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

SEPTEMBER 4, 2020

MR RANDY MARSH
DIRECTOR OF OPERATIONS
SMI STEEL LLC DBA CMC STEEL AL
P O BOX 321188
BIRMINGHAM AL 35232

RE: DRAFT PERMIT
NPDES PERMIT NUMBER AL0001554

Dear Mr. Marsh:

Transmitted herein is a 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 draft permit, we are also requesting comments within the same period from EPA.

Our records indicate that you are currently utilizing the Department's web-based electronic environmental (E2) reporting system for submittal of discharge monitoring reports (DMRs). Your E2 DMRs will automatically update on the effective date of this permit, if issued.

The Alabama Department of Environmental Management encourages your voluntary consideration of 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 Alex Chavers by e-mail at **adchavers@adem.alabama.gov** or by phone at **(334) 271-7851.**

Sincerely,

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

Enclosure: 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)

ADEM
Alabama Department of Environmental Management

NATIONAL POLLUTANT DISCHARGE ELIMINATION SYSTEM PERMIT

PERMITTEE: SMI STEEL LLC

FACILITY: CMC STEEL ALABAMA
101 SOUTH 50TH STREET
BIRMINGHAM, AL 35212

PERMIT NUMBER: AL0001554

RECEIVING WATERS: DSN001, DSN003: UNNAMED TRIBUTARY TO 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 furtlier 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:

Draft

Alabama Department of Environmental Management

INDUSTRIAL SECTION
NATIONAL POLLUTANT DISCHARGE ELIMINATION SYSTEM (NPDES) PERMIT

TABLE OF CONTENTS

PART I DISCHARGE LIMITATIONS, CONDITIONS, AND REQUIREMENTS

A. DISCHARGE LIMITATIONS AND MONITORING REQUIREMENTS

TIER 0 (Flow is greater than or equal to 0.0 CFS but less than 3.0 CFS) 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 following point source(s) outfall(s), described more fully in the permittee's application:

DSN0010: Process and cooling waters from steel manufacturing processes 4/

Such discharge shall be limited and monitored by the permittee as specified below:

	DISCHARGE LIMITATIONS					MONITORING REQUIREMENTS 1/		
EFFLUENT CHARACTERISTIC	Monthly Average	Daily Maximum	Daily Minimum	Monthly Average	Daily Maximum	Measurement Frequency 2/	Sample Type	Seasonal
Stream Flow, Mean. Daily 5/	REPORT cfs	REPORT cfs	-	-	-	Daily	Measured	-
Oxygen, Dissolved (DO)	-	-	6 mg/l	-	-	Monthly	Grab	-
pH	-	-	6.0 S.U.	-	8.5 S.U.	Weekly	Grab	-
Solids, Total Suspended	423 lbs/day	1154 lbs/day	-	-	-	Monthly	Composite	-
Oil & Grease	108 lbs/day	360 lbs/day	-	-	15 mg/l	Monthly	Grab	-
Nitrogen, Ammonia Total (As N)	-	-	-	1 mg/l	1.5 mg/l	Monthly	Composite	-
Phosphorus, Total (As P)	-	-	-	-	2.0 mg/l	Monthly	Composite	March – October
Lead, Total (As Pb)	0.06 lbs/day	1.12 lbs/day	-	REPORT mg/l	REPORT mg/l	Monthly	Composite	-

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 flow proportional composite samples collected using automatic sampling equipment or a minimum of eight (8) equal volume grab samples collected over equal discharge volumes. 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.B for Stream Flow/Tier Monitoring Requirements.

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

5/ Stream Flow (Mean Daily) should reflect the previous 24-hour average as recorded at the stream flow monitoring station.

