facilities, mining activities, and silvicultural activities) which discharge process wastewater must submit Form 2C.
3. Applicants for new industrial facilities which propose to discharge process wastewater must submit Form 2D.
4. Applicants for new and existing industrial facilities which discharge only non-process wastewater (i.e., non-contact cooling water and/or sanitary wastewater) must submit Form 2E.
5. Applicants for new and existing facilities whose discharge is composed entirely of storm water associated with industrial activity must submit Form 2F, unless exempted by § 122.26(c)(1)(ii). If the discharge is composed of storm water and non-storm water, the applicant must also submit Forms 2C, 2D, and/or 2E, as appropriate (in addition to Form 2F).

SECTION I – ENGINEERING REPORT/BMP PLAN REQUIREMENTS
See ADEM 335-6-6-.08(i) & (j)

SECTION J– RECEIVING WATERS

Receiving Water(s)	303(d) Segment? (Y / N)	Included in TMDL?* (Y / N)
Village Creek	Y	Y (Zinc, pH, TSS)
		No compliance schedule requested

*If a TMDL Compliance Schedule is requested, the following should be attached as supporting documentation:
(1) Justification for the requested Compliance Schedule (e.g. time for design and installation of control equipment, etc.);
(2) Monitoring results for the pollutant(s) of concern which have not previously been submitted to the Department (sample collection dates, analytical results (mass and concentration), methods utilized, MDL/ML, etc. should be submitted as available);
(3) Requested interim limitations, if applicable;
(4) Date of final compliance with the TMDL limitations; and,
(5) Any other additional information available to support requested compliance schedule.

SECTION K – APPLICATION CERTIFICATION

THE INFORMATION CONTAINED IN THIS FORM MUST BE CERTIFIED BY A RESPONSIBLE OFFICIAL AS DEFINED IN ADEM ADMINISTRATIVE RULE 335-6-6-.09 "SIGNATORIES TO PERMIT APPLICATIONS AND REPORTS" (SEE BELOW).

"I CERTIFY UNDER PENALTY OF LAW THAT THIS DOCUMENT AND ALL ATTACHMENTS WERE PREPARED UNDER MY DIRECTION OR SUPERVISION IN ACCORDANCE WITH A SYSTEM DESIGNED TO ASSURE THAT QUALIFIED PERSONNEL PROPERLY GATHER AND EVALUATE THE INFORMATION SUBMITTED. BASED ON MY INQUIRY OF THE PERSON OR PERSONS WHO MANAGE THE SYSTEM, OR THOSE PERSONS DIRECTLY RESPONSIBLE FOR GATHERING THE INFORMATION, THE INFORMATION SUBMITTED IS, TO THE BEST OF MY KNOWLEDGE AND BELIEF, TRUE, ACCURATE, AND COMPLETE. I AM AWARE THAT THERE ARE SIGNIFICANT PENALTIES FOR SUBMITTING FALSE INFORMATION INCLUDING THE POSSIBILITY OF FINE AND IMPRISONMENT FOR KNOWING VIOLATIONS."

"I FURTHER CERTIFY UNDER PENALTY OF LAW THAT ALL ANALYSES REPORTED AS LESS THAN DETECTABLE IN THIS APPLICATION OR ATTACHMENTS THERETO WERE PERFORMED USING THE EPA APPROVED TEST METHOD HAVING THE LOWEST DETECTION LIMIT FOR THE SUBSTANCE TESTED."

SIGNATURE OF RESPONSIBLE OFFICIAL: Francis W Griggs DATE SIGNED: 8-1-16

(TYPE OR PRINT)
NAME OF RESPONSIBLE OFFICIAL: Francis W. Griggs

TITLE OF RESPONSIBLE OFFICIAL: Vice President/General Manager

MAILING ADDRESS: 2301 FL Shuttlesworth Drive

CITY, STATE, ZIP: Birmingham, Alabama 35202 PHONE: 205-250-7474

335-6-6-.09 SIGNATORIES TO PERMIT APPLICATIONS AND REPORTS.

(1) The application for an NPDES permit shall be signed by a responsible official, as indicated below:
(a) In the case of a corporation, by a principal executive officer of at least the level of vice president, or a manager assigned or delegated in accordance with corporate procedures, with such delegation submitted in writing if required by the Department, who is responsible for manufacturing, production, or operating facilities and is authorized to make management decisions which govern the operation of the regulated facility;
(b) In the case of a partnership, by a general partner;
(c) In the case of a sole proprietorship, by the proprietor; or
(d) In the case of a municipal, state, federal, or other public entity, by either a principal executive officer, or ranking elected official.

Supplement to ADEM Form 187
Section A, Part 11 (d)
Corporate Officers

Name	Office
James R. Darsey	President
James D. Frias	Vice President and Treasurer
Francis W. Griggs	Vice President
Tomas A. Miller	Vice President
A. Rae Eagle	Secretary
Elizabeth W. Bowers	Assistant Secretary
Susann Grahs	Assistant Secretary

Supplement to ADEM Form 187
Section A, Part 14
State Environmental Permits

Permit Held by:	Permit Name	Permit Number
Nucor Steel Birmingham	EPA ID Number	ALD000622852
	Jefferson County Air Source Permit	4-07-0260-02 and 03
	General NPDES Stormwater Permit	ALG120670
	NPDES Permit	AL0003785
Nucor Steel Tuscaloosa, Inc.	Title V Air Permit	413-0033
	NPDES Permit	AL0054941
	SID Permit	IU-39-63-00346
	EPA ID Number	ALD982088437
Nucor Steel Decatur, LLC	NPDES Permit	AL0070068
	General NPDES Stormwater Permit	ALG120429
	SID Permit	IU-08-52-00473
	SID Permit	IU-08-52-0466
	Title V Air Permit	712-0037
	EPA ID Number	ALR000006817
	Coast Guard Special Permit	1-07
Vulcraft (A Division of Nucor Corporation)	Major Source Air Permit	703-0017
	SID Permit	IU 35-25-00362
	General NPDES Stormwater Permit	ALG120405
	EPA ID Number	ALD983192881
	Stormwater Construction Permit	ALR16EBWM
American Buildings Company	EPA ID Number	ALD058642950
	General NPDES Stormwater Permit	ALF12-0256
	Title V Air Permit	601-0019
Astralloy	General NPDES Stormwater Permit	ALG120011

Supplement to ADEM Form 187
Section C, Part 5
Biocides and Corrosion Inhibitors

Additive Name	Trade Name	Frequency of Use	Purpose	Affected Areas	Actual Usage Amounts (lbs/mo)	[1]Proposed Discharge Concentrations (mg/l)	EPA Registration Number	96-hour Median Tolerance Limit
Tetrapotassium Pyrophosphate (7320-34-5) Polymer Blend (proprietary)	Chemtreal CL1441	Continuous	Corrosion and Scale Inhibitor	Duct &EAF Towers Caster Cooling Tower	2500	1135	N/A	N/A
Sodium Hypochlorite (7681-52-9) Sodium Hydroxide (1310-73-2)	Sodium Hypochlorite	Continuous	Microbiological Control	Duct &EAF Towers Caster Cooling Tower Rolling Mill	12000	5450	N/A	5.3 mg/l Bluegill sunfish
Quadraperse copolymer (proprietary) Potassum Hydroxide (1310-58-3) Potassium Phosphate, tribasic (7778-53-2) Tetrapotassium pyrophosphate (7320-34-5)	Chemtreat CL4831	Continuous	Corrosion and Scale Inhibitor	Mold Cooling Tower Lube Cooling Tower Reheat Cooling Tower Melt Shop AC Small Tower	600	273	N/A	707.107 mg/l Fathead minnow
5-chloro-2-methyl-4-isothiazolin-3-ome (26172-55-4) 2-methyl-4-isothiazolin-3-one (2682-20-4) Magnesium nitrate (10377-60-3) Magnesium chloride (7786-30-3)	Chemtreat CL2156	Once/week	Microbiological Control	Mold Cooling Tower Lube Cooling Tower Reheat Cooling Tower	200	91	707-133-15300	23 mg/l Bluegill sunfish
Tetrapotassium Pyrophosphate (7320-34-5)	Chemtreat CT709	Continuous	Corrosion and Scale Inhibitor	Rolling Mill Cooling System	1400	636	N/A	637.3 mg/l Fathead minnow >1,000 mg/l Sheepshead minnow

Longterm Average Flow reported on Form 2C in MGD	0.0088

1 - The proposed discharge concentrations were calculated using a flow of 0.0088 MGD long term average flow reported on Form 2C

Inland Lake

Supplement to Form 187, Section D
Questions 3-17

SECTION D – WATER SUPPLY

Water Sources (check as many as are applicable):

[ ] Private Well
[ ] Municipal Water Utility (Specify City):
[ ] Surface Water
[ ] Other (Specify):

IF MORE THAN ONE WELL OR SURFACE INTAKE, PROVIDE DATA FOR EACH ON AN ATTACHMENT

City:___ *MGD Well:_____ *MGD Well Depth:____ Ft. Latitude:_____ Longitude:_____

Surface Intake Volume: _____ *MGD Intake Elevation in Relation to Bottom _____ Ft.

Intake Elevation: _____ Ft. Latitude: _____ Longitude: _____

Name of Surface Water Source: Inland Lake

*** MGD – Million Gallons per Day**

Cooling Water Intake Structure Information

Complete questions 1 and 2 if your water supply is provided by an outside source and not by an onsite water intake structure? (e.g., another industry, municipality, etc...)

1. Does the provider of your source water operate a surface water intake? Yes [✓] No [ ]
   (If yes, continue, if no, go to Section E.)

   a) Name of Provider Birmingham Water Works b)Location of Provider Springville, AL

   c) Latitude: 33° 50' 16" N Longitude: 86° 32' 57" W

2. Is the provider a public water system (defined as a system which provides water to the public for human consumption or which provides only treated water, not raw water)? Yes [X] No [X] both
   (If yes, go to Section E, if no, continue.)

Only to be completed if you have a cooling water intake structure or the provider of your water supply uses an intake structure and does not treat the raw water.

3. Is any water withdrawn from the source water used for cooling? Yes [X] No [ ]

4. Using the average monthly measurements over any 12-month period, approximately what percentage of water withdrawn is used exclusively for cooling purposes? 50 %

5. Does the cooling water consist of treated effluent that would otherwise be discharged? Yes [ ] No [X]
   (If yes, go to Section E, if no, complete questions 6 – 17.)

6. Is the cooling water used in a once-through or closed cycle cooling system? Yes [X] No [ ]

7. When was the intake installed? 1936
   (Please provide dates for all major construction/installation of intake components including screens)

8. What is the maximum intake volume? 50 MGD
   (maximum pumping capacity in gallons per day)

9. What is the average intake volume? 50 MGD
   (average intake pump rate in gallons per day average in any 30-day period)

Inland Lake

10. How is the intake operated? (e.g., continuously, intermittently, batch)
11. What is the mesh size of the screen on your intake? 3"
12. What is the intake screen flow-through area? 4x4
13. What is the through screen design intake flow velocity? 4.0 ft/sec
14. What is the mechanism for cleaning the screen? (e.g., does it rotate for cleaning) Manual Cleaning
15. Do you have any additional fish detraction technology on your intake? Yes [ ] No [X]
16. Have there been any studies to determine the impact of the intake on aquatic organisms? Yes [ ] No [X] (If yes please provide.)
17. Attach a site map showing the location of the water intake in relation to the facility, shoreline, water depth, etc.
Depth #1@40' #2@60' #3@80' #4@100'

SECTION E – WASTE STORAGE AND DISPOSAL INFORMATION

Provide a description of the location of all sites involved in the storage of solids or liquids that could be accidentally discharged to a water of the state, either directly or indirectly via such avenues as storm water drainage, municipal wastewater systems, etc., which are located at the facility for which the NPDES application is being made. Where possible, the location should be noted on a map and included with this application:

Description of Waste	Description of Storage Location

Provide a description of the location of the ultimate disposal sites of solid or liquid waste by-products (such as sludges) from any wastewater treatment system located at the facility.

Description of Waste	Quantity (lbs/day)	Disposal Method*

***Indicate which wastes identified above are disposed of at an off-site treatment facility and which are disposed of on-site. If any wastes are sent to an off-site centralized waste treatment facility, identify the waste and the facility.**

Sipsey

SECTION D – WATER SUPPLY

Water Sources (check as many as are applicable):

[ ] Private Well
[✓] Municipal Water Utility (Specify City):
[ ] Surface Water
[ ] Other (Specify):

IF MORE THAN ONE WELL OR SURFACE INTAKE, PROVIDE DATA FOR EACH ON AN ATTACHMENT

City:_____ *MGD Well:_____ *MGD Well Depth:____ Ft. Latitude:_____ Longitude:_____

Surface Intake Volume: _____*MGD Intake Elevation in Relation to Bottom _____Ft.

Intake Elevation: _____ Ft. Latitude: _____ Longitude: _____

Name of Surface Water Source: Sipsey Fork of Black Warrior River

*** MGD – Million Gallons per Day**

Cooling Water Intake Structure Information

Complete questions 1 and 2 if your water supply is provided by an outside source and not by an onsite water intake structure? (e.g., another industry, municipality, etc...)

1. Does the provider of your source water operate a surface water intake? Yes [✓] No [ ]
   (If yes, continue, if no, go to Section E.)
   a) Name of Provider Birmingham Water Works b)Location of Provider Breman, AL
   c) Latitude: 33°55'55" N Longitude: 87°6'2" W
2. Is the provider a public water system (defined as a system which provides water to the public for human consumption or which provides only treated water, not raw water)? Yes [X] No [X] both
   (If yes, go to Section E, if no, continue.)

Only to be completed if you have a cooling water intake structure or the provider of your water supply uses an intake structure and does not treat the raw water.

3. Is any water withdrawn from the source water used for cooling? Yes [X] No [ ]
4. Using the average monthly measurements over any 12-month period, approximately what percentage of water withdrawn is used exclusively for cooling purposes? 50 %
5. Does the cooling water consist of treated effluent that would otherwise be discharged? Yes [ ] No [X]
   (If yes, go to Section E, if no, complete questions 6 – 17.)
6. Is the cooling water used in a once-through or closed cycle cooling system? Yes [X] No [ ]
7. When was the intake installed? 1961
   (Please provide dates for all major construction/installation of intake components including screens)
8. What is the maximum intake volume? 74 MGD
   (maximum pumping capacity in gallons per day)
9. What is the average intake volume? 42 MGD
   (average intake pump rate in gallons per day average in any 30-day period)

Sipsey

10. How is the intake operated? (e.g., continuously, (intermittently), batch)
11. What is the mesh size of the screen on your intake? 0.5"
12. What is the intake screen flow-through area? 4x8
13. What is the through screen design intake flow velocity? 5.8 ft/sec
14. What is the mechanism for cleaning the screen? (e.g., does it rotate for cleaning) Manual Cleaning
15. Do you have any additional fish detraction technology on your intake? Yes [ ] No [X]
16. Have there been any studies to determine the impact of the intake on aquatic organisms? Yes [ ] No [X] (If yes please provide.)
17. Attach a site map showing the location of the water intake in relation to the facility, shoreline, water depth, etc.

Depth = 10'

SECTION E – WASTE STORAGE AND DISPOSAL INFORMATION

Provide a description of the location of all sites involved in the storage of solids or liquids that could be accidentally discharged to a water of the state, either directly or indirectly via such avenues as storm water drainage, municipal wastewater systems, etc., which are located at the facility for which the NPDES application is being made. Where possible, the location should be noted on a map and included with this application:

Description of Waste	Description of Storage Location

Provide a description of the location of the ultimate disposal sites of solid or liquid waste by-products (such as sludges) from any wastewater treatment system located at the facility.

Description of Waste	Quantity (lbs/day)	Disposal Method*

***Indicate which wastes identified above are disposed of at an off-site treatment facility and which are disposed of on-site. If any wastes are sent to an off-site centralized waste treatment facility, identify the waste and the facility.**

Mulberry

SECTION D – WATER SUPPLY

Water Sources (check as many as are applicable):

[ ] Private Well
[✓] Municipal Water Utility (Specify City):
[ ] Surface Water
[ ] Other (Specify): _____

IF MORE THAN ONE WELL OR SURFACE INTAKE, PROVIDE DATA FOR EACH ON AN ATTACHMENT

City: _____ *MGD Well: _____ *MGD Well Depth: ____ Ft. Latitude: _____ Longitude: _____

Surface Intake Volume: _____ *MGD Intake Elevation in Relation to Bottom _____ Ft.

Intake Elevation: _____ Ft. Latitude: _____ Longitude: _____

Name of Surface Water Source: Mulberry Fork of Black Warrior River

*** MGD – Million Gallons per Day**

Cooling Water Intake Structure Information

Complete questions 1 and 2 if your water supply is provided by an outside source and not by an onsite water intake structure? (e.g., another industry, municipality, etc...)

1. Does the provider of your source water operate a surface water intake? Yes [✓] No [ ]
   (If yes, continue, if no, go to Section E.)
   a) Name of Provider Birmingham Water Works b)Location of Provider Quinton, AL
   c) Latitude: 33° 40' 11" N Longitude: 87° 7' 18" W
2. Is the provider a public water system (defined as a system which provides water to the public for human consumption or which provides only treated water, not raw water)? Yes [X] No [X] both
   (If yes, go to Section E, if no, continue.)

Only to be completed if you have a cooling water intake structure or the provider of your water supply uses an intake structure and does not treat the raw water.

3. Is any water withdrawn from the source water used for cooling? Yes [X] No [ ]
4. Using the average monthly measurements over any 12-month period, approximately what percentage of water withdrawn is used exclusively for cooling purposes? 50%
5. Does the cooling water consist of treated effluent that would otherwise be discharged? Yes [ ] No [X]
   (If yes, go to Section E, if no, complete questions 6 – 17.)
6. Is the cooling water used in a once-through or closed cycle cooling system? Yes [X] No [ ]
7. When was the intake installed? 1989
   (Please provide dates for all major construction/installation of intake components including screens)
8. What is the maximum intake volume? 85 MGD
   (maximum pumping capacity in gallons per day)
9. What is the average intake volume? 50 MGD
   (average intake pump rate in gallons per day average in any 30-day period)

Mulberry

10. How is the intake operated? (e.g., (continuously) intermittently, batch)
11. What is the mesh size of the screen on your intake? 0.5"
12. What is the intake screen flow-through area? 8 x 2
13. What is the through screen design intake flow velocity? 4.5 ft/sec
14. What is the mechanism for cleaning the screen? (e.g., does it rotate for cleaning) Manual Cleaning
15. Do you have any additional fish detraction technology on your intake? Yes [ ] No [X]
16. Have there been any studies to determine the impact of the intake on aquatic organisms? Yes [ ] No [X] (If yes please provide.)
17. Attach a site map showing the location of the water intake in relation to the facility, shoreline, water depth, etc.