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 following point source(s) outfall(s), described more fully in the permittee's application:

DSN0010 (continued): Process and cooling waters from steel manufacturing processes 3/ 4/

Such discharge shall be limited and monitored by the permittee as specified below:

	DISCHARGE LIMITATIONS			MONITORING REQUIREMENTS 1/				
EFFLUENT CHARACTERISTIC	Monthly Average	Daily Maximum	Daily Minimum	Monthly Average	Daily Maximum	Measurement Frequency 2/	Sample Type	Seasonal
Zinc, Total (As Zn)	0.56 lbs/day	1.68 lbs/day	-	REPORT mg/l	REPORT mg/l	Monthly	Composite	-
Copper Total Recoverable 5/	-	-	-	-	0.0346 mg/l	Monthly	Composite	-
Flow, In Conduit or Thru Treatment Plant	REPORT MGD	REPORT MGD	-	-	-	Daily	Totalizer	-
BOD, Carbonaceous 05 Day, 20C	-	-	-	9 mg/l	13.5 mg/l	Monthly	Composite	December - April
BOD, Carbonaceous 05 Day, 20C	-	-	-	4.9 mg/l	7.4 mg/l	Monthly	Composite	May - November

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 flow proportional composite samples collected using automatic sampling equipment or a minimum of eight (8) equal volume grab samples collected over equal discharge volumes. 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.B for Stream Flow/Tier Monitoring Requirements.

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

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

TIER 1 (Flow is greater than or equal to 3.0 CFS but less than 3.5 CFS) 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 following point source(s) outfall(s), described more fully in the permittee's application:

DSN0011: Process and cooling waters from steel manufacturing processes 4/

Such discharge shall be limited and monitored by the permittee as specified below:

	DISCHARGE LIMITATIONS					MONITORING REQUIREMENTS 1/		
EFFLUENT CHARACTERISTIC	Monthly Average	Daily Maximum	Daily Minimum	Monthly Average	Daily Maximum	Measurement Frequency 2/	Sample Type	Seasonal
Stream Flow, Mean. Daily 5/	REPORT cfs	REPORT cfs	-	-	-	Daily	Measured	-
Oxygen, Dissolved (DO)	-	-	6 mg/l	-	-	Monthly	Grab	-
pH	-	-	6.0 S.U.	-	8.5 S.U.	Weekly	Grab	-
Solids, Total Suspended	423 lbs/day	1154 lbs/day	-	-	-	Monthly	Composite	-
Oil & Grease	108 lbs/day	360 lbs/day	-	-	15 mg/l	Monthly	Grab	-
Nitrogen, Ammonia Total (As N)	-	-	-	1 mg/l	1.5 mg/l	Monthly	Composite	-
Phosphorus, Total (As P)	-	-	-	-	2.0 mg/l	Monthly	Composite	March – October
Lead, Total (As Pb)	0.25 lbs/day	1.12 lbs/day	-	REPORT mg/l	REPORT mg/l	Monthly	Composite	-

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 flow proportional composite samples collected using automatic sampling equipment or a minimum of eight (8) equal volume grab samples collected over equal discharge volumes. 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.B for Stream Flow/Tier Monitoring Requirements.

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

5/ Stream Flow (Mean Daily) should reflect the previous 24-hour average as recorded at the stream flow monitoring station.

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 following point source(s) outfall(s), described more fully in the permittee's application:

DSN0011 (continued): Process and cooling waters from steel manufacturing processes 3/ 4/

Such discharge shall be limited and monitored by the permittee as specified below:

	DISCHARGE LIMITATIONS			MONITORING REQUIREMENTS 1/				
EFFLUENT CHARACTERISTIC	Monthly Average	Daily Maximum	Daily Minimum	Monthly Average	Daily Maximum	Measurement Frequency 2/	Sample Type	Seasonal
Zinc, Total (As Zn)	0.56 lbs/day	1.68 lbs/day	-	REPORT mg/l	REPORT mg/l	Monthly	Composite	-
Flow, In Conduit or Thru Treatment Plant	REPORT MGD	REPORT MGD	-	-	-	Daily	Totalizer	-
BOD, Carbonaceous 05 Day, 20C	-	-	-	50 mg/l	75 mg/l	Monthly	Composite	December - April
BOD, Carbonaceous 05 Day, 20C	-	-	-	27 mg/l	40.5 mg/l	Monthly	Composite	May - November

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 flow proportional composite samples collected using automatic sampling equipment or a minimum of eight (8) equal volume grab samples collected over equal discharge volumes. 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.B for Stream Flow/Tier Monitoring Requirements.