Depth = 14'

SECTION E – WASTE STORAGE AND DISPOSAL INFORMATION

Provide a description of the location of all sites involved in the storage of solids or liquids that could be accidentally discharged to a water of the state, either directly or indirectly via such avenues as storm water drainage, municipal wastewater systems, etc., which are located at the facility for which the NPDES application is being made. Where possible, the location should be noted on a map and included with this application:

Description of Waste	Description of Storage Location

Provide a description of the location of the ultimate disposal sites of solid or liquid waste by-products (such as sludges) from any wastewater treatment system located at the facility.

Description of Waste	Quantity (lbs/day)	Disposal Method*

***Indicate which wastes identified above are disposed of at an off-site treatment facility and which are disposed of on-site. If any wastes are sent to an off-site centralized waste treatment facility, identify the waste and the facility.**

SECTION D- WATER SUPPLY:

Question List:

Note: Questions 1- 6 have been answered by U. S. Pipe.

7. When was the intake installed?
   Inland Intake: 1936
   Sipsey Pump Station: 1961
   Mulberry Pump Station: 1989

8. What is the maximum intake volume?
   Inland Pump Station: 50 MGD
   Sipsey Pump Station: 74 MGD
   Mulberry Pump Station: 85 MGD

9. What is the average intake volume?
   Inland Pump Station: 50MGD
   Sipsey Pump Station: 42 MGD
   Mulberry Pump Station: 50MGD

10. How is the intake operated?
    Inland Pump Station: Continuously
    Sipsey Pump Station: Intermittently
    Mulberry Pump Station: Continuously

11. What is the mesh size of the screen on your intake?
    Inland Pump Station: Three inch Mesh
    Sipsey Pump Station: Half inch Mesh
    Mulberry Pump Station: Half inch Mesh

12. What is the intake screen flow-through area?
    Inland Pump Station: 4X4 Flow through area
    Sipsey Pump Station: 4X8 Flow through area
    Mulberry Pump Station: 8X2 Flow through area

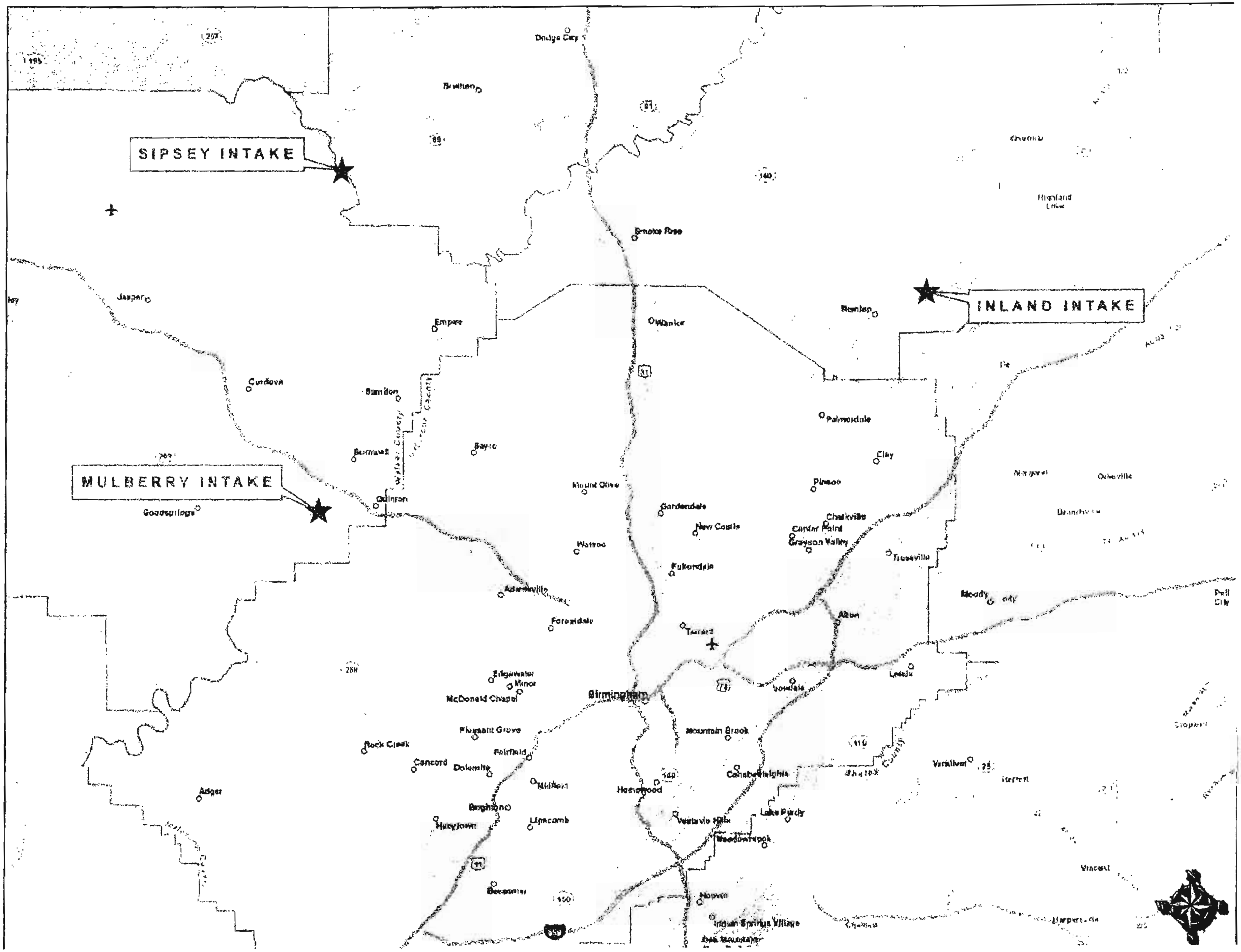
13. What is the through screen design intake flow velocity?
    Inland Pump Station: 4.0 fps
    Sipsey Pump Station: 5.8 fps
    Mulberry Pump Station: 4.5 fps

14. What is the mechanism for cleaning the screen?
    Inland Pump Station: Manual Cleaning
    Sipsey Pump Station: Manual Cleaning
    Mulberry Pump Station: Yes

15. Do you have any additional fish detraction technology on your intake?
    Inland Pump Station: No
    Sipsey Pump Station: No
    Mulberry Pump Station: No

16. Have there been any studies to determine the impact of the intake on aquatic organisms?
    Inland Pump Station: No
    Sipsey Pump Station: No
    Mulberry Pump Station: No

17. Attach a site map showing the location of the water intake in relation to the facility, shoreline, water depth, etc.
    See Attached: Site Map
    Inland Pump Station Intake Depth: #1 @ 40', #2 @ 60', #3 @ 80', #4 @ 100'
    Sipsey Pump Station Depth: 10'
    Mulberry Pump Station Depth: 14'


SIPSEY INTAKE
INLAND INTAKE
MULBERRY INTAKE
Dodge City
Empire
Cordova
Jasper
Goodsprings
Bayview
Mount Olive
Gardendale
New Castle
Fultondale
Adamsville
Forestdale
Center Point
Grayson Valley
Chalkville
Palmerdale
Clay
Pinson
Trussville
Moody
Tarrant
Birmingham
McDonald Chapel
Pleasant Grove
Rock Creek
Concord
Dolomite
Fairfield
Midfield
Homewood
Mountain Brook
Lipscomb
Bessemer
Hoover
Vestavia Hills
Meadowbrook
Lake Purdy
Leeds
Adger
Smoke Rise
Warrior
Remlap
Vincent

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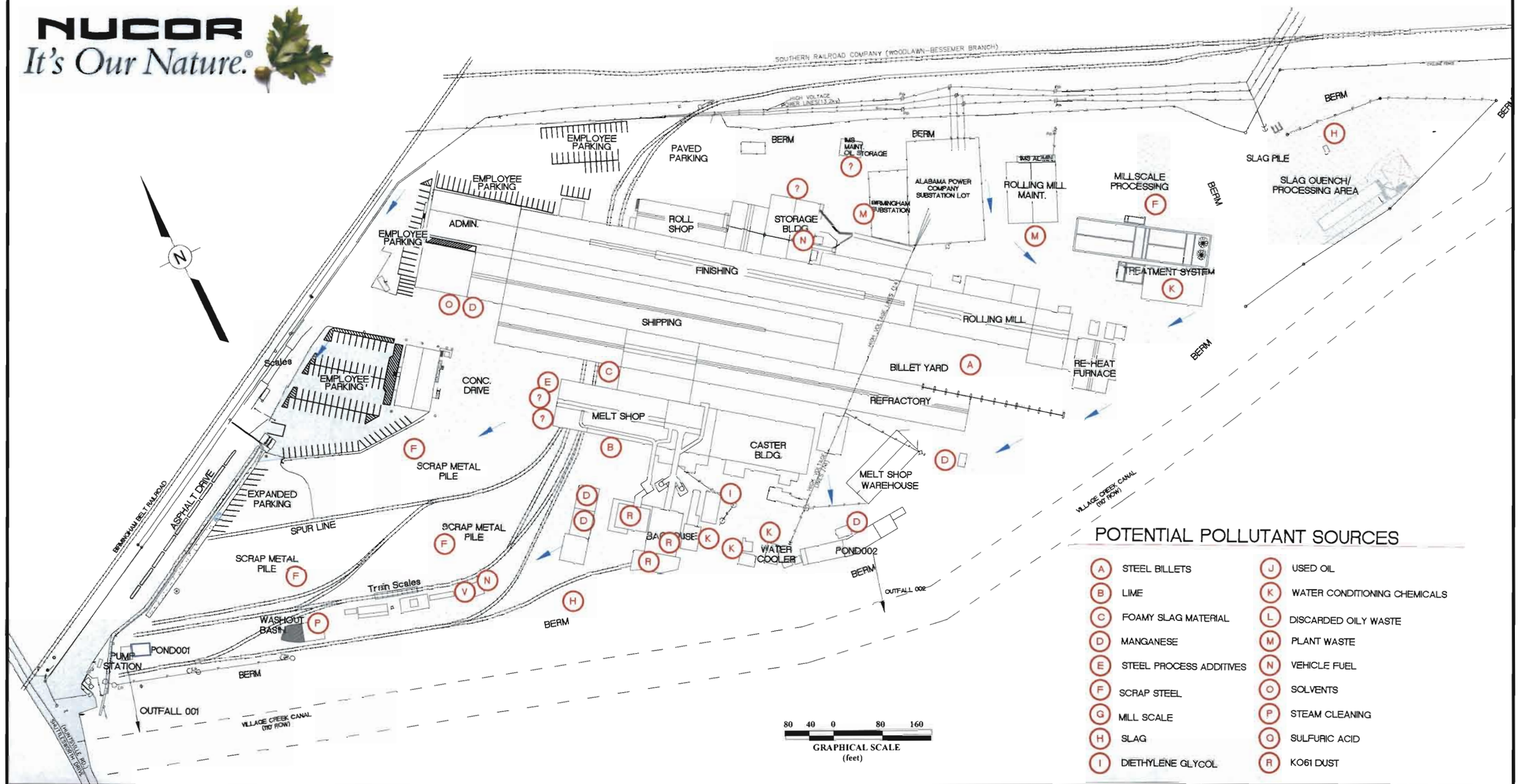

POTENTIAL POLLUTANT SOURCES

- A — STEEL BILLETS
- B — LIME
- C — FOAMY SLAG MATERIAL
- D — MANGANESE
- E — STEEL PROCESS ADDITIVES
- F — SCRAP STEEL
- G — MILL SCALE
- H — SLAG
- I — DIETHYLENE GLYCOL
- J — USED OIL
- K — WATER CONDITIONING CHEMICALS
- L — DISCARDED OILY WASTE
- M — PLANT WASTE
- N — VEHICLE FUEL
- O — SOLVENTS
- P — STEAM CLEANING
- Q — SULFURIC ACID
- R — KO61 DUST

PPM CONSULTANTS, INC
www.ppmco.com

DRAWN BY:	DRAWN DATE:
LR	01/2016
PROJECT NUMBER:	BILLING GROUP:
456501	ISBMP1

NUCOR STEEL BIRMINGHAM, INC.
2301 F.L. SHUTTLESWORTH DRIVE
BIRMINGHAM, JEFFERSON COUNTY, ALABAMA

SITE MAP AND POTENTIAL POLLUTANT SOURCES

DWG
1

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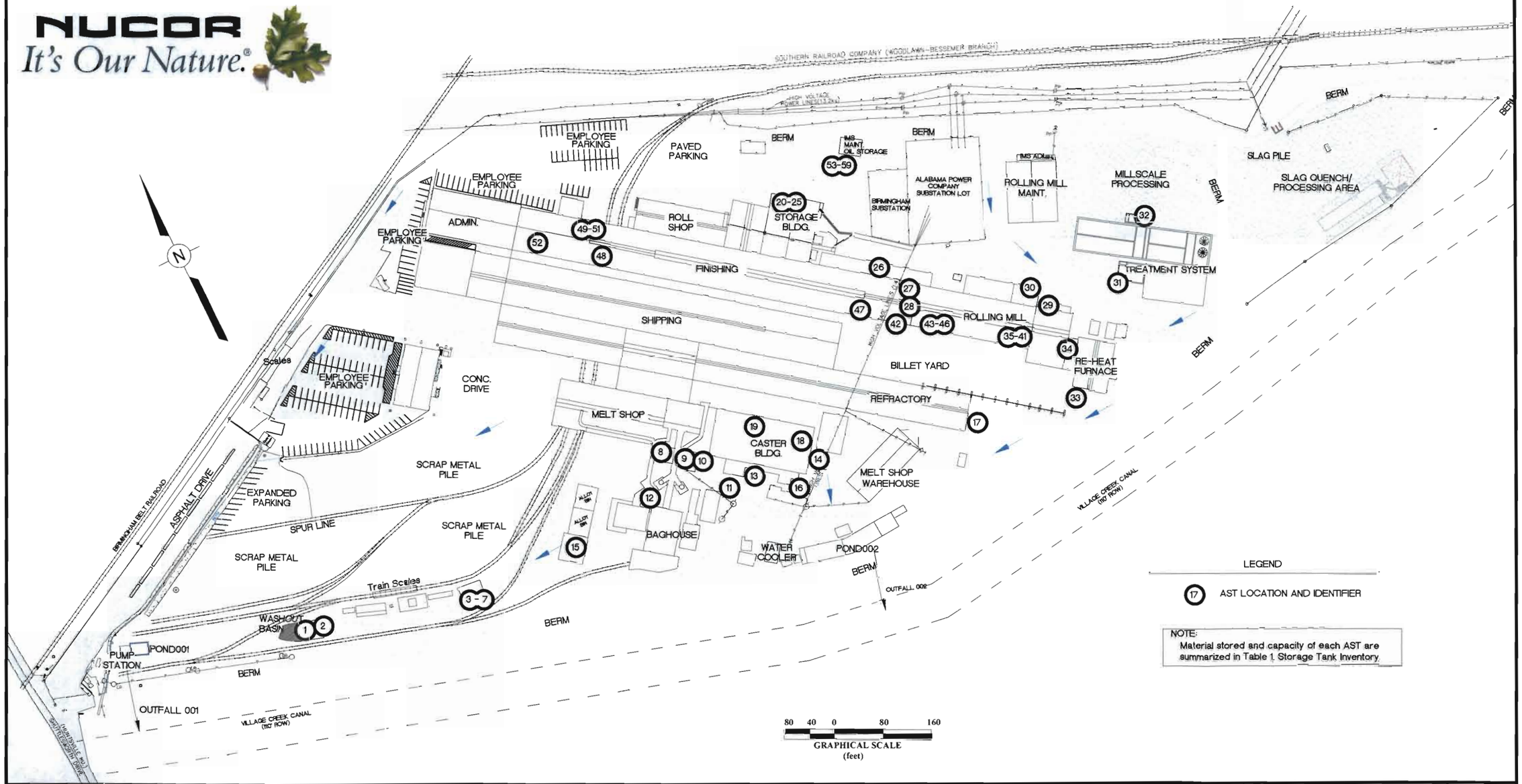

LEGEND

(17) AST LOCATION AND IDENTIFIER

NOTE:
Material stored and capacity of each AST are summarized in Table 1, Storage Tank Inventory.

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DRAWN BY:	DRAWN DATE:
LR	01/2016
PROJECT NUMBER:	BILLING GROUP:
456501	ISBMP1

NUCOR STEEL BIRMINGHAM, INC.
2301 F.L. SHUTTLESWORTH DRIVE
BIRMINGHAM, JEFFERSON COUNTY, ALABAMA

SPCC INVENTORY MAP

DWG
2

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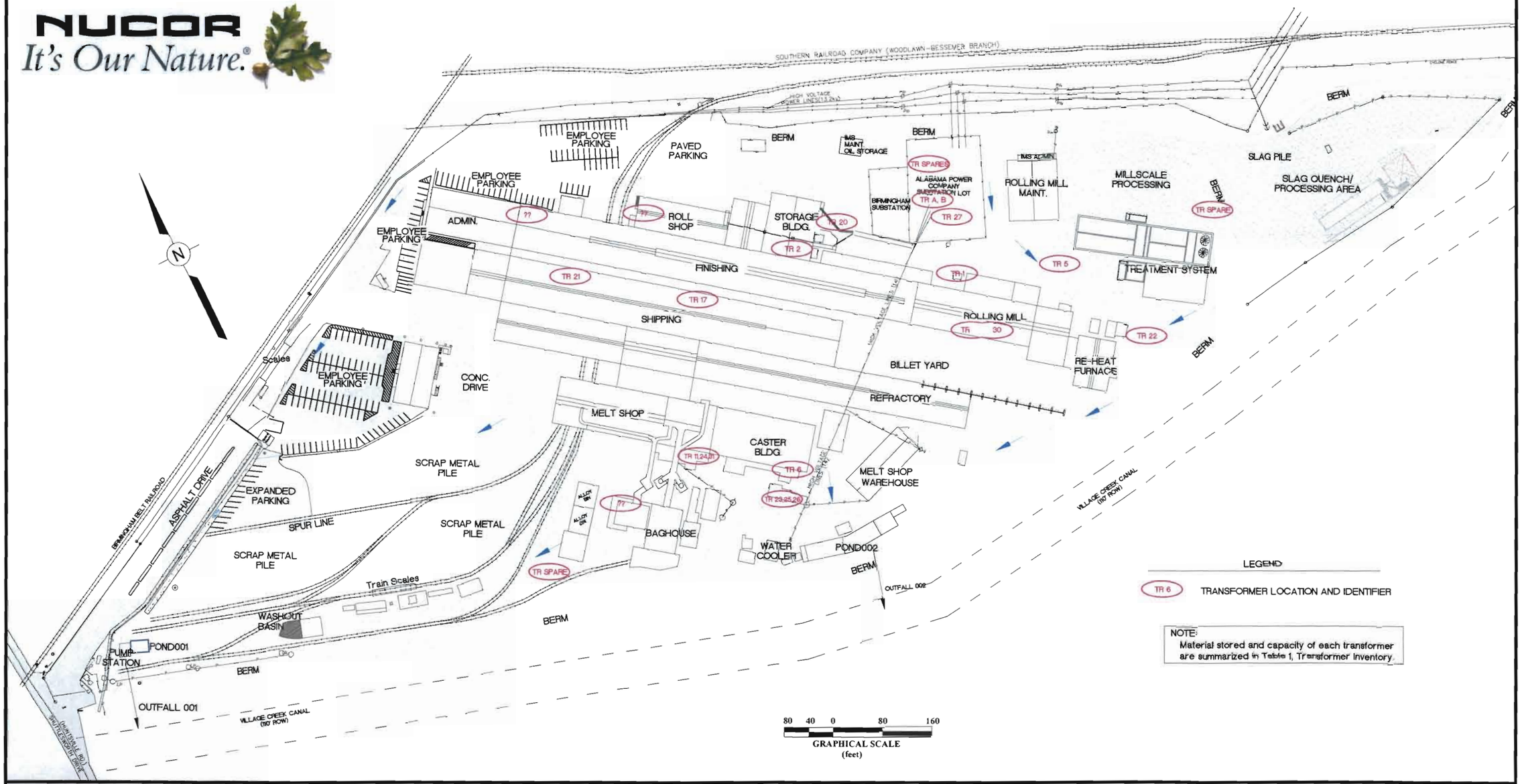


PPM CONSULTANTS, INC www.ppmco.com		**NUCOR STEEL BIRMINGHAM, INC.** **2301 F.L. SHUTTLESWORTH DRIVE** **BIRMINGHAM, JEFFERSON COUNTY, ALABAMA**	**TRANSFORMER INVENTORY MAP**
DRAWN BY: LR	DRAWN DATE: 01/2016		DWG 3
PROJECT NUMBER: 456501	BILLING GROUP: ISBMP1		

TABLE 1
MATERIAL INVENTORY
NUCOR STEEL BIRMINGHAM, INC.

I.D.	Contents	Capacity (gal)	Rain Exposure (Y/N)	Type of Material	Type of Containment	Size of Containment	Containment Volume (gal)	Location
Source Area A: Scrapyard								
1	De-Greaser	200	Y	Plastic Tote	Concrete Containment	8'x31'-8"x5"	790	Wash Pad in Scrap Yard
2	Oil/Water Seperator	500	Y	Steel	Concrete Containment	12'-7"x 31'-8"x4"	993	Wash Pad in Scrap Yard
3	Diesel Fuel	6,000	N	Steel	Double Wall Tank/Concrete Containment	Double Wall Tank/17'x34'x1'	4323	Scrap Yard Fuel Storage
4	Motor Oil	1,000	N	Steel	Double Wall Tank/Concrete Containment	Double Wall Tank/17'x34'x1'	4323	Scrap Yard Fuel Storage
5	Hydraulic Oil	1,000	N	Steel	Double Wall Tank/Concrete Containment	Double Wall Tank/17'x34'x1'	4323	Scrap Yard Fuel Storage
6	Used Oil	350	N	Steel Tote	Concrete Containment	17'x34'x1'	4323	Scrap Yard Fuel Storage
7	Misc. Hydraulic and Lube Oils	200	N	Steel Drum	Concrete Containment	17'x34'x1'	4323	Scrap Yard Fuel Storage
Source Area B: Metlshop								
8	Transformer Secondary Containment	6,000	Y	Steel	None	N/A	N/A	Outside Valve Train Room
9	Grease	478	Y	Steel	None	N/A	N/A	By Transformer Sec Containment
10	MS EAF/Electrode Hydraulics	1,000	N	Steel	Concrete Containment	24'x26'-8"x1'	3962	Inside Hydraulic Room
11	Oil Tank	6,000	N	Plastic	Concrete Containment	12'-5"x19'-11"x4'	7400	By Furnace Cooling Tower
12	100 T Crane Generator	340	Y	Steel	Steel	Double Wall Tank	N/A	North End MCC Room
13	Used Oil from Caster Spray Water	275	Y	Plastic	Plastic Containment	N/A	350	Caster Spray Water Pit
14	Caster Mold Lube Oil	8,000	Y	Steel	Concrete Containment	12'-2"x19'-8"x5'-1"	9098	Outside MS Maintenance Area
15	Spare Transformer	8,500	N	Steel	Concrete Containment	38'x48'x8"	9100	Transformer Building
16	Emergency Pump Generator	150	N	Steel	Steel	60"x38"x19"	187	Behind Air Compressor Area
17	Refractory Diesel Tank	125	Y	Concrete	Double Wall Tank (Convault)	Double Wall Tank	N/A	By Refractory Cleanout Area
18	Grease/Gear Oil	20,121	N	Steel	Steel	6'x6'x7"	157	Southside of Caster
19	Caster Hydraulic Unit	820	N	Steel	Concrete Containment	12'x12'x1'-4"	1345	Northside of Caster
Source Area C: Rolling Mill/Shipping								
20	Rolling Mill Diesel Tank	600	N	Steel	Concrete Containment	20'x39'x1'	5834	Flat Mill Building
21	RM Used Oil Tank	5,000	N	Steel	Concrete Containment	20'x39'x1'	5834	Flat Mill Building
22	RM Rando HD46 Tank	500	N	Steel	Concrete Containment	20'x39'x1'	5834	Flat Mill Building
23	RM Meropa 220 Tank	500	N	Steel	Concrete Containment	20'x39'x1'	5834	Flat Mill Building
24	Portable Used Oil	470	N	Steel	Concrete Containment	20'x39'x1'	5834	Flat Mill Building
25	Diesel Fuel,Waste Fuel,Misc. Lube, Oils	5-10 55	N	Steel	Concrete Containment	20'x39'x1'	5834	Flat Mill Building
26	Roiling Mill Generator Diesel Tank	275	N	Steel	Concrete Containment	5'x7'-4"x1'-2"	320	Northside of RM Pulpit
27	RM Hydraulic Oil	1,000	N	Steel	Concrete Containment	9'x18'x1'-10"	2221	Northside of RM Pulpit
28	RM Oil Stands 9-16	1,000	N	Steel	Concrete Containment	9'x18'x1'-10"	2221	Northside of RM Pulpit
29	Lube Oil in RM Stand 1-8	2,000	N	Steel	Concrete Containment	9'x19'x1'-10"	2345	East of Reheat Furnace
30	Diesel Tank	100	N	Steel	Concrete Containment	5'-5"x8'x1'-2"	378	Em. Gen. by Reheat Cooling Tower
31	Used Oil Tank	2,500	Y	Steel	Double Wall Tank/Concrete Containment	Double Wall/9'x21'X2'-8"	3770	West side of RM Water System
32	Used Oil Tank	2,500	Y	Steel	Double Wall Tank/Concrete Containment	Double Wall/9'x21'X2'-8"	3771	Eastside of RM Water System
33	RM Reheat Pusher Hydraulics	1,000	N	Steel	Concrete Containment	13'-6"x15'x1'	1515	Behind Billet Table Pulpit
34	Skimmer Used Oil	500	Y	Steel	Spill Over Drain	Spill Over	N/A	Beside Billet Table Pulpit
35	Lube Oil for RM Basement Stands 1-8	6,500	N	Steel	Inside Building	Inside Building	N/A	RM Basement
36	New Lube Oil Tank A thru 8	5,500	N	Steel	Inside Building	Inside Building	N/A	RM Basement
37	Lube Oil Tank 3 thru 8	4-450	N	Steel	Inside Building	Inside Building	N/A	RM Basement
38	Lube Oil Stands 9&11	650	N	Steel	Inside Building	Inside Building	N/A	RM Basement

TABLE 1
MATERIAL INVENTORY
NUCOR STEEL BIRMINGHAM, INC.

I.D.	Contents	Capacity (gal)	Rain Exposure (Y/N)	Type of Material	Type of Containment	Size of Containment	Containment Volume (gal)	Location
39	Lube Oil Stands 10&12	1,000	N	Steel	Inside Building	Inside Building	N/A	RM Basement
40	Lube Oil	180	N	Steel	Inside Building	Inside Building	N/A	RM Basement
41	Lube Oil Stand 13&14	430	N	Steel	Inside Building	Inside Building	N/A	RM Basement
42	Lube Oil Stands 13-16	1,800	N	Steel	Inside Building	Inside Building	N/A	North End of RM Motor Room
43	A-12 Rougher Hydraulics	150	N	Steel	Inside Building	Inside Building	N/A	RM Basement
44	Air Oil	400	N	Steel	Inside Building	Inside Building	N/A	RM Basement
45	Lube Oil Stand 15&16	448	N	Steel	Inside Building	Inside Building	N/A	RM Basement
46	Hydraulic Oil Stands 13-16	150	N	Steel	Inside Building	Inside Building	N/A	RM Basement
47	RM Dropwall Hydraulics	350	N	Steel	Concrete Containment	9'-8"x14'-10"x1'	1073	Southside of New Tensil Lab
48	Hugger Hydraulics	70	N	Steel	Concrete Containment	3'x5'x3'	337	By Swing Table
49	Wire Tier Hydraulics A	115	N	Steel	Inside Building	Inside Building	N/A	Bundler Pit
50	Wire Tier Hydraulics B	115	N	Steel	Inside Building	Inside Building	N/A	Bundler Pit
51	Wire Tier Hydraulics C	115	N	Steel	Inside Building	Inside Building	N/A	Bundler Pit
52	60 Ft Bay Bundling Hydraulics	350	N	Steel	Concrete Containment	3'-3"x9'-3'x1'-4"	299	Between 60 & 40ft Storage Tables
Source Area D: IMS								
53	IMS Diesel	1,000	Y	Steel	Double Wall Tank	Double Wall Tank	N/A	IMS Work Area
54	IMS HD 46 Hydraulic Oil	325	Y	Steel	Steel Containment	4'-4"x8'-5"x2'-2"	591	IMS Work Area
55	IMS Motor Oil	500	Y	Steel	Steel Containment	4'-4"x8'-5"x2'-2"	591	IMS Work Area
56	IMS Waste Oil	300	Y	Steel	Double Wall Tank	Double Wall Tank	N/A	IMS Work Area
57	IMS On Road Diesel	550	Y	Steel	Double Wall Tank	Double Wall Tank	N/A	IMS Work Area
58	Misc. Hydraulic and Lube Oils	20,180	Y	Steel	Steel Containment	4'-6"x8'-4"x8"	187	IMS Work Area
59	IMS Grease	55	Y	Steel	Plastic Containment	2'x4'x1'-4"	80	IMS Work Area

TABLE 2
TRANSFORMER INVENTORY
NUCOR STEEL BIRMINGHAM, INC.

TRANSFORMER	SIZE (KVA)	VOLTAGE	LOCATION	CAPACITY (GAL of OIL)
TR-A	5,000	13,800 / 2,400	Sub-Station - North S.N.-AS40633-001	640
TR-B	5,000	13,800 / 2,400	Sub-Station - South S.N.-20363	640
TR-1	1,500	2,400 / 480	Old Mill Rougher	657
TR-2	1,000	2,400 / 480	Cooling Bed / Roll Shop	294
TR-3	1,500	2,400 / 480	Cooling Bed / Shear Table	377
TR-4	500	2,400 / 480 / 277	Administration Office	238
TR-5	1,000	2,400 / 480	New Water System	452
TR-6	1,000	2,400 / 480	Inside MCC by Compressors	175 Silicone
TR-7	2,000	13,800 / 480	Melt Shop and Caster	435
TR-8	2,000	13,800 / 480	Mill Stands - 13 & 14	353
TR-9	2,000	13,800 / 480	Mill Stands - 15 & 16	353
TR-10	1,500	13,800 / 480	West Side Of Mill - Aux. Power	246
TR-11	45,000	13,800 / 1100	Electric Arc Furnace	8806
TR-12	1,500	2,400 / 480	Baghouse And Furnace	Air Cooled
TR-13	1,500	13,800 / 480	Mill Stands - 1 & 2	182
TR-14	1,500	13,800 / 480	Mill Stands - 3 & 4	182
TR-15	1,500	13,800 / 480	Mill Stands - 5 & 6	182
TR-16	1,500	13,800 / 480	Mill Stands - 7 & 8	182
TR-17	1,500	13,800 / 480	Mill Stands - 9 & 10	182
TR-18	1,500	13,800 / 480	Mill Stands - 11 & 12	182
TR-19	1,500	13,800 / 480	Mill - Aux. Power	182
TR-20	1,500	13,800 / 480	Cooling Bed Fans / Air Compressors	182
TR-21	1,500	2,400 / 480	Bundling & Tying	435
TR-22	2,000	13,800 / 480	Reheat Furnace	600
TR-23	5,000	13,800 / 2,400	Feeds TR-6 & TR-12	755
TR-24	2,000	13,800 / 480	Melt Shop Cooling Towers	Air Cooled
TR-25	1,500	13,800 / 2,400	No. 2 Baghouse	738
TR-26	1,250	2,400 / 480 / 277	Air Comp. / Caster Spray Water Pumps	443
TR-27	75	480 / 208 / 120	Old Administration Office	DRY TYPE
TR-28	75	480 / 120 / 240	Employee Locker Room / Scrap Yard	DRY TYPE
TR-29				
TR-30	2,000	13,800 / 480	Mill Stands - A & B. Shear 4	643
TR-31	15.3MVAR	33,000	Arc Furnace Reactor	3888
SPARE	45,000	13,800 / 972	Electric Arc Furnace	7592
SPARE	1,500	13,800 / 480	Mill Drives - Roof Transformer Spare	182
SPARE	1,500	13,800 / 480	Micsellaneous	405
SPARE	1,500	2,400 / 480	Bundling & Tying Spare For Roof (New)	435
SPARE	xx	xx	Dry Type Transformers	None
SPARE	1,000	2,400 / 480	Cooling Pond Pumps	174

Please print or type in the unshaded areas only.

Form Approved. OMB No. 2040-0086.

FORM 1 GENERAL

EPA

U.S. ENVIRONMENTAL PROTECTION AGENCY

GENERAL INFORMATION

Consolidated Permits Program

(Read the "General Instructions" before starting.)

I. EPA I.D. NUMBER: S F ALD000622852 T/A C D

LABEL ITEMS	
I.	EPA I.D. NUMBER
III.	FACILITY NAME
V.	FACILITY MAILING ADDRESS
VI.	FACILITY LOCATION

PLEASE PLACE LABEL IN THIS SPACE

GENERAL INSTRUCTIONS

If a preprinted label has been provided, affix it in the designated space. Review the information carefully; if any of it is incorrect, cross through it and enter the correct data in the appropriate fill-in area below. Also, if any of the preprinted data is absent *(the area to the left of the label space lists the information that should appear)*, please provide it in the proper fill-in area(s) below. If the label is complete and correct, you need not complete Items I, III, V, and VI *(except VI-B which must be completed regardless)*. Complete all items if no label has been provided. Refer to the instructions for detailed item descriptions and for the legal authorizations under which this data is collected.

II. POLLUTANT CHARACTERISTICS

INSTRUCTIONS: Complete A through J to determine whether you need to submit any permit application forms to the EPA. If you answer "yes" to any questions, you must submit this form and the supplemental form listed in the parenthesis following the question. Mark "X" in the box in the third column if the supplemental form is attached. If you answer "no" to each question, you need not submit any of these forms. You may answer "no" if your activity is excluded from permit requirements; see Section C of the instructions. See also, Section D of the instructions for definitions of **bold-faced terms**.

SPECIFIC QUESTIONS	Mark "X" YES	NO	FORM ATTACHED	SPECIFIC QUESTIONS	Mark "X" YES	NO	FORM ATTACHED
A. Is this facility a **publicly owned treatment works** which results in a **discharge** to **waters of the U.S.**? (FORM 2A)		X		B. Does or will this facility *(either existing or proposed)* include a **concentrated animal feeding operation** or **aquatic animal production facility** which results in a **discharge** to **waters of the U.S.**? (FORM 2B)		X	
	16	17	18		19	20	21
C. Is this a facility which currently results in **discharges** to **waters of the U.S.** other than those described in A or B above? (FORM 2C)	X		X	D. Is this a proposed facility *(other than those described in A or B above)* which will result in a **discharge** to **waters of the U.S.**? (FORM 2D)		X	
	22	23	24		25	26	27
E. Does or will this facility treat, store, or dispose of **hazardous wastes**? (FORM 3)		X		F. Do you or will you inject at this facility industrial or municipal effluent below the lowermost stratum containing, within one quarter mile of the well bore, underground sources of drinking water? (FORM 4)		X	
	28	29	30		31	32	33
G. Do you or will you inject at this facility any produced water or other fluids which are brought to the surface in connection with conventional oil or natural gas production, inject fluids used for enhanced recovery of oil or natural gas, or inject fluids for storage of liquid hydrocarbons? (FORM 4)		X		H. Do you or will you inject at this facility fluids for special processes such as mining of sulfur by the Frasch process, solution mining of minerals, in situ combustion of fossil fuel, or recovery of geothermal energy? (FORM 4)		X	
	34	35	36		37	38	39
I. Is this facility a proposed **stationary source** which is one of the 28 industrial categories listed in the instructions and which will potentially emit 100 tons per year of any air pollutant regulated under the Clean Air Act and may affect or be located in an attainment area? (FORM 5)		X		J. Is this facility a proposed **stationary source** which is NOT one of the 28 industrial categories listed in the instructions and which will potentially emit 250 tons per year of any air pollutant regulated under the Clean Air Act and may affect or be located in an **attainment area**? (FORM 5)		X	
	40	41	42		43	44	45

III. NAME OF FACILITY

1 SKIP: Nucor Steel Birmingham, Inc.

IV. FACILITY CONTACT

A. NAME & TITLE *(last, first, & title)*	B. PHONE *(area code & no.)*
2 Steve Messier, Environmental, Health and Safety Manager	(205) 250-7474

V. FACILTY MAILING ADDRESS

A. STREET OR P.O. BOX: 3 PO Box 2764

B. CITY OR TOWN	C. STATE	D. ZIP CODE
4 Birmingham	AL	35202

VI. FACILITY LOCATION

A. STREET, ROUTE NO. OR OTHER SPECIFIC IDENTIFIER: 5 2301 Shuttlesworth Drive

B. COUNTY NAME: Jefferson

C. CITY OR TOWN	D. STATE	E. ZIP CODE	F. COUNTY CODE *(if known)*
6 Birmingham	AL	35234	073

RECEIVED AUG 08 2016 IND/MUN BRANCH

EPA Form 3510-1 (8-90)

CONTINUE ON REVERSE

CONTINUED FROM THE FRONT

VII. SIC CODES *(4-digit, in order of priority)*

A. FIRST	B. SECOND
3312 (specify) Steel Works, Blast Furnaces, and Rolling Mills (EAF mini mill)	(specify)

C. THIRD	D. FOURTH
(specify)	(specify)

VIII. OPERATOR INFORMATION

A. NAME: Nucor Steel Birmingham, Inc

B. Is the name listed in Item VIII-A also the owner? ☑ YES ☐ NO

C. STATUS OF OPERATOR *(Enter the appropriate letter into the answer box: if "Other," specify.)*

F = FEDERAL
S = STATE
P = PRIVATE
M = PUBLIC *(other than federal or state)*
O = OTHER *(specify)*

P (specify)

D. PHONE *(area code & no.)*: A (205) 250-7474

E. STREET OR P.O. BOX: 2301 Shuttlesworth Drive

F. CITY OR TOWN	G. STATE	H. ZIP CODE	IX. INDIAN LAND
Birmingham	AL	35234	Is the facility located on Indian lands? ☐ YES ☑ NO

X. EXISTING ENVIRONMENTAL PERMITS

A. NPDES *(Discharges to Surface Water)*	D. PSD *(Air Emissions from Proposed Sources)*
9 N AL0003735	9 P

B. UIC *(Underground Injection of Fluids)*	E. OTHER *(specify)*
9 U N/A	9 ALG120670 (specify) General NPDES

C. RCRA *(Hazardous Wastes)*	E. OTHER *(specify)*
9 R ALD000622852	9 (specify)

XI. MAP

Attach to this application a topographic map of the area extending to at least one mile beyond property boundaries. The map must show the outline of the facility, the location of each of its existing and proposed intake and discharge structures, each of its hazardous waste treatment, storage, or disposal facilities, and each well where it injects fluids underground. Include all springs, rivers, and other surface water bodies in the map area. See instructions for precise requirements.

XII. NATURE OF BUSINESS *(provide a brief description)*

Scrap Steel is collected and segregated on site. Scrap is introduced to an electric arc furnace (EAF), melted down and transferred to a continuous caster to produce billets. Billets are stored in the billet yard until introduced to the re-heat furnace. Heated billets are then run through a rolling mill to produce the finished product. Limited amounts of finished products are stored on-site until shipped out. The primary product is rebar. Co-products produced at the plant include slag and mill scale.

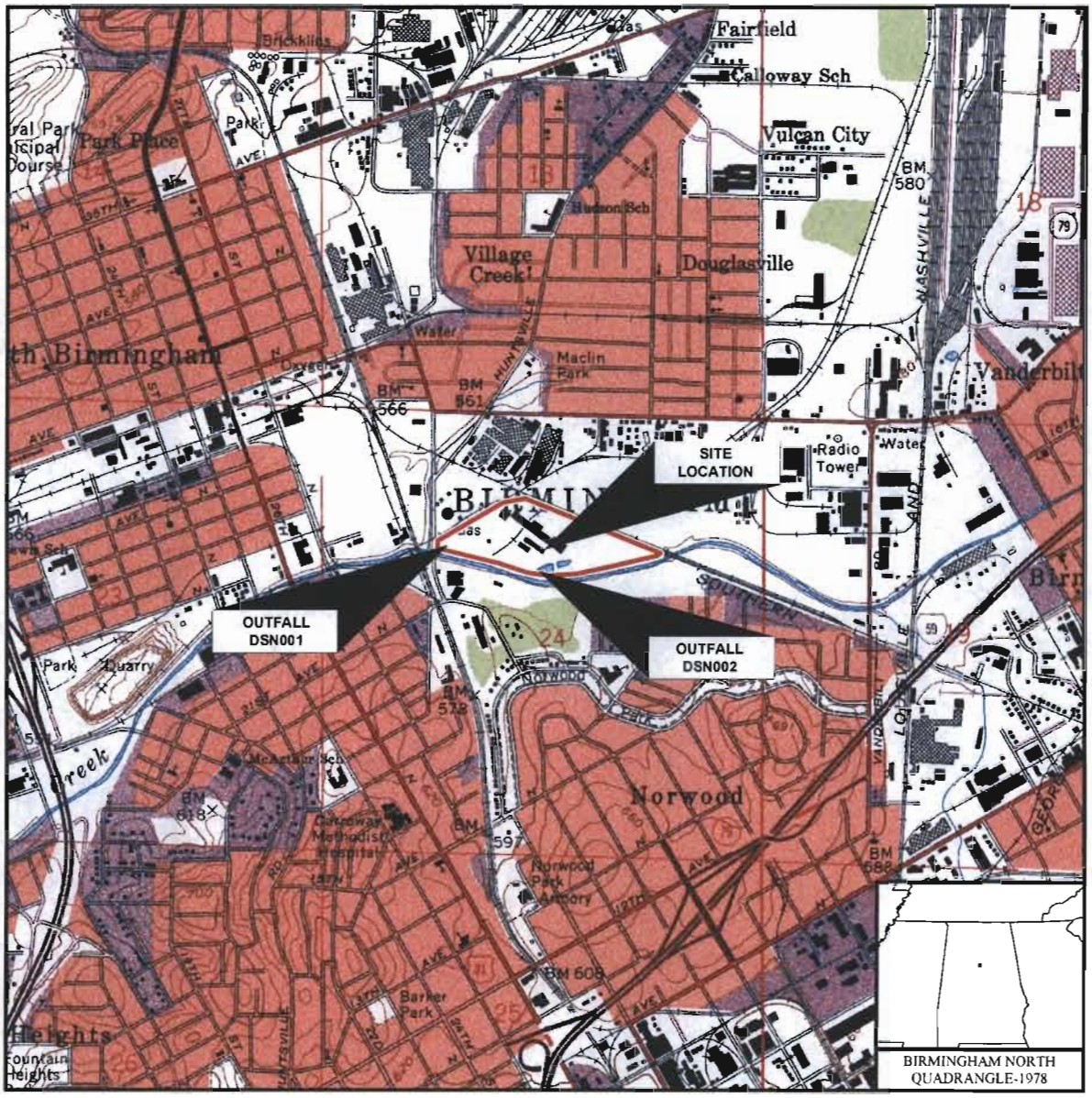
XIII. CERTIFICATION *(see instructions)*

I certify under penalty of law that I have personally examined and am familiar with the information submitted in this application and all attachments and that, based on my inquiry of those persons immediately responsible for obtaining the information contained in the application, I believe that the information is true, accurate, and complete. I am aware that there are significant penalties for submitting false information, including the possibility of fine and imprisonment.

A. NAME & OFFICIAL TITLE *(type or print)*	B. SIGNATURE	C. DATE SIGNED
FRANKLIN GRIGGS VP&GM	Franklin Griggs	8-1-16

COMMENTS FOR OFFICIAL USE ONLY

EPA Form 3510-1 (8-90)



SCALE: 1 : 24,000

1 .5 0 1 MILES

1000 0 1000 5000 10,000 FEET

1 0 1 2 KILOMETER

1000 0 1000 2000 METER

N

PPM CONSULTANTS, INC. www.ppmco.com		NUCOR STEEL BIRMINGHAM 2301 F.L. SHUTTLESWORTH DRIVE BIRMINGHAM, ALABAMA	SITE LOCATION MAP
DRAWN BY: BWH	DRAWN DATE: 07/21/16		DRAWING NUMBER 1
PROJECT NUMBER: 456501	BILLING GROUP: NPD16		

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Please print or type in the unshaded areas only.

EPA I.D. NUMBER (*copy from Item 1 of Form 1*)
ALD000622852

Form Approved.
OMB No. 2040-0086.
Approval expires 3-31-98.

FORM 2C NPDES

U.S. ENVIRONMENTAL PROTECTION AGENCY
APPLICATION FOR PERMIT TO DISCHARGE WASTEWATER
EXISTING MANUFACTURING, COMMERCIAL, MINING AND SILVICULTURE OPERATIONS
Consolidated Permits Program

I. OUTFALL LOCATION

For each outfall, list the latitude and longitude of its location to the nearest 15 seconds and the name of the receiving water.

A. OUTFALL NUMBER (*list*)	B. LATITUDE			C. LONGITUDE			D. RECEIVING WATER (*name*)
	1. DEG	2. MIN.	3. SEC.	1. DEG	2. MIN.	3. SEC	
DSN002	33.00	32.00	39.00	86.00	48.00	20.00	Village Creek

II. FLOWS, SOURCES OF POLLUTION, AND TREATMENT TECHNOLOGIES

A. Attach a line drawing showing the water flow through the facility. Indicate sources of intake water, operations contributing wastewater to the effluent, and treatment units labeled to correspond to the more detailed descriptions in Item B. Construct a water balance on the line drawing by showing average flows between intakes, operations, treatment units, and outfalls. If a water balance cannot be determined (*e.g., for certain mining activities*), provide a pictorial description of the nature and amount of any sources of water and any collection or treatment measures.

B. For each outfall, provide a description of: (1) All operations contributing wastewater to the effluent, including process wastewater, sanitary wastewater, cooling water, and storm water runoff; (2) The average flow contributed by each operation; and (3) The treatment received by the wastewater. Continue on additional sheets if necessary.

1. OUTFALL NO. (*list*)	2. OPERATION(S) CONTRIBUTING FLOW		3. TREATMENT		
	a. OPERATION (*list*)	b. AVERAGE FLOW (*include units*)	a. DESCRIPTION	b. LIST CODES FROM TABLE 2C-1	
DSN002	Rolling Mill Process Wastewater	0.0004 MGD	Flotation	1-H	
	(Contact and Noncontact Water)		Screening	1-T	
	Continuous Casting & Melt Shop	0.0004 MGD	Sedimentation	1-U	
	Process Wastewater		Neutralization	2-K	
DSN002 (Cont)	Stormwater	0.008 MGD	Discharge to Surface Waters	4-A	
			Reuse/Recycling	4-C	

OFFICIAL USE ONLY (*effluent guidelines sub-categories*)

EPA Form 3510-2C (8-90)

CONTINUE ON REVERSE

CONTINUED FROM THE FRONT

C. Except for storm runoff, leaks, or spills, are any of the discharges described in Items II-A or B intermittent or seasonal?

☐ YES (*complete the following table*) ☐ NO (*go to Section III*)

1. OUTFALL NUMBER (*list*)	2. OPERATION(s) CONTRIBUTING FLOW (*list*)	3. FREQUENCY a. DAYS PER WEEK (*specify average*)	3. FREQUENCY b. MONTHS PER YEAR (*specify average*)	4. FLOW a. FLOW RATE (*in mgd*) 1. LONG TERM AVERAGE	4. FLOW a. FLOW RATE (*in mgd*) 2. MAXIMUM DAILY	4. FLOW B. TOTAL VOLUME (*specify with units*) 1. LONG TERM AVERAGE	4. FLOW B. TOTAL VOLUME (*specify with units*) 2. MAXIMUM DAILY	4. FLOW C. DURATION (*in days*)
DSN002	Rolling Mill Process Wastewater (Contact and Non-contact Water) Continuous Casting and Melt Shop Process Wastewater Stormwater **numbers are skewed due to intermittent discharge	N/A	Estimated 5 months per year	0.0004 MGD 0.0004 MGD 0.0080 MGD	N/A (no data)	0.0088 MGD	N/A	5-yr Average from 2011 to the current

III. PRODUCTION

A. Does an effluent guideline limitation promulgated by EPA under Section 304 of the Clean Water Act apply to your facility?

☑ YES (*complete Item III-B*) ☐ NO (*go to Section IV*)

B. Are the limitations in the applicable effluent guideline expressed in terms of production (*or other measure of operation*)?

☑ YES (*complete Item III-C*) ☐ NO (*go to Section IV*)

C. If you answered "yes" to Item III-B, list the quantity which represents an actual measurement of your level of production, expressed in the terms and units used in the applicable effluent guideline, and indicate the affected outfalls.

1. AVERAGE DAILY PRODUCTION a. QUANTITY PER DAY	b. UNITS OF MEASURE	c. OPERATION, PRODUCT, MATERIAL, ETC. (*specify*)	2. AFFECTED OUTFALLS (*list outfall numbers*)
2,403,251	pounds per day	Continous Casting - Billets	DSN002
2,628,869	pounds per day	Hot Forming - Rebar	DSN002
***max monthly average over the last 12 months			

IV. IMPROVEMENTS

A. Are you now required by any Federal, State or local authority to meet any implementation schedule for the construction, upgrading or operations of wastewater treatment equipment or practices or any other environmental programs which may affect the discharges described in this application? This includes, but is not limited to, permit conditions, administrative or enforcement orders, enforcement compliance schedule letters, stipulations, court orders, and grant or loan conditions.

☐ YES (*complete the following table*) ☑ NO (*go to Item IV-B*)

1. IDENTIFICATION OF CONDITION, AGREEMENT, ETC.	2. AFFECTED OUTFALLS a. NO.	2. AFFECTED OUTFALLS b. SOURCE OF DISCHARGE	3. BRIEF DESCRIPTION OF PROJECT	4. FINAL COMPLIANCE DATE a. REQUIRED	4. FINAL COMPLIANCE DATE b. PROJECTED

B. OPTIONAL: You may attach additional sheets describing any additional water pollution control programs (*or other environmental projects which may affect your discharges*) you now have underway or which you plan. Indicate whether each program is now underway or planned, and indicate your actual or planned schedules for construction.

☐ MARK "X" IF DESCRIPTION OF ADDITIONAL CONTROL PROGRAMS IS ATTACHED

EPA I.D. NUMBER (*copy from Item 1 of Form 1*)
ALD000622852

CONTINUED FROM PAGE 2

V. INTAKE AND EFFLUENT CHARACTERISTICS

A, B, & C: See instructions before proceeding – Complete one set of tables for each outfall – Annotate the outfall number in the space provided. NOTE: Tables V-A, V-B, and V-C are included on separate sheets numbered V-1 through V-9.

D. Use the space below to list any of the pollutants listed in Table 2c-3 of the instructions, which you know or have reason to believe is discharged or may be discharged from any outfall. For every pollutant you list, briefly describe the reasons you believe it to be present and report any analytical data in your possession.

1. POLLUTANT	2. SOURCE	1. POLLUTANT	2. SOURCE
None			

VI. POTENTIAL DISCHARGES NOT COVERED BY ANALYSIS

Is any pollutant listed in Item V-C a substance or a component of a substance which you currently use or manufacture as an intermediate or final product or byproduct?

☐ YES (*list all such pollutants below*) ☑ NO (*go to Item VI-B*)

CONTINUED FROM THE FRONT

VII. BIOLOGICAL TOXICITY TESTING DATA

Do you have any knowledge or reason to believe that any biological test for acute or chronic toxicity has been made on any of your discharges or on a receiving water in relation to your discharge within the last 3 years?

☐ YES (*identify the test(s) and describe their purposes below*) ☑ NO (*go to Section VIII*)

VIII. CONTRACT ANALYSIS INFORMATION

Were any of the analyses reported in Item V performed by a contract laboratory or consulting firm?

☑ YES (*list the name, address, and telephone number of, and pollutants analyzed by, each such laboratory or firm below*) ☐ NO (*go to Section IX*)

A. NAME	B. ADDRESS	C. TELEPHONE (*area code & no.*)	D. POLLUTANTS ANALYZED (*list*)
Sutherland Environmental Company, Inc.	2515 5th Avenue South Birmingham, AL 35233	205-581-9500	All analyses reported

IX. CERTIFICATION

I certify under penalty of law that this document and all attachments were prepared under my direction or supervision in accordance with a system designed to assure that qualified personnel properly gather and evaluate the information submitted. Based on my inquiry of the person or persons who manage the system or those persons directly responsible for gathering the information, the information submitted is, to the best of my knowledge and belief, true, accurate, and complete. I am aware that there are significant penalties for submitting false information, including the possibility of fine and imprisonment for knowing violations.

A. NAME & OFFICIAL TITLE (*type or print*)	B. PHONE NO. (*area code & no.*)
Francis W. Griggs, Vice President/General Manager	(205) 250-7474
C. SIGNATURE	D. DATE SIGNED
Francis W Griggs	8-1-10

Sutherland

Environmental Company, Inc.

2515 5th Avenue South
Birmingham, AL 35233
205-581-9500

Client:	Nucor Steel	Report Date:	June 16, 2022
Attention:	Mr. Sam Price	Reference #	47072
Address:	P.O. Box 2764	P.O. #	verbal
	Birmingham, AL 35202	Project ID:	Permit Sampling

Sample Matrix:	water	Analytical	
Date Received:	6/13/22	Analyst:	Hageman/Heard
Date Collected:	6/13/22	Date Analysis:	6/15/22
Sample Collector:	S. Price	Method:	***EPA Method 624***

VOLATILE ORGANIC COMPOUNDS

VOLATILE ORGANIC COMPOUNDS, PPB	FIELD ID					Method Detection Limit PPB
	DSN~~001~~002					
	LAB ID					
	237106					
Acrolein	BDL					5
Acrylonitrile	BDL					5

N/A = Not Available
BDL = Below Detection Limit, Method
All results expressed as PPB (ug/L)

MK / QAQC

EPA Laboratory ID AL01084

Respectfully submitted,

Kevin Doriety

Kevin Doriety
Analytical Chemist

Sutherland

Environmental Company, Inc.

2515 5th Avenue South
Birmingham, AL 35233
205-581-9500

Client:	Nucor Steel	Report Date:	June 16, 2022
Attention:	Mr. Sam Price	Reference #	47072
Address:	P.O. Box 2764	P.O. #	verbal
	Birmingham, AL 35202	Project ID:	Permit Sampling

Sample Matrix:	water	Sample Collector:	S. Price
Date Received:	6/13/22	Method Reference:	Standard Methods
Date /Time Collected:	6/13/22 @ 1339-1443	Field ID:	DSN~~001~~ 002 Lab ID: **237106**

Parameter	Result	Units	Date / Time Assay		Analyst	Method	D.L.
Color	ND	CU	6/14/22	1307	CCR	SM 2120B	1

NA = Not Available
ND = Non Detect
BDL = Below Detection Limit
DL = Detection Limit , Method

MH / QAQC

EPA Laboratory ID AL01084

Respectfully submitted,

Kevin Doriety
Analytical Chemist

Sutherland

Environmental Company, Inc.

2515 5th Avenue South
Birmingham, AL 35233
205-581-9500

Client:	Nucor Steel	Report Date:	June 23, 2022
Attention:	Mr. Sam Price	Reference #	47071
Address:	P.O. Box 2764	P.O. #	verbal
	Birmingham, AL 35202	Project ID:	Permit Sampling

Sample Matrix:	water	Extraction Date:	6/15/22
Date Received:	6/13/22	Analyst:	Hageman/Heard
Date Collected:	6/13/22	Date of Analysis:	6/17/22
Sample Collector:	S. Price	Method:	***EPA Method 8270C***

SEMIVOLATILE ORGANIC COMPOUNDS

ACID AND BASE NEUTRAL EXTRACTABLE ORGANIC COMPOUNDS, PPB	FIELD ID DSN002 LAB ID 237105					Method Detection Limit, PPB
Acenaphthene	BDL					1
Acenaphthylene	BDL					1
Anthracene	BDL					1
Benzo(a)anthracene	BDL					1
Benzo(b)fluoranthene	BDL					1
Benzo(k)fluoranthene	BDL					1
Benzo(g,h,i)perylene	BDL					1
Benzo(a)pyrene	BDL					1
Bis(2-chloroethoxy)methane	BDL					2
Bis(2-chloroethyl)ether	BDL					5
Bis(2-chloroisopropyl)ether	BDL					5
Bis(2-ethylhexyl)phthalate	BDL					2
4-bromophenyl phenyl ether	BDL					1
Butyl benzyl phthalate	BDL					2
4-Chloroaniline	BDL					2
2-Chloronaphthalene	BDL					1
4-Chloro-3-methylphenol	BDL					1
2-Chlorophenol	BDL					1
4-Chlorophenyl phenyl ether	BDL					1
Carbazole	BDL					1
Chrysene	BDL					1
Dibenzo(a,h)anthracene	BDL					1
Dibenzofuran	BDL					1
Di-n-butylphthalate	BDL					5

Compound List Continued next page

Sutherland

Environmental Company, Inc.

2515 5th Avenue South
Birmingham, AL 35233
205-581-9500

Client:	Nucor Steel	Report Date:	June 23, 2022
Attention:	Mr. Sam Price	Reference #	47071
Address:	P.O. Box 2764	P.O. #	verbal
	Birmingham, AL 35202	Project ID:	Permit Sampling

Sample Matrix:	water	Extraction Date:	6/15/22
Date Received:	6/13/22	Analyst:	Hageman/Heard
Date Collected:	6/13/22	Date of Analysis:	6/17/22
Sample Collector:	S. Price	Method:	***EPA Method 8270C***

SEMIVOLATILE ORGANIC COMPOUNDS

ACID AND BASE NEUTRAL EXTRACTABLE ORGANIC COMPOUNDS, PPB	FIELD ID DSN002 LAB ID 237105					Method Detection Limit, PPB
1,3-Dichlorobenzene	BDL					1
1,4-Dichlorobenzene	BDL					1
1,2-Dichlorobenzene	BDL					1
2,4-Dichlorophenol	BDL					1
Diethylphthalate	BDL					2
2,4-Dimethylphenol	BDL					1
Dimethylphthalate	BDL					1
2,4-Dinitrophenol	BDL					5
2,4-Dinitrotoluene	BDL					1
2,6-Dinitrotoluene	BDL					1
Di-n-octylphthalate	BDL					1
Fluoranthene	BDL					1
Fluorene	BDL					1
Hexachlorobenzene	BDL					1
Hexachlorobutadiene	BDL					1
Hexachlorocyclopentadiene	BDL					50
Hexachloroethane	BDL					1
Indeno(1,2,3-cd)pyrene	BDL					1
Isophorone	BDL					5
2-Methylnaphthalene	BDL					1
2-Methylphenol (o-cresol)	BDL					1
4-Methylphenol (p-cresol)	BDL					1

Compound List Continued next page

Sutherland

Environmental Company, Inc.

2515 5th Avenue South
Birmingham, AL 35233
205-581-9500

Client:	Nucor Steel	Report Date:	June 23, 2022
Attention:	Mr. Sam Price	Reference #	47071
Address:	P.O. Box 2764	P.O. #	verbal
	Birmingham, AL 35202	Project ID:	Permit Sampling

Sample Matrix:	water	Extraction Date:	6/15/22
Date Received:	6/13/22	Analyst:	Hageman/Heard
Date Collected:	6/13/22	Date of Analysis:	6/17/22
Sample Collector:	S. Price	Method:	***EPA Method 8270C***

SEMIVOLATILE ORGANIC COMPOUNDS

ACID AND BASE NEUTRAL EXTRACTABLE ORGANIC COMPOUNDS, PPB	FIELD ID					Method Detection Limit, PPB
	DSN002					
	LAB ID					
	237105					
Naphthalene	BDL					1
2-Nitroaniline	BDL					10
3-Nitroaniline	BDL					10
4-Nitroaniline	BDL					10
Nitrobenzene	BDL					1
2-Nitrophenol	BDL					5
4-Nitrophenol	BDL					5
N-Nitrosodimethylamine	BDL					1
N-Nitrosodi-n-propylamine	BDL					1
Pentachlorophenol	BDL					50
Phenanthrene	BDL					1
Phenol	BDL					5
Pyrene	BDL					1
1,2,4-Trichlorobenzene	BDL					1
2,4,5-Trichlorophenol	BDL					5
2,4,6-Trichlorophenol	BDL					5

BDL = Below Detection Limit, Method
All results expressed as PPB (ug/L)

/QAQC

EPA Laboratory ID AL01084

Respectfully submitted,

Kevin Doriety
Analytical Chemist

Quality Environmental Analytical Services

Sutherland

Environmental Company, Inc.

2515 5th Avenue South
Birmingham, AL 35233
205-581-9500

Client:	Nucor Steel	Report Date:	June 23, 2022
Attention:	Mr. Sam Price	Reference #	47071
Address:	P.O. Box 2764	P.O. #	verbal
	Birmingham, AL 35202	Project ID:	Permit Sampling

Sample Matrix:	water	Sample Collector:	S. Price		
Date Received:	6/13/22	Method Reference:	Standard, Hach Methods, & EPA 600		
Date /Time Collected:	6/13/22 @ 1339-1443	Field ID:	**DSN002**	Lab ID:	**237105**

Parameter	Result	Units	Date / Time Assay		Analyst	Method	D.L.
pH	**7.12**	SU	6/14/22	1522	CRR	SM4500-H+	na
TSS	**2**	mg/L	6/16/22	1224	CCR	SM2540D	1
Chlorine, Residual	BDL	mg/L	6/14/22	1251	CCR	SM4500-Cl-G	0.10
Oil & Grease	**1**	mg/L	6/15/22	1326	CRR	E 1664A	1
Cyanide, Total	BDL	mg/L	6/14/22	1208	CCR	SM4500-CN-E	0.005
COD	**16**	mg/L	6/16/22	1142	CCR	SM 5220D	1
Nitrogen, Total	**0.32**	mg/L	6/16/22	1352	CCR	H 10208	0.10
Nitrate	BDL	mg/L	6/14/22	1334	CCR	H 10206	0.10
Nitrite	BDL	mg/L	6/14/22	1336	CRR/CCR	SM4500-NO2-B	0.10
Kjeldahl Nitrogen, Total	**0.69**	mg/L	6/16/22	1351	CCR	H 10242	0.10
Ammonia	BDL	mg/L	6/16/22	1433	CCR	SM4500NH3-G	0.10
Phosphorus, Total	**2.43**	mg/L	6/14/22	1220	CCR	SM4500-P E	0.05
BOD-5	**5**	mg/L	6/20/22	1112	CRR	SM 5210B	1

BOD start date/time: 6/15/22 @ 1137
COD start date/time: 6/16/22 @ 0942

BDL = Below Detection Limit
DL = Detection Limit , Method

_____ / QAQC

EPA Laboratory ID AL01084

Respectfully submitted,

Kevin Doriety
Analytical Chemist

Quality Environmental Analytical Services

Sutherland

Environmental Company, Inc.

2515 5th Avenue South
Birmingham, AL 35233
205-581-9500

Client:	Nucor Steel	Report Date:	June 23, 2022
Attention:	Mr. Sam Price	Reference #	47071
Address:	P.O. Box 2764	P.O. #	verbal
	Birmingham, AL 35202	Project ID:	Permit Sampling

Sample Matrix:	water	Analytical	
Date Received:	6/13/22	Analyst:	Kevin Doriety
Date Collected:	6/13/22	Date Analysis:	6/22-23/22
Sample Collector:	S. Price	Method:	***EPA Method 200.8***

METALLIC ANALYTES

	FIELD ID						
	DSN002						
Analyte, mg/L as Total	LAB ID						Detection Limit,mg/L
	237105						
Arsenic	BDL						0.01
Barium	BDL						0.02
Beryllium	BDL						0.01
Cadmium	BDL						0.01
Chromium	BDL						0.01
Lead	BDL						0.0020
Mercury	BDL						0.0005
Selenium	BDL						0.01
Silver	BDL						0.01
Antimony	BDL						0.01
Thallium	BDL						0.01
Nickel	**0.01**						0.01
Zinc	**0.04**						0.01
Copper	**0.01**						0.01
Boron	BDL						0.01
Tin	BDL						0.01

BDL = Below Detection Limit
Detection Limit is Practical Quantitation Limit
All results expressed as PPM mg/L of total analyte

EPA Laboratory ID AL01084

Sutherland

Environmental Company, Inc.

2515 5th Avenue South
Birmingham, AL 35233
205-581-9500

Client:	Nucor Steel	Report Date:	June 23, 2022
Attention:	Mr. Sam Price	Reference #	47071
Address:	P.O. Box 2764	P.O. #	verbal
	Birmingham, AL 35202	Project ID:	Permit Sampling

Sample Matrix:	water	Analytical	
Date Received:	6/13/22	Analyst:	Kevin Doriety
Date Collected:	6/13/22	Date Analysis:	6/22-23/22
Sample Collector:	S. Price	Method:	***EPA Method 200.8***

METALLIC ANALYTES

	FIELD ID						
	DSN002						
Analyte, mg/L as Total	LAB ID						Detection Limit,mg/L
	237105						
Aluminum	**0.05**						0.01
Titanium	BDL						0.01
Iron	**0.20**						0.01
Magnesium	**22**						0.01
Manganese	**0.02**						0.01
Cobalt	**0.02**						0.01
Molybdenum	BDL						0.01

BDL = Below Detection Limit
Detection Limit is Practical Quantitation Limit
All results expressed as PPM mg/L of total analyte

/ QAQC

EPA Laboratory ID AL01084

Respectfully submitted,

Kevin Doriety
Analytical Chemist

Quality Environmental Analytical Services

Sutherland

Environmental Company, Inc.

2515 5th Avenue South
Birmingham, AL 35233
205-581-9500

Client:	Nucor Steel	Report Date:	June 23, 2022
Attention:	Mr. Sam Price	Reference #	47071
Address:	P.O. Box 2764	P.O. #	verbal
	Birmingham, AL 35202	Project ID:	Permit Sampling

Sample Matrix:	water	Analytical	
Date Received:	6/13/22	Analyst:	Kevin Doriety
Date Collected:	6/13/22	Date Analysis:	6/22-23/22
Sample Collector:	S. Price	Method:	***EPA Method 200.8***

METALLIC ANALYTES

	FIELD ID						
	DSN002						
Analyte, mg/L as Total Recoverable	LAB ID						Detection Limit,mg/L
	237105						
Arsenic	BDL						0.01
Barium	BDL						0.02
Beryllium	BDL						0.01
Cadmium	BDL						0.01
Chromium	BDL						0.01
Lead	BDL						0.0020
Mercury	BDL						0.0005
Selenium	BDL						0.01
Silver	BDL						0.01
Antimony	BDL						0.01
Thallium	BDL						0.01
Nickel	**0.01**						0.01
Zinc	**0.04**						0.01
Copper	**0.01**						0.01
Boron	BDL						0.01
Tin	BDL						0.01

BDL = Below Detection Limit
Detection Limit is Practical Quantitation Limit
All results expressed as PPM mg/L of total analyte

EPA Laboratory ID AL01084

Sutherland

Environmental Company, Inc.

2515 5th Avenue South
Birmingham, AL 35233
205-581-9500

Client:	Nucor Steel	Report Date:	June 23, 2022
Attention:	Mr. Sam Price	Reference #	47071
Address:	P.O. Box 2764	P.O. #	verbal
	Birmingham, AL 35202	Project ID:	Permit Sampling

Sample Matrix:	water	Analytical	
Date Received:	6/13/22	Analyst:	Kevin Doriety
Date Collected:	6/13/22	Date Analysis:	6/22-23/22
Sample Collector:	S. Price	Method:	***EPA Method 200.8***

METALLIC ANALYTES

	FIELD ID						
	DSN002						
Analyte, mg/L as Total Recoverable	LAB ID						Detection Limit,mg/L
	237105						
Aluminum	**0.05**						0.01
Titanium	BDL						0.01
Iron	**0.20**						0.01
Magnesium	**22**						0.01
Manganese	**0.02**						0.01
Cobalt	**0.02**						0.01
Molybdenum	BDL						0.01

BDL = Below Detection Limit
Detection Limit is Practical Quantitation Limit
All results expressed as PPM mg/L of total analyte

/ QAQC

EPA Laboratory ID AL01084

Respectfully submitted,

Kevin Doriety
Analytical Chemist

Sutherland

Environmental Company, Inc.

2515 5th Avenue South
Birmingham, AL 35233
205-581-9500

Client:	Nucor Steel	Report Date:	June 16, 2022
Attention:	Mr. Sam Price	Reference #	47073
Address:	P.O. Box 2764	P.O. #	verbal
	Birmingham, AL 35202	Project ID:	Permit Sampling

Sample Matrix:	water	Analytical	
Date Received:	6/13/22	Analyst:	Hageman/Heard
Date Collected:	6/13/22	Date Analysis:	6/15/22
Sample Collector:	S. Price	Method:	***EPA Method 8260B***

VOLATILE ORGANIC COMPOUNDS

	FIELD ID					
VOLATILE ORGANIC COMPOUNDS, PPB	DSN002					Detection Limit PPB
	LAB ID					
	237107					
Benzene	BDL					5
Bromobenzene	BDL					5
Bromochloromethane	BDL					5
Bromodichloromethane	BDL					5
Bromoform	BDL					5
Bromomethane	BDL					5
n-Butylbenzene	BDL					5
sec-Butylbenzene	BDL					5
tert-Butybenzene	BDL					5
Carbon Tetrachloride	BDL					5
Chlorobenzene	BDL					5
Chloroethane	BDL					5
Chloroform	BDL					5
Chloromethane	BDL					5
2-Chlorotoluene	BDL					5
4-Chlorotoluene	BDL					5
Dibromochloromethane	BDL					5
1,2-Dibromo-3-Chloropropane	BDL					5
1,2-Dibromoethane	BDL					5
Dibromomethane	BDL					5
1,2-Dichlorobenzene	BDL					5
1,3-Dichlorobenzene	BDL					5
1,4-Dichlorobenzene	BDL					5
Dichlorodifluoromethane	BDL					5
1,1-Dichloroethane	BDL					5
1,2-Dichloroethane	BDL					5

Compound List Continued next page

BDL = Below Detection Limit, Practical Quantitation
All results expressed as PPB (ug/L)

Sutherland

Environmental Company, Inc.

2515 5th Avenue South
Birmingham, AL 35233
205-581-9500

Client:	Nucor Steel	Report Date:	June 16, 2022
Attention:	Mr. Sam Price	Reference #	47073
Address:	P.O. Box 2764	P.O. #	verbal
	Birmingham, AL 35202	Project ID:	Permit Sampling

Sample Matrix:	water	Analytical	
Date Received:	6/13/22	Analyst:	Hageman/Heard
Date Collected:	6/13/22	Date Analysis:	6/15/22
Sample Collector:	S. Price	Method:	***EPA Method 8260B***

VOLATILE ORGANIC COMPOUNDS

	FIELD ID					
VOLATILE ORGANIC COMPOUNDS, PPB	DSN002					Detection Limit PPB
	LAB ID					
	237107					
1,1-Dichloroethene	BDL					5
cis-1,2-Dichloroethene	BDL					5
trans-1,2-Dichloroethene	BDL					5
1,2-Dichloropropane	BDL					5
1,3- Dichloropropane	BDL					5
2,2-Dichloropropane	BDL					5
1,1-Dichloropropene	BDL					5
cis-1-3,Dichloropropene	BDL					5
trans-1,3-Dichloropropene	BDL					5
Ethylbenzene	BDL					5
Hexachlorobutadiene	BDL					5
Isopropylbenzene	BDL					5
4-Isopropyltoluene	BDL					5
Methylene Chloride	BDL					5
Naphthalene	BDL					5
n-Propylbenzene	BDL					5
Styrene	BDL					5
1,1,1,2-Tetrachloroethane	BDL					5
1,1,2,2-Tetrachloroethane	BDL					5
Tetrachloroethene	BDL					5
Toluene	BDL					5
1,2,3-Trichlorobenzene	BDL					5
1,2,4-Trichlorobenzene	BDL					5
1,1,1-Trichloroethane	BDL					5
1,1,2-Trichloroethane	BDL					5

Compound List Continued next page

BDL = Below Detection Limit, Practical Quantitation
All results expressed as PPB (ug/L)

Sutherland

Environmental Company, Inc.

2515 5th Avenue South
Birmingham, AL 35233
205-581-9500

Client:	Nucor Steel	Report Date:	June 16, 2022
Attention:	Mr. Sam Price	Reference #	47073
Address:	P.O. Box 2764	P.O. #	verbal
	Birmingham, AL 35202	Project ID:	Permit Sampling

Sample Matrix:	water	Analytical	
Date Received:	6/13/22	Analyst:	Hageman/Heard
Date Collected:	6/13/22	Date Analysis:	6/15/22
Sample Collector:	S. Price	Method:	***EPA Method 8260B***

VOLATILE ORGANIC COMPOUNDS

	FIELD ID					
VOLATILE ORGANIC COMPOUNDS, PPB	**DSN002**					Detection Limit PPB
	LAB ID					
	237107					
Trichloroethylene	BDL					5
Trichlorofluoromethane	BDL					5
1,2,3-Trichloropropane	BDL					5
1,2,4-Trimethylbenzene	BDL					5
1,3,5-Trimethylbenzene	BDL					5
Vinyl Chloride	BDL					2
Xylenes, o,m,p	BDL					15
MTBE	BDL					5

BDL = Below Detection Limit, Practical Quantitation
All results expressed as PPB (ug/L)

MH /QAQC

EPA Laboratory ID AL01084

Respectfully submitted,

Kevin Doriety
Analytical Chemist

Quality Environmental Analytical Services

Sutherland

Environmental Company, Inc.

2515 5th Avenue South
Birmingham, AL 35233
205-581-9500

Client:	Nucor Steel	Report Date:	June 16, 2022
Attention:	Mr. Sam Price	Reference #	47073
Address:	P.O. Box 2764	P.O. #	verbal
	Birmingham, AL 35202	Project ID:	Permit Sampling

Sample Matrix:	water	Sample Collector:	S. Price		
Date Received:	6/13/22	Method Reference:	Standard Methods		
Date /Time Collected:	6/13/22 @ 1339-1443	Field ID:	**DSN002**	Lab ID:	**237107**

Parameter	Result	Units	Date / Time Assay		Analyst	Method	D.L.
Carbon, Total Organic	**5.4**	mg/L	6/14/22	1245	CCR	SM 5310C	1.0
Sulfate, Total	BDL	mg/L	6/14/22	1323	CCR	SM4500-SO4-E	0.10

NA = Not Available
ND = Non Detect
BDL = Below Detection Limit
DL = Detection Limit , Method

MH / QAQC

EPA Laboratory ID AL01084

Respectfully submitted,

Kevin Doriety
Analytical Chemist

Sutherland Environmental Read and Review Checklist

1. Is the client and the sample collector(s) accurately noted on report?	NO	YES	NO	YES
2. Do all dates match the COC on the report?	NO	YES	NO	YES
3. Is the purchase order ID (PO) and project ID accurately noted on report?	NO	YES	NO	YES
4. Are all methods and method references correct on report?	NO	YES	NO	YES
5. Do the Field ID(s) and the Lab ID(s) correspond to the COC?	NO	YES	NO	YES
6. Is the report formatted correctly?	NO	YES	NO	YES
7. Does the following information on report correspond to the printout information from the analytical instrumentation:				
Sample Matrix	NO	YES	NO	YES
Analyst	NO	YES	NO	YES
Analysis Date/Time	NO	YES	NO	YES
Analyte concentration	NO	YES	NO	YES
Units	NO	YES	NO	YES
Dilution Factors/Conversions	NO	YES	NO	YES
Detection/Reporting/Quant. Limits	NO	YES	NO	YES
QC Reviewed:	KD MJH	YES		YES

Initial*: MJH

* MJH = Michael Heard, KD = Kevin Doriety, MSH = Matt Hageman, KH = Kelly Hester

PDF: Katie, Sam, Tyler

Notes: _____

Invoice # 47073

Sutherland Environmental Co., Inc.

Sutherland Environmental Company Inc.

Sample Check-in Form

Date Received: 6/13/22 **Invoice #** 47073

Method of Delivery: hand **Client:** Nucor Steel

1. Did any containers arrive broken?		✓ NO	
* If so, please state field ID with analysis of broken sample(s)			
2. Were cooler(s) sealed upon arrival?	✓ YES	NO	NA
3. Were the samples received at the proper temperature (4°C +/- 2°C)?	✓ YES	NO	NA
4. Did a chain of custody accompany the samples?	✓ YES	NO	
* Was it properly filled out?	✓ YES	NO	
5. Were correct containers used for the analysis requested?	✓ YES	NO	
6. Were all containers properly preserved?	✓ YES	NO	NA
7. Were all water samples received at the proper pH?	✓ YES	NO	NA
8. If VOA vials were present, was there any head space?	YES	✓ NO	NA
* If so, please state field ID of deficient sample(s):			
9. Were all containers properly labeled and match chain of custody?	✓ YES	NO	
10. Did containers arrive within holding time of analysis?	✓ YES	NO	
* If not, please state field ID and analysis of sample(s) out of holding time:			
11. Was client informed of any/all deficiencies in sample check-in?	YES	NO	✓ NA
12. Were any samples rejected?	YES	✓ NO	
* If so, please state field ID of rejected sample(s):			

Sample Custodian (signed): M. Watts

Environmental Company, Inc.
2515 5th Avenue South
B'HAM, AL 35233
PHONE (205)581-9500 FAX (205)581-9504
E-Mail: suthlab@bellsouth.net

CHAIN OF CUSTODY ANALYSIS REQUEST

#47073

SEND REPORT TO:
Name/Co.: Nucor Steel Birmingham, Inc.
Address: P.O. Box 2764
Birmingham, AL 35202-2764
Phone# / Cell#: 205-264-8289 / 205-790-2321
E-mail: katie.rigney@nucor.com, sam.price@nucor.com & steve.messier@nucor.com
PDF Results: yes no Fax #: 205-250-7465

Client P.O. #

CLIENT: Nucor Steel Birmingham
PROJECT: Permit Sampling
SAMPLER(S): (print) Sam Price

DATE DELIVERED: 6/13/22

LAB ID	FIELD ID	DATE Collected	TIME Collected	SAMPLE DESCRIPTION (matrix)	TOC	VOC	Sulfur Tetraoxide SO4						Number of sample containers
237107	DSN002	6/13/22	1:39-2:43	Water	2	1	1						4
				pH	6.95								
				Temp	85.6								

ANALYSIS REQUESTED / METHOD

Preservative: (a)HCL, (b)HNO_3, (c)H_2SO_4, (d)NaOH, (e)Zn Acetate
Container type: (a) Amber, (g) Glass, (p) Plastic, (v) VOC Vial, (t) Tedlar bag

	TOC	VOC
Preservative:	a	None
Container:	g	p

Last revised 8/6/08

Relinquished by Sampler: Signed:	Date	Time	Received by: Signed:	Date	Time
	6/13/22	4:03			
Relinquished by: Signed:	Date	Time	Received by: Signed:	Date	Time
Relinquished by: Signed:	Date	Time	Received in Laboratory by: Signed: M.W.	Date	Time
				6/13	4:03

Turn Around Time (please note):
Standard X ***RUSH, mark below**
*3-Day *2-Day *Next Day *Same Day

Remarks:

Refrigerated upon receipt: (yes) no
Invoice # (LAB use only): 47073

Sutherland Environmental Read and Review Checklist

1. Is the client and the sample collector(s) accurately noted on report?	NO	YES	NO	YES
2. Do all dates match the COC on the report?	NO	YES	NO	YES
3. Is the purchase order ID (PO) and project ID accurately noted on report?	NO	YES	NO	YES
4. Are all methods and method references correct on report?	NO	YES	NO	YES
5. Do the Field ID(s) and the Lab ID(s) correspond to the COC?	NO	YES	NO	YES
6. Is the report formatted correctly?	NO	YES	NO	YES
7. Does the following information on report correspond to the printout information from the analytical instrumentation:				
Sample Matrix	NO	YES	NO	YES
Analyst	NO	YES	NO	YES
Analysis Date/Time	NO	YES	NO	YES
Analyte concentration	NO	YES	NO	YES
Units	NO	YES	NO	YES
Dilution Factors/Conversions	NO	YES	NO	YES
Detection/Reporting/Quant. Limits	NO	YES	NO	YES
QC Reviewed:		YES		YES
Initial*:	KH		LA	

* MJH = Michael Heard, KD = Kevin Doriety, MSH = Matt Hageman, KH = Kelly Hester

PDF: Katie, Sam, Tyler

Notes: _____

Invoice # 47071

Sutherland Environmental Co., Inc.

Sutherland Environmental Company Inc.

Sample Check-in Form

Date Received: 6/13/22 **Invoice #** 47071

Method of Delivery: hand **Client:** Nucor Steel

1. Did any containers arrive broken?	YES	✓NO	
* If so, please state field ID with analysis of broken sample(s)			
2. Were cooler(s) sealed upon arrival?	✓YES	NO	NA
3. Were the samples received at the proper temperature (4°C +/- 2°C)?	✓YES	NO	NA
4. Did a chain of custody accompany the samples?	✓YES	NO	
* Was it properly filled out?	✓YES	NO	
5. Were correct containers used for the analysis requested?	✓YES	NO	
6. Were all containers properly preserved?	✓YES	NO	NA
7. Were all water samples received at the proper pH?	✓YES	NO	NA
8. If VOA vials were present, was there any head space?	YES	✓NO	NA
* If so, please state field ID of deficient sample(s):			
9. Were all containers properly labeled and match chain of custody?	✓YES	NO	
10. Did containers arrive within holding time of analysis?	✓YES	NO	
* If not, please state field ID and analysis of sample(s) out of holding time:			
11. Was client informed of any/all deficiencies in sample check-in?	YES	NO	✓NA
12. Were any samples rejected?	YES	✓NO	
* If so, please state field ID of rejected sample(s):			

Sample Custodian (signed): M. Watts

Sutherland
Environmental Company, Inc.
2515 5th Avenue South
B'HAM, AL 35233
PHONE (205)581-9500 FAX (205)581-9504
E-Mail: suthlab@bellsouth.net

CHAIN OF CUSTODY ANALYSIS REQUEST

47071

SEND REPORT TO:
Name/Co.: Nucor Steel Birmingham, Inc.
Address: P.O. Box 2764
Birmingham, AL 35202-2764
Phone# / Cell#: 205-264-8289 / 205-790-2321
E-mail: katie.rigney@nucor.com, sam.price@nucor.com & steve.messier@nucor.com
PDF Results: **yes** no Fax #: 205-250-7465

Client P.O. #

CLIENT: Nucor Steel Birmingham
PROJECT: Permit Sampling
SAMPLER(S): (print) Sam Price

DATE DELIVERED: 6/13/22

LAB ID	FIELD ID	DATE Collected	TIME Collected	SAMPLE DESCRIPTION (matrix)	TSS, pH, Residual Cl	Oil & Grease	Total Cyanide	*Total Metals	TKN & Total Phosphorus	COD, Nitrate, Nitrite, NH3, Nitrogen	BOD	Semi-VOC	Number of sample containers
					ANALYSIS REQUESTED / METHOD								
237105	DSN002	6/13/22	1:39-2:43	Water	1	1	1	1	1	1	1	1	8

Preservative: (a)HCL, (b)HNO_3, (c)H_2SO_4, (d)NaOH, (e)Zn Acetate — **Preservative:** none a d b c c none none
Container type: (a) Amber, (g) Glass, (p) Plastic, (v) VOC Vial, (t) Tedlar bag — **Container:** p g p p p p g g

Last revised 8/6/08

Relinquished by Sampler: Signed: Sam Price	Date 6/13/22	Time 4:03	Received by: Signed:	Date	Time
Relinquished by: Signed:	Date	Time	Received by: Signed:	Date	Time
Relinquished by: Signed:	Date	Time	Received in Laboratory by: Signed: M.W.	Date 6/13	Time 4:03

Turn Around Time (please note):
Standard X ***RUSH, mark below**
*3-Day *2-Day *Next Day *Same Day

Remarks: *Need Report in 2 Weeks
**Total Metals- Al, Ba, B, Co, Fe, Mg, Mo, Mn, Sn, Ti, Sb, As, Be, Cd, Cr, Cu, Pb, Hg, Ni, Se, Ag, Ti, Zn

Refrigerated upon receipt: (yes) no
Invoice # (LAB use only): 47071

RE: [EXT] Confirm for T. Rec. Metals

From: Price, Sam (NSBHM) (sam.price@nucor.com)

To: suthlab@bellsouth.net

Date: Wednesday, June 15, 2022, 10:08 AM CDT

Molly

Please add Total Recoverable Metals to the Permit Sampling project.

Thanks

Sam Price

Environmental Supervisor

Nucor Steel Birmingham

2301 FL Shuttlesworth Drive • Birmingham, AL 35234

Phone: 205.250.7407

Sales: 205.250.7416

Cell: 205.790.3831

sam.price@nucor.com

NUCOR®

From: Sutherland Env <suthlab@bellsouth.net>
Sent: Tuesday, June 14, 2022 9:35 AM
To: Price, Sam (NSBHM) <sam.price@nucor.com>
Subject: [EXT] Confirm for T. Rec. Metals

This message came from outside of Nucor.

Hey Sam,

We can do the Total Recoverable Metals from the Total Metals bottles. Please just confirm that you want to add the Total Recoverable Metals to the Permit Sampling project.

Sutherland Environmental Read and Review Checklist

1. Is the client and the sample collector(s) accurately noted on report?	NO	YES	NO	YES
2. Do all dates match the COC on the report?	NO	YES	NO	YES
3. Is the purchase order ID (PO) and project ID accurately noted on report?	NO	YES	NO	YES
4. Are all methods and method references correct on report?	NO	YES	NO	YES
5. Do the Field ID(s) and the Lab ID(s) correspond to the COC?	NO	YES	NO	YES
6. Is the report formatted correctly?	NO	YES	NO	YES
7. Does the following information on report correspond to the printout information from the analytical instrumentation:				
Sample Matrix	NO	YES	NO	YES
Analyst	NO	YES	NO	YES
Analysis Date/Time	NO	YES	NO	YES
Analyte concentration	NO	YES	NO	YES
Units	NO	YES	NO	YES
Dilution Factors/Conversions	NO	YES	NO	YES
Detection/Reporting/Quant. Limits	NO	YES	NO	YES
QC Reviewed:		YES		YES
***Initial*:**		MJH		KH

* MJH = Michael Heard, KD = Kevin Doriety, MSH = Matt Hageman, KH = Kelly Hester

PDF: Katie, Sam, Tyler

Notes: _____

Invoice # 47072

Sutherland Environmental Co., Inc.

Sutherland Environmental Company Inc.

Sample Check-in Form

Date Received: 6/13/22 **Invoice #** 47072

Method of Delivery: hand **Client:** Nucor Steel

1. Did any containers arrive broken?	YES	✓NO	
* If so, please state field ID with analysis of broken sample(s) _____			
2. Were cooler(s) sealed upon arrival?	✓YES	NO	NA
3. Were the samples received at the proper temperature (4°C +/- 2°C)?	✓YES	NO	NA
4. Did a chain of custody accompany the samples?	✓YES	NO	
* Was it properly filled out?	✓YES	NO	
5. Were correct containers used for the analysis requested?	✓YES	NO	
6. Were all containers properly preserved?	✓YES	NO	NA
7. Were all water samples received at the proper pH?	✓YES	NO	NA
8. If VOA vials were present, was there any head space?	YES	✓NO	NA
* If so, please state field ID of deficient sample(s): _____			
9. Were all containers properly labeled and match chain of custody?	✓YES	NO	
10. Did containers arrive within holding time of analysis?	✓YES	NO	
* If not, please state field ID and analysis of sample(s) out of holding time: _____			
11. Was client informed of any/all deficiencies in sample check-in?	YES	NO	✓NA
12. Were any samples rejected?	YES	✓NO	
* If so, please state field ID of rejected sample(s):			

Sample Custodian (signed): M. Watts

Environmental Company, Inc.
2515 5th Avenue South
B'HAM, AL 35233
PHONE (205)581-9500 FAX (205)581-9504
E-Mail: suthlab@bellsouth.net

ANALYSIS REQUEST

47072

Name/Co.: Nucor Steel Birmingham, Inc.
Address: P.O. Box 2764
Birmingham, AL 35202-2764
Phone# / Cell#: 205-264-8289 / 205-790-2321
E-mail: katie.rigney@nucor.com, sam.price@nucor.com & tyler.smith@nucor.com
PDF Results: **yes** no Fax #: 205-250-7465

Client P.O. #

CLIENT: Nucor Steel Birmingham
PROJECT: Permit Sampling
SAMPLER(S): (print) Sam Price

DATE DELIVERED: 7/26/16

LAB ID	FIELD ID	DATE Collected	TIME Collected	SAMPLE DESCRIPTION (matrix)	VOC Aerobic ~~8005~~ Acrylonitrile	Color						Number of sample containers
					ANALYSIS REQUESTED / METHOD							
237106	DSN~~001~~ 002	~~7/25/16~~ 6/13/22	~~19:48~~ 1:39-2:43	Water	1	1						2

Preservative: (a)HCL, (b)HNO_3, (c)H_2SO_4, (d)NaOH, (e)Zn Acetate — **Preservative:** none None
Container type: (a) Amber, (g) Glass, (p) Plastic, (v) VOC Vial, (t) Tedlar bag — **Container:** g p

Last revised 8/6/08

Relinquished by Sampler: Signed:	Date	Time	Received by: Signed:	Date	Time
	~~7/26/16~~ 6/13	4:03			
Relinquished by: Signed:	Date	Time	Received by: Signed:	Date	Time
Relinquished by: Signed:	Date	Time	Received in Laboratory by: Signed: M.W.	Date	Time
				6/13	4:03

Turn Around Time (please note):
Standard X *RUSH, mark below
*3-Day *2-Day *Next Day *Same Day

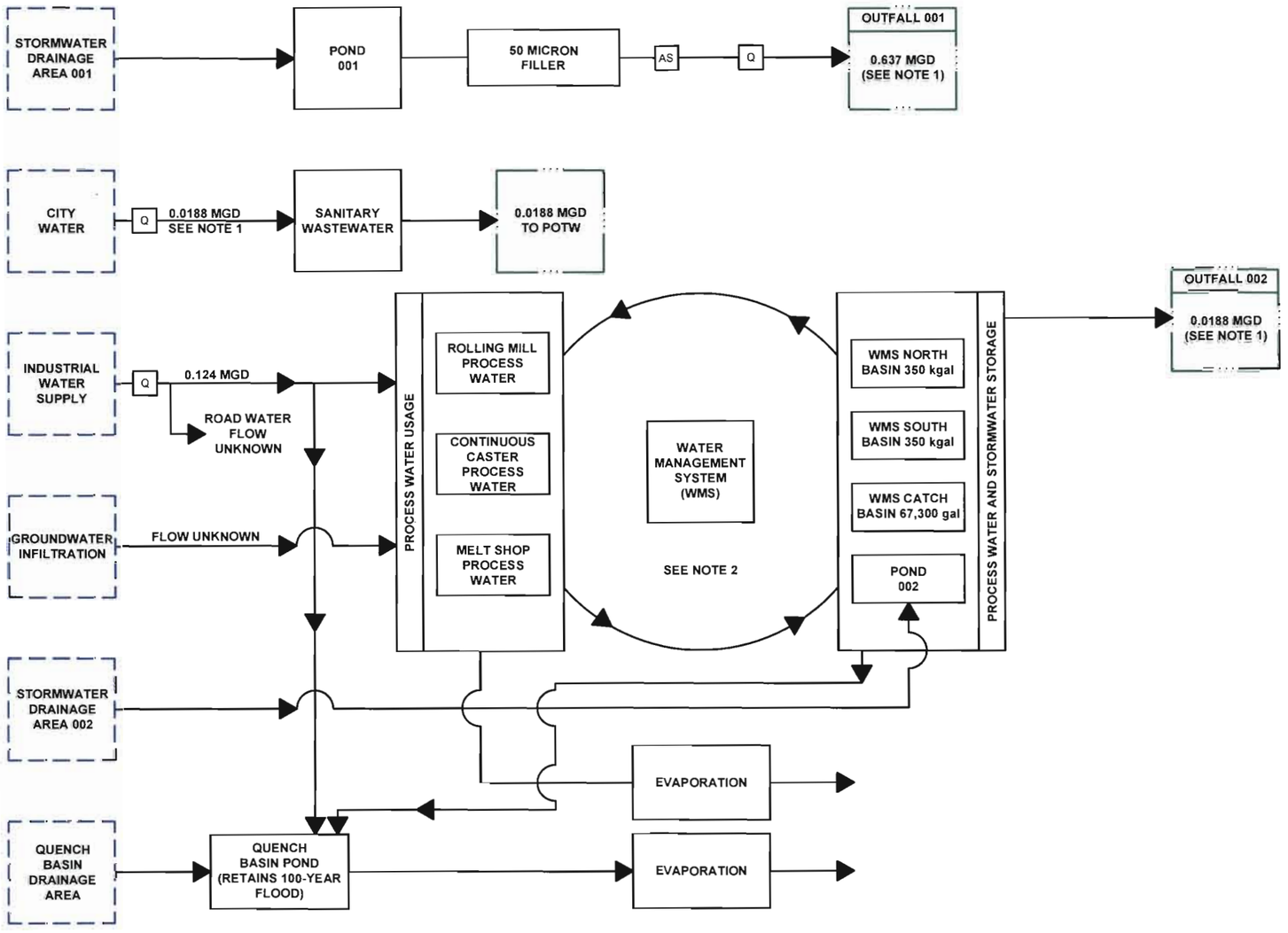
Remarks:

Refrigerated upon receipt: yes no

Invoice # (LAB use only): 47072

NOTES:

1. FLOW TAKEN FROM METER READINGS.
2. PROCESS WATER AND STORMWATER IS STORED AND RECIRCULATED AS NEEDED TO MINIMIZE DISCHARGE FROM 002.



LEGEND:

- WATER FLOW INTO PLANT
- WATER DISCHARGE OUTFALL
- AS AUTO SAMPLER
- Q FLOW METER

PPM CONSULTANTS, INC. www.ppmco.com		NUCOR STEEL BIRMINGHAM 2301 F.L. SHUTTLESWORTH DRIVE BIRMINGHAM, ALABAMA	WATER FLOW DIAGRAM
DRAWN BY: BWH	DRAWN DATE: 07/27/16		FIGURE NUMBER 2
PROJECT NUMBER: 456501	BILLING GROUP: NPD16		

Z:\Nucor Steel Birmingham\456501\Npd16\456501-Npd16.dwg, 2 WFD, 8/5/2016 11:13:42 AM, brian hicks

Please print or type in the unshaded areas only.

EPA ID Number (*copy from Item 1 of Form 1*)
ALD00622852

Form Approved. OMB No. 2040-0086
Approval expires 5-31-92

FORM
2F
NPDES

U.S. Environmental Protection Agency
Washington, DC 20460

Application for Permit to Discharge Storm Water Discharges Associated with Industrial Activity

Paperwork Reduction Act Notice

Public reporting burden for this application is estimated to average 28.6 hours per application, including time for reviewing instructions, searching existing data sources, gathering and maintaining the data needed, and completing and reviewing the collection of information. Send comments regarding the burden estimate, any other aspect of this collection of information, or suggestions for improving this form, including suggestions which may increase or reduce this burden to: Chief, Information Policy Branch, PM-223, U.S. Environmental Protection Agency, 1200 Pennsylvania Avenue, NW, Washington, DC 20460, or Director, Office of Information and Regulatory Affairs, Office of Management and Budget, Washington, DC 20503.

I. Outfall Location

For each outfall, list the latitude and longitude of its location to the nearest 15 seconds and the name of the receiving water.

A. Outfall Number (*list*)	B. Latitude			C. Longitude			D. Receiving Water (*name*)
DSN001	33.00	32.00	42.00	86.00	48.00	20.00	Village Creek
DSN002	33.00	32.00	39.00	86.00	48.00	20.00	Village Creek

II. Improvements

A. Are you now required by any Federal, State, or local authority to meet any implementation schedule for the construction, upgrading or operation of wastewater treatment equipment or practices or any other environmental programs which may affect the discharges described in this application? This includes, but is not limited to, permit conditions, administrative or enforcement orders, enforcement compliance schedule letters, stipulations, court orders, and grant or loan conditions.

1. Identification of Conditions, Agreements, Etc.	2. Affected Outfalls		3. Brief Description of Project	4. Final Compliance Date	
	number	source of discharge		a. req.	b. proj.
N/A					

B. You may attach additional sheets describing any additional water pollution (or other environmental projects which may affect your discharges) you now have under way or which you plan. Indicate whether each program is now under way or planned, and indicate your actual or planned schedules for construction.

III. Site Drainage Map

Attach a site map showing topography (or indicating the outline of drainage areas served by the outfalls(s) covered in the application if a topographic map is unavailable) depicting the facility including: each of its intake and discharge structures, the drainage area of each storm water outfall; paved areas and buildings within the drainage area of each storm water outfall, each known past or present areas used for outdoor storage of disposal of significant materials, each existing structural control measure to reduce pollutants in storm water runoff, materials loading and access areas, areas where pesticides, herbicides, soil conditioners and fertilizers are applied; each of its hazardous waste treatment, storage or disposal units (including each area not required to have a RCRA permit which is used for accumulating hazardous waste under 40 CFR 262.34); each well where fluids from the facility are injected underground; springs, and other surface water bodies which received storm water discharges from the facility.

Continued from the Front

IV. Narrative Description of Pollutant Sources

A. For each outfall, provide an estimate of the area (include units) of imperious surfaces (including paved areas and building roofs) drained to the outfall, and an estimate of the total surface area drained by the outfall.

Outfall Number	Area of Impervious Surface *(provide units)*	Total Area Drained *(provide units)*	Outfall Number	Area of Impervious Surface *(provide units)*	Total Area Drained *(provide units)*
DSN001	335,032 ft2	469,510 ft2	DSN002	485,044 ft2	707,044 ft2

B. Provide a narrative description of significant materials that are currently or in the past three years have been treated, stored or disposed in a manner to allow exposure to storm water; method of treatment, storage, or disposal; past and present materials management practices employed to minimize contact by these materials with storm water runoff; materials loading and access areas, and the location, manner, and frequency in which pesticides, herbicides, soil conditioners, and fertilizers are applied.

Various materials are exposed to stormwater while stored on site. These materials include billets, scrap steel, slag, finished product, and mill scale. Depending on their storage location, stormwater runoff is either collected in the storm drain system or directed by ditch to a permitted outfall, DSN001, DSN002 or held in one of the retention ponds or stormwater basins on site. To the extent possible, these materials are maintained under roof to minimize exposure to stormwater. Pesticides, herbicides, soil conditioners, and fertilizers are not normally used at the facility. In the event pesticides are used, a contractor authorized to discharge under ADEMs General NPDES permit (ALG870000) is utilized. Every effort is made to prevent any stormwater discharge from the facility. There are two large basins and one stabilization ("catch") basin adjoined to the on-site water management system and four retention/detention basins (001, 002, rolling mill basin and the quench basin) that are utilized to minimize the need for a discharge to Village Creek. The stormwater water stored on site along with industrial water (if needed) are used to quench slag, and for quench/process water to produce billets and rebar.

C. For each outfall, provide the location and a description of existing structural and nonstructural control measures to reduce pollutants in storm water runoff; and a description of the treatment the storm water receives, including the schedule and type of maintenance for control and treatment measures and the ultimate disposal of any solid or fluid wastes other than by discharge.

Outfall Number	Treatment	List Codes from Table 2F-1
DSN001 DSN002	Processes utilized in the reduction of pollutants in stormwater runoff are: 1) settling basins; 2) oil skimming devices; 3) pH control; 4) filtration; 5) recycling and reuse of stormwater and 6) best management practices (BMPs) in accordance with the facilities Storm Water Pollution Prevention Plan (SWPPP). Additionally, Nucor has flow diversions which utilize sorbent boom, and raw materials are stored under roof and/or on a concrete slab. The roads of the plant are vacuum swept routinely to minimize impact to stormwater via normal plant activities.	1-F, 1-H, 1-T, 1-U, 2-K, 4-A and 4-C

V. Nonstormwater Discharges

A. I certify under penalty of law hat the outfall(s) covered by this application have been tested or evaluated for the presence of nonstormwater discharges, and that all nonstormwater discharged from these outfall(s) are identified in either an accompanying Form 2C or From 2E application for the outfall.

Name and Official Title *(type or print)*	Signature	Date Signed
FRANK W. GRIGGS	Frank W Griggs	8-1-16

B. Provide a description of the method used, the date of any testing, and the onsite drainage points that were directly observed during a test.

Nucor visually inspects each outfall on a daily basis to verify that discharges are not occuring when its not raining (during dry weather conditions).

VI. Significant Leaks or Spills

Provide existing information regarding the history of significant leaks or spills of toxic or hazardous pollutants at the facility in the last three years, including the approximate date and location of the spill or leak, and the type and amount of material released.

None

Continued from Page 2

EPA ID Number *(copy from Item 1 of Form 1)*
ALD00622852

VII. Discharge Information

A, B, C, & D: See instructions before proceeding. Complete one set of tables for each outfall. Annotate the outfall number in the space provided. Table VII-A, VII-B, VII-C are included on separate sheets numbers VII-1 and VII-2.

E. Potential discharges not covered by analysis – is any toxic pollutant listed in table 2F-2, 2F-3, or 2F-4, a substance or a component of a substance which you currently use or manufacture as an intermediate or final product or byproduct?

☐ Yes (*list all such pollutants below*) ☑ No (*go to Section IX*)

VIII. Biological Toxicity Testing Data

Do you have any knowledge or reason to believe that any biological test for acute or chronic toxicity has been made on any of your discharges or on a receiving water in relation to your discharge within the last 3 years?

☐ Yes (*list all such pollutants below*) ☑ No (*go to Section IX*)

IX. Contract Analysis Information

Were any of the analyses reported in Item VII performed by a contract laboratory or consulting firm?

☑ Yes (*list the name, address, and telephone number of, and pollutants analyzed by, each such laboratory or firm below*) ☐ No (*go to Section X*)

A. Name	B. Address	C. Area Code & Phone No.	D. Pollutants Analyzed
Sutherland Environmental Company, Inc.	2515 5th Avenue South Birmingham, AL 35202	205-581-9500	All analysis reported

X. Certification

I certify under penalty of law that this document and all attachments were prepared under my direction or supervision in accordance with a system designed to assure that qualified personnel properly gather and evaluate the information submitted. Based on my inquiry of the person or persons who manage the system or those persons directly responsible for gathering the information, the information submitted is, to the best of my knowledge and belief, true, accurate, and complete. I am aware that there are significant penalties for submitting false information, including the possibility of fine and imprisonment for knowing violations.

A. Name & Official Title (*Type Or Print*)	B. Area Code and Phone No.
FRANCIS W. GRIGGS VP&GM	205-250-7400
C. Signature	D. Date Signed
Francis W. Griggs	8-1-16

Sutherland

Environmental Company, Inc.

2515 5th Avenue South
Birmingham, AL 35233
205-581-9500

Client:	Nucor Steel	Report Date:	July 25, 2022
Attention:	Mr. Sam Price	Reference #	47228
Address:	P.O. Box 2764	P.O. #	verbal
	Birmingham, AL 35202	Project ID:	Permit Sampling

Sample Matrix:	water	Sample Collector:	T. Smith		
Date Received:	7/15/22	Method Reference:	Standard Methods, EPA600, & Hach Methods		
Date /Time Collected:	7/14/22 @ 1229	Field ID:	**DSN001**	Lab ID:	**237866**

Parameter	Result	Units	Date / Time Assay		Analyst	Method	D.L.
TSS	**96**	mg/L	7/19/22	1158	CCR	SM 2540D	1
pH	**8.66**	SU	7/15/22	1506	CRR	SM4500-H+	na
Chlorine, Residual	**0.14**	mg/L	7/15/22	1502	CRR	SM4500-Cl-G	0.10
Cyanide, Total	BDL	mg/L	7/20/22	1305	CRR	SM4500-CN-E	0.005
Oil & Grease	**2**	mg/L	7/18/22	1519	CRR	E 1664A	1
Aluminum, Total	**0.615**	mg/L	7/19/22	0751	KD	E 200.8	0.010
Barium, Total	**0.092**	mg/L	7/19/22	0618	KD	E 200.8	0.020
Cobalt, Total	BDL	mg/L	7/19/22	0934	KD	E 200.8	0.01
Iron, Total	**1.775**	mg/L	7/19/22	0725	KD	E 200.8	0.010
Magnesium, Total	**7.80**	mg/L	7/20/22	0747	KD	E 200.8	0.010
Molydbenum, Total	BDL	mg/L	7/25/22	0733	KD	E 200.8	0.010
Manganese, Total	**0.213**	mg/L	7/19/22	0725	KD	E 200.8	0.010
Tin, Total	BDL	mg/L	7/25/22	0745	KD	E 200.8	0.01
Antimony, Total	BDL	mg/L	7/19/22	0956	KD	E 200.8	0.010
Arsenic, Total	BDL	mg/L	7/19/22	0618	KD	E 200.8	0.010
Beryllium, Total	BDL	mg/L	7/19/22	0900	KD	E 200.8	0.010
Cadmium, Total	BDL	mg/L	7/19/22	0618	KD	E 200.8	0.010
Chromium, Total	BDL	mg/L	7/19/22	0618	KD	E 200.8	0.010
Copper, Total	**0.036**	mg/L	7/19/22	0658	KD	E 200.8	0.010
Mercury, Total	BDL	mg/L	7/20/22	1246	KD	E 200.8	0.0005
Nitrogen, Total	BDL	mg/L	7/19/22	1410	CCR	H 10208	0.10
Selenium, Total	BDL	mg/L	7/19/22	0618	KD	E 200.8	0.010

NA = Not Available
BDL = Below Detection Limit
DL = Detection Limit , Method
SU = Standard Units

Sutherland

Environmental Company, Inc.

2515 5th Avenue South
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205-581-9500

Client:	Nucor Steel	Report Date:	July 25, 2022
Attention:	Mr. Sam Price	Reference #	47228
Address:	P.O. Box 2764	P.O. #	verbal
	Birmingham, AL 35202	Project ID:	Permit Sampling

Sample Matrix:	water	Sample Collector:	T. Smith		
Date Received:	7/15/22	Method Reference:	Standard Methods, EPA600, & Hach Methods		
Date /Time Collected:	7/14/22 @ 1229	Field ID:	**DSN001**	Lab ID:	**237866**

Parameter	Result	Units	Date / Time Assay		Analyst	Method	D.L.
Silver, Total	BDL	mg/L	7/19/22	0841	KD	E 200.8	0.010
Nickel, Total	BDL	mg/L	7/19/22	0658	KD	E 200.8	0.010
Thallium, Total	BDL	mg/L	7/19/22	1035	KD	E 200.8	0.010
Titanium, Total	BDL	mg/L	7/25/22	0718	KD	E 200.8	1.0
Zinc, Total	**0.436**	mg/L	7/19/22	0658	KD	E 200.8	0.010
Lead, Total	**0.0699**	mg/L	7/19/22	0618	KD	E 200.8	0.0020
Kjeldahl Nitrogen, Total	**0.38**	mg/L	7/20/22	1222	CCR	H 10242	0.10
COD	**20**	mg/L	7/19/22	1116	CCR	SM 5220D	1
Ammonia	BDL	mg/L	7/19/22	1449	CCR	SM4500NH3-G	0.10
BOD-5	**31**	mg/L	7/20/22	1040	CRR	SM 5210B	1
Phosphorus, Total	**0.06**	mg/L	7/20/22	1025	CCR	SM4500-P E	0.05
Nitrite	BDL	mg/L	7/15/22	1457	CRR	SM4500-NO2-B	0.10
Nitrate	**0.28**	mg/L	7/15/22	1300	CRR	SM4500-NO3-E	0.10
Color	BDL	CU	7/15/22	1508	CRR	SM 2120B	1
Copper, Total Rec.	**0.036**	mg/L	7/19/22	0658	KD	E 200.8	0.010
Zinc, Total Rec.	**0.436**	mg/L	7/19/22	0658	KD	E 200.8	0.010
Nickel, Total Rec.	BDL	mg/L	7/19/22	0658	KD	E 200.8	0.010
Cadmium, Total Rec.	BDL	mg/L	7/19/22	0618	KD	E 200.8	0.010
Chromium, Total Rec.	BDL	mg/L	7/19/22	0618	KD	E 200.8	0.010
Lead, Total Rec.	**0.0699**	mg/L	7/19/22	0618	KD	E 200.8	0.0020
Aluminum, Total Rec.	**0.615**	mg/L	7/19/22	0751	KD	E 200.8	0.010
Iron, Total Rec.	**1.775**	mg/L	7/19/22	0725	KD	E 200.8	0.010
Manganese, Total Rec.	**0.213**	mg/L	7/19/22	0725	KD	E 200.8	0.010

BOD Start Date/ Time: 7/15/22 @ 1210
COD Start Date/Time: 7/19/22 @ 0916

NA = Not Available
BDL = Below Detection Limit
DL = Detection Limit , Method
CU = Color Units

MK / QAQC

EPA Laboratory ID AL01084

Respectfully submitted,

Kevin Doriety

Kevin Doriety
Analytical Chemist

Quality Environmental Analytical Services

Sutherland

Environmental Company, Inc.

2515 5th Avenue South
Birmingham, AL 35233
205-581-9500

Client:	Nucor Steel	Report Date:	July 25, 2022
Attention:	Mr. Sam Price	Reference #	47228
Address:	P.O. Box 2764	P.O. #	verbal
	Birmingham, AL 35202	Project ID:	Permit Sampling

Sample Matrix:	water	Extraction Date:	7/18/22
Date Received:	7/15/22	Analyst:	Hageman/Heard
Date Collected:	7/14/22	Date of Analysis:	7/21/22
Sample Collector:	T. Smith	Method:	***EPA Method 625***

SEMIVOLATILE ORGANIC COMPOUNDS

ACID AND BASE NEUTRAL EXTRACTABLE ORGANIC COMPOUNDS, PPM	FIELD ID: DSN001 / LAB ID: 237866					Method Detection Limit, PPM
Acenaphthene	BDL					0.001
Acenaphthylene	BDL					0.001
Anthracene	BDL					0.001
Benzo(a)anthracene	BDL					0.001
Benzo(b)fluoranthene	BDL					0.001
Benzo(k)fluoranthene	BDL					0.001
Benzo(g,h,i)perylene	BDL					0.001
Benzo(a)pyrene	BDL					0.001
Bis(2-chloroethoxy)methane	BDL					0.002
Bis(2-chloroethyl)ether	BDL					0.005
Bis(2-chloroisopropyl)ether	BDL					0.005
Bis(2-ethylhexyl)phthalate	**0.015**					0.002
4-bromophenyl phenyl ether	BDL					0.001
Butyl benzyl phthalate	BDL					0.002
4-Chloroaniline	BDL					0.002
2-Chloronaphthalene	BDL					0.001
4-Chloro-3-methylphenol	BDL					0.001
2-Chlorophenol	BDL					0.001
4-Chlorophenyl phenyl ether	BDL					0.001
Carbazole	BDL					0.001
Chrysene	BDL					0.001
Dibenzo(a,h)anthracene	BDL					0.001
Dibenzofuran	BDL					0.001
Di-n-butylphthalate	BDL					0.005

Compound List Continued next page

Sutherland

Environmental Company, Inc.

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Client:	Nucor Steel	Report Date:	July 25, 2022
Attention:	Mr. Sam Price	Reference #	47228
Address:	P.O. Box 2764	P.O. #	verbal
	Birmingham, AL 35202	Project ID:	Permit Sampling

Sample Matrix:	water	Extraction Date:	7/18/22
Date Received:	7/15/22	Analyst:	Hageman/Heard
Date Collected:	7/14/22	Date of Analysis:	7/21/22
Sample Collector:	T. Smith	Method:	***EPA Method 625***

SEMIVOLATILE ORGANIC COMPOUNDS

ACID AND BASE NEUTRAL EXTRACTABLE ORGANIC COMPOUNDS, PPM	FIELD ID DSN001 LAB ID 237866	Method Detection Limit, PPM
1,3-Dichlorobenzene	BDL	0.001
1,4-Dichlorobenzene	BDL	0.001
1,2-Dichlorobenzene	BDL	0.001
2,4-Dichlorophenol	BDL	0.001
Diethylphthalate	BDL	0.002
2,4-Dimethylphenol	BDL	0.001
Dimethylphthalate	BDL	0.001
2,4-Dinitrophenol	BDL	0.005
2,4-Dinitrotoluene	BDL	0.001
2,6-Dinitrotoluene	BDL	0.001
Di-n-octylphthalate	BDL	0.001
Fluoranthene	BDL	0.001
Fluorene	BDL	0.001
Hexachlorobenzene	BDL	0.001
Hexachlorobutadiene	BDL	0.001
Hexachlorocyclopentadiene	BDL	0.050
Hexachloroethane	BDL	0.001
Indeno(1,2,3-cd)pyrene	BDL	0.001
Isophorone	BDL	0.005
2-Methylnaphthalene	BDL	0.001
2-Methylphenol (o-cresol)	BDL	0.001
4-Methylphenol (p-cresol)	BDL	0.001

Compound List Continued next page

Sutherland

Environmental Company, Inc.

2515 5th Avenue South
Birmingham, AL 35233
205-581-9500

Client:	Nucor Steel	Report Date:	July 25, 2022
Attention:	Mr. Sam Price	Reference #	47228
Address:	P.O. Box 2764	P.O. #	verbal
	Birmingham, AL 35202	Project ID:	Permit Sampling

Sample Matrix:	water	Extraction Date:	7/18/22
Date Received:	7/15/22	Analyst:	Hageman/Heard
Date Collected:	7/14/22	Date of Analysis:	7/21/22
Sample Collector:	T. Smith	Method:	***EPA Method 625***

SEMIVOLATILE ORGANIC COMPOUNDS

ACID AND BASE NEUTRAL EXTRACTABLE ORGANIC COMPOUNDS, PPM	FIELD ID / DSN001 / LAB ID / 237866					Method Detection Limit, PPM
Naphthalene	BDL					0.001
2-Nitroaniline	BDL					0.010
3-Nitroaniline	BDL					0.010
4-Nitroaniline	BDL					0.010
Nitrobenzene	BDL					0.001
2-Nitrophenol	BDL					0.005
4-Nitrophenol	BDL					0.005
N-Nitrosodimethylamine	BDL					0.001
N-Nitrosodi-n-propylamine	BDL					0.001
Pentachlorophenol	BDL					0.050
Phenanthrene	BDL					0.001
Phenol	BDL					0.005
Pyrene	BDL					0.001
1,2,4-Trichlorobenzene	BDL					0.001
2,4,5-Trichlorophenol	BDL					0.005
2,4,6-Trichlorophenol	BDL					0.005

BDL = Below Detection Limit, Method
All results expressed as PPM (mg/L)

MH /QAQC

EPA Laboratory ID AL01084

Respectfully submitted,

Kevin Doriety

Kevin Doriety
Analytical Chemist

Quality Environmental Analytical Services

Sutherland Environmental Read and Review Checklist

1. Is the client and the sample collector(s) accurately noted on report?	NO	YES	NO	YES
2. Do all dates match the COC on the report?	NO	YES	NO	YES
3. Is the purchase order ID (PO) and project ID accurately noted on report?	NO	YES	NO	YES
4. Are all methods and method references correct on report?	NO	YES	NO	YES
5. Do the Field ID(s) and the Lab ID(s) correspond to the COC?	NO	YES	NO	YES
6. Is the report formatted correctly?	NO	YES	NO	YES
7. Does the following information on report correspond to the printout information from the analytical instrumentation:				
Sample Matrix	NO	YES	NO	YES
Analyst	NO	YES	NO	YES
Analysis Date/Time	NO	YES	NO	YES
Analyte concentration	NO	YES	NO	YES
Units	NO	YES	NO	YES
Dilution Factors/Conversions	NO	YES	NO	YES
Detection/Reporting/Quant. Limits	NO	YES	NO	YES
QC Reviewed:		YES		YES

Initial*: MJH _____ _____

* MJH = Michael Heard, KD = Kevin Doriety, MSH = Matt Hageman, KH = Kelly Hester

PDF: Katie, Sam, Tyler

Notes: _____

Invoice # 47228

Sutherland Environmental Co., Inc.

Sutherland Environmental Company Inc.

Sample Check-in Form

Date Received: 7/15/22 **Invoice #** 47228

Method of Delivery: Hand **Client:** Nucor Steel

1. Did any containers arrive broken?		✓ NO	
* If so, please state field ID with analysis of broken sample(s) _____			
2. Were cooler(s) sealed upon arrival?	✓ YES	NO	NA
3. Were the samples received at the proper temperature (4°C +/- 2°C)?	✓ YES	NO	NA
4. Did a chain of custody accompany the samples?	✓ YES	NO	
* Was it properly filled out?	✓ YES	NO	
5. Were correct containers used for the analysis requested?	✓ YES	NO	
6. Were all containers properly preserved?	✓ YES	NO	NA
7. Were all water samples received at the proper pH?	✓ YES	NO	NA
8. If VOA vials were present, was there any head space?	YES	NO	✓ NA
* If so, please state field ID of deficient sample(s): _____			
9. Were all containers properly labeled and match chain of custody?	✓ YES	NO	
10. Did containers arrive within holding time of analysis?	✓ YES	NO	
* If not, please state field ID and analysis of sample(s) out of holding time: _____			
11. Was client informed of any/all deficiencies in sample check-in?	YES	NO	✓ NA
12. Were any samples rejected?	YES	✓ NO	
* If so, please state field ID of rejected sample(s): _____			

Sample Custodian (signed): M. Watts

Sutherland
Environmental Company, Inc.
2515 5th Avenue South
B'HAM, AL 35233
PHONE (205)581-9500 FAX (205)581-9504
E-Mail: suthlab@bellsouth.net

CHAIN OF CUSTODY
ANALYSIS REQUEST

SEND REPORT TO:

47228

Name/Co.: Nucor Steel Birmingham, Inc.
Address: P.O. Box 2764
Birmingham, AL 35202-2764
Phone# / Cell#: 205-264-8289 / 205-790-2321
E-mail: katie.roberts@nucor.com, sam.price@nucor.com & tyler.smith@nucor.com
PDF Results: **yes** no Fax #: 205-250-7465

Client P.O. #

CLIENT: Nucor Steel Birmingham
PROJECT: Permit Sampling
SAMPLER(S): (print) Tyler Smith

DATE DELIVERED: 7/15/22

LAB ID	FIELD ID	DATE Collected	TIME Collected	SAMPLE DESCRIPTION (matrix)	TSS, pH, Residual Cl	Oil & Grease	Total Cyanide	*Total Metals	TKN & Total Phosphorus	COD, Nitrate, Nitrite, NH3, Nitrogen	Color	Total Recoverable Metals ****	BOD	Semi-VOC	Number of sample containers
					ANALYSIS REQUESTED / METHOD										
2378166	DSN001	7/14/22	12:29pm	Water	1	1	1	1	1	1	1	1	1	1	10

Preservative: (a)HCL, (b)HNO_3, (c)H_2SO_4, (d)NaOH, (e)Zn Acetate — **Preservative:** none | a | d | b | c | c | None | b | none | none
Container type: (a) Amber, (g) Glass, (p) Plastic, (v) VOC Vial, (t) Tedlar bag — **Container:** p | g | p | p | p | p | p | p | g | g
Last revised 8/6/08

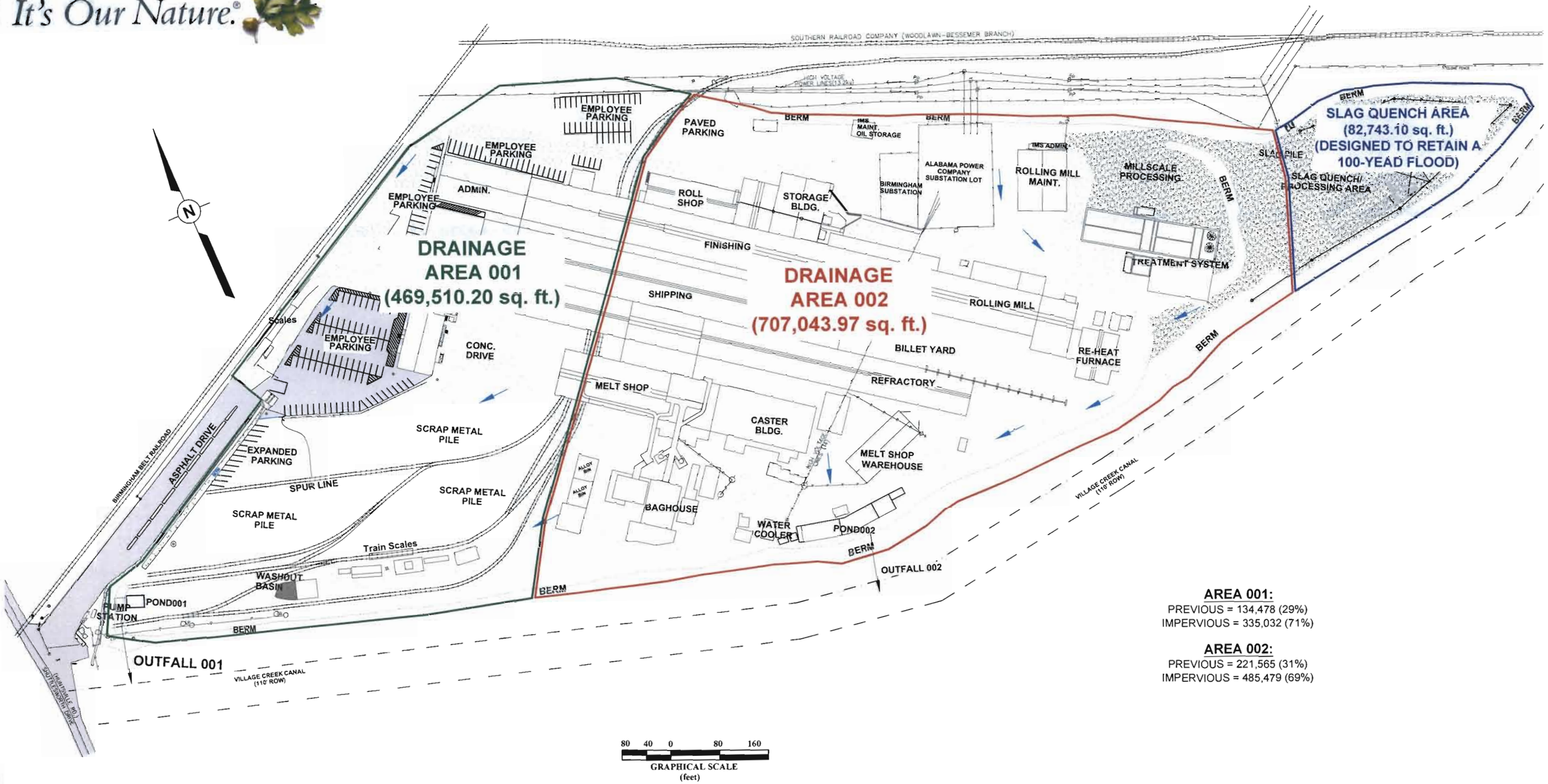
Relinquished by Sampler:	Date	Time	Received by:	Date	Time
Signed: Tyler Smith	7/15/22	10:58	Signed:		
Relinquished by:	Date	Time	Received by:	Date	Time
Signed:			Signed:		
Relinquished by:	Date	Time	Received in Laboratory by:	Date	Time
Signed:			Signed: M W.	7/15	10:58

Turn Around Time (please note):
Standard X *RUSH, mark below
*3-Day *2-Day *Next Day *Same Day

Remarks: **** Total Recoverable Metals - Cu, Zn, Ni, Cd, Cr, Pb, Al, Fe, Mn
**Total Metals- Al, Ba, B, Co, Fe, Mg, Mo, Mn, Sn, Ti, Sb, As, Be, Cd, Cr, Cu, Pb, Hg, Ni, Se, Ag, Ti, Zn
LK 7/15/22

Refrigerated upon receipt: yes no
Invoice # (LAB use only): 47228

NUCOR
It's Our Nature.



AREA 001:
PREVIOUS = 134,478 (29%)
IMPERVIOUS = 335,032 (71%)

AREA 002:
PREVIOUS = 221,565 (31%)
IMPERVIOUS = 485,479 (69%)

PPM CONSULTANTS, INC. www.ppmco.com		NUCOR STEEL BIRMINGHAM 2301 F.L. SHUTTLESWORTH DRIVE BIRMINGHAM, ALABAMA	FIGURE NUMBER 1
DRAWN BY: BWH	DRAWN DATE: 07/27/16	DRAINAGE AREA DELINEATION PLAN	
PROJECT NUMBER: 456501	BILLING GROUP: NPD16		

Z:\Nucor Steel Birmingham\456501\Npd16\456501-Npd16.dwg, 1 Drainage, 7/27/2016 3:16:47 PM, brian hicks

Holt, Wayne A

From: Smith, Tyler (NSBHM) <tyler.smith@nucor.com>
Sent: Monday, September 19, 2022 1:24 PM
To: Holt, Wayne A
Cc: Roberts, Katie (NSBHM); Price, Sam (NSBHM); Odom, Cody
Subject: Nucor Steel Birmingham NPDES Permit Sampling - NPDES AL0003735
Attachments: 47071 Permit Sampling.pdf; 47073 Permit Sampling.pdf; 47228 Permit Sampling.pdf; 47072 Permit Sampling 002 - corrected.pdf

Dear Mr. Holt,

Per the request of ADEM, Nucor Steel Birmingham has collected a new panel of discharge samples for permitted outfalls DSN001 & DSN002. These attached panels include all parameters that were submitted with our 2016 NPDES permit renewal for NPDES AL0003735. Should you need additional information or samples, feel free to contact me.

Thanks,

Tyler Smith
Environmental Manager

Nucor Steel Birmingham, Inc.
2301 FL Shuttlesworth Drive, Birmingham, AL 35234
Phone: 205.250.7410
Sales: 205.250.7416
Cell: 205.861.8901
tyler.smith@nucor.com

NUCOR

BAR MILL GROUP
NUCOR STEEL BIRMINGHAM, INC.

August 4, 2016

Mr. Alex Chavers
Alabama Department of Environmental Management
Industrial Section/Water Division
1400 Coliseum Blvd
Montgomery, Alabama 36110

Re: Nucor Steel Birmingham, Inc.
NPDES Permit Renewal – AL0003735

Dear Mr. Chavers:

Enclosed are two copies of the application package for renewal of the National Pollutant Discharge Elimination System (NPDES) permit for the Nucor Steel Birmingham, Inc., (Nucor) facility. Also, included is a check in the amount of $5,615 for renewal of our NPDES permit as a Minor Discharger. Nucor is currently permitted to discharge stormwater and process wastewater via one outfall (DSN002) and stormwater via a second outfall (DSN001); the existing permit expires on February 29, 2017. This application package includes the required forms – EPA Forms 1, 3510-2C, and 3510-2F, ADEM Form 187 and all associated supplemental information.

Facility Improvements Related to Storm Water/Process Water

The facility has undergone significant changes to improve stormwater and process water management since the prior renewal, some of which were presented in the last permit renewal application. Notable facility improvements related to storm water and/or process water include:

- Completed construction and operation of the rolling mill water treatment system. This process allows for stormwater to be utilized for process water after treatment thereby reducing the amount discharged. In addition, it created over 750,000 gallons of on-site storm water storage capacity.

- The northeastern side of the property formerly contained a sedimentation pond for precipitating mill scale and other sediments. This approximate 3 acre area was drained, excavated and backfilled with an engineered fill. Additionally the slag quenching operation was moved to this area including construction of a state of the art drive-in quench structure with an adjoining

140,000-gallon capacity storm water basin used as the primary source of water for quenching slag. The slag quenching structure and basin now contain all excess quench water eliminating its contribution to the DSN002 discharge. This area was designed to retain water from a 100-year flood, thereby further reducing stormwater runoff from the facility.

- Pond 002, which was formerly an earthen basin, was converted into a concrete basin with a capacity of 255,000 gallons. The concrete basin facilitates expedient and more frequent sediment removal and therefore reduces solids loading on the discharge from outfall 002.

- There are continuing minor improvements to the piping and filtering network to move water around the facility for treatment and/or recycling for process water thereby minimizing the need for discharge.

Request for Tiered Permit Structure

The domestic steel manufacturing industry is continuing to experience a stressed economy predominantly due to the suppression of the construction in the southeastern U.S. and the pressures from imported steel. As such, current production rates are down significantly. Nucor is optimistic that this will improve and hopefully in the near future. In the event the current lower production rates trigger more stringent discharge limitations, Nucor respectfully request that ADEM issue a tiered permit structure that would conversely be triggered with the increased production rates providing proportional relief on the discharge limits. This would only be requested in the event that limits become more stringent for the forthcoming permit cycle. In the event that a tiered permit structure is necessary, Nucor requests that this dialogue be initiated in the draft review process for this permit renewal, at which time we will present the necessary production data to detail our reduced production and accommodate this request. The following is a summary of some basic historical production data our existing discharge limits are based upon:

Production rates from the October 1, 2008 NPDES renewal application are depicted as follows:

	Production or Flow Highest Month	Last 12 Months Monthly Average	Highest Year of Last 5 Years 5 Year Average	Average of Last 5 Years
Continuous Casting	**3,827,611**	**2,965,464**	**2,965,464**	**2,841,250**
Hot Forming	**3,939,819**	**2,975,808**	**3,227,436**	**3,091,250**

Production rates presented in the attached NPDES renewal application are depicted as follows:

2b.

Process Description	Last 12 Months (gals/day) Highest Month Average*	Highest Flow Year of Last 5 (gals/day) Monthly Average*	Discharge Type (batch, continuous, intermittent)
Continuous Casting -Billets	2,403,251 ppd	1,982,736 ppd	intermittent
Hot Forming -Rebar	2,682,869 ppd	1,935,628 ppd	intermittent

As indicated, the production rate for continuous casting of billets (highest monthly average of the last 12 months) has decreased by 37% from 3,827,611 pounds per day (ppd) on the previous renewal to 2,403,251 ppd on the current renewal; and hot forming of rebar decreased by 32% from 3,939,819 ppd on the previous renewal to 2,682,869 ppd on the current renewal. To reiterate, this decreased production is a result of the economic downturn only and, further to that point, there have not been any operational or process changes that prohibit the plant from reaching maximum historical production rates on demand.

As always, Nucor Steel Birmingham, Inc. is committed to complying with all permit requirements to the fullest extent. If you have any questions or need additional information as you begin to process the permit, please contact me at 205-250-7474 or Mr. Zane Hood, P.E., with PPM Consultants at 205-836-5650.

Sincerely,

Mr. Stephen R. Messier
Environmental Manager

cc: Mr. Zane Hood, Jr., P.E. (PPM Consultants, Inc.)

Attachments: ADEM Form 187 and Supplemental Information
EPA Form 1 and Supplemental Information
EPA Form 3510-2C and Supplemental Information
EPA Form 3510-2F and Supplemental Information

NUCOR STEEL BIRMINGHAM, INC.
APPLICATION FOR
NPDES PERMIT RENEWAL
AL 0003735

Prepared for
Nucor Steel Birmingham, Inc.

456501-NPD16

AUGUST 2016

Environmental Science
and Engineering

PPM
CONSULTANTS