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

TIER 2 (Flow is greater than or equal to 3.5 CFS but less than 4.3 CFS) 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 following point source(s) outfall(s), described more fully in the permittee's application:

DSN0012: Process and cooling waters from steel manufacturing processes 4/

Such discharge shall be limited and monitored by the permittee as specified below:

	DISCHARGE LIMITATIONS					MONITORING REQUIREMENTS 1/		
EFFLUENT CHARACTERISTIC	Monthly Average	Daily Maximum	Daily Minimum	Monthly Average	Daily Maximum	Measurement Frequency 2/	Sample Type	Seasonal
Stream Flow, Mean. Daily 5/	REPORT cfs	REPORT cfs	-	-	-	Daily	Measured	-
Oxygen, Dissolved (DO)	-	-	6 mg/l	-	-	Monthly	Grab	-
pH	-	-	6.0 S.U.	-	8.5 S.U.	Weekly	Grab	-
Solids, Total Suspended	423 lbs/day	1154 lbs/day	-	-	-	Monthly	Composite	-
Oil & Grease	108 lbs/day	360 lbs/day	-	-	15 mg/l	Monthly	Grab	-
Nitrogen, Ammonia Total (As N)	-	-	-	1 mg/l	1.5 mg/l	Monthly	Composite	-
Phosphorus, Total (As P)	-	-	-	-	2.0 mg/l	Monthly	Composite	March – October
Lead, Total (As Pb)	0.28 lbs/day	1.12 lbs/day	-	REPORT mg/l	REPORT mg/l	Monthly	Composite	-

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 flow proportional composite samples collected using automatic sampling equipment or a minimum of eight (8) equal volume grab samples collected over equal discharge volumes. 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.B for Stream Flow/Tier Monitoring Requirements.

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

5/ Stream Flow (Mean Daily) should reflect the previous 24-hour average as recorded at the stream flow monitoring station.

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 following point source(s) outfall(s), described more fully in the permittee's application:

DSN0012 (continued): Process and cooling waters from steel manufacturing processes 3/ 4/

Such discharge shall be limited and monitored by the permittee as specified below:

	DISCHARGE LIMITATIONS			MONITORING REQUIREMENTS 1/				
EFFLUENT CHARACTERISTIC	Monthly Average	Daily Maximum	Daily Minimum	Monthly Average	Daily Maximum	Measurement Frequency 2/	Sample Type	Seasonal
Zinc, Total (As Zn)	0.56 lbs/day	1.68 lbs/day	-	REPORT mg/l	REPORT mg/l	Monthly	Composite	-
Flow, In Conduit or Thru Treatment Plant	REPORT MGD	REPORT MGD	-	-	-	Daily	Totalizer	-
BOD, Carbonaceous 05 Day, 20C	-	-	-	70 mg/l	105 mg/l	Monthly	Composite	December - April
BOD, Carbonaceous 05 Day, 20C	-	-	-	36 mg/l	54 mg/l	Monthly	Composite	May - November

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 flow proportional composite samples collected using automatic sampling equipment or a minimum of eight (8) equal volume grab samples collected over equal discharge volumes. 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.B for Stream Flow/Tier Monitoring Requirements.

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

TIER 3 (Flow is greater than or equal to 4.3 CFS) 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 following point source(s) outfall(s), described more fully in the permittee's application:

DSN0013: Process and cooling waters from steel manufacturing processes 4/

Such discharge shall be limited and monitored by the permittee as specified below:

	DISCHARGE LIMITATIONS					MONITORING REQUIREMENTS 1/		
EFFLUENT CHARACTERISTIC	Monthly Average	Daily Maximum	Daily Minimum	Monthly Average	Daily Maximum	Measurement Frequency 2/	Sample Type	Seasonal
Stream Flow, Mean. Daily 5/	REPORT cfs	REPORT cfs	-	-	-	Daily	Measured	-
Oxygen, Dissolved (DO)	-	-	6 mg/l	-	-	Monthly	Grab	-
pH	-	-	6.0 S.U.	-	8.5 S.U.	Weekly	Grab	-
Solids, Total Suspended	423 lbs/day	1154 lbs/day	-	-	-	Monthly	Composite	-
Oil & Grease	108 lbs/day	360 lbs/day	-	-	15 mg/l	Monthly	Grab	-
Nitrogen, Ammonia Total (As N)	-	-	-	1 mg/l	1.5 mg/l	Monthly	Composite	-
Phosphorus, Total (As P)	-	-	-	-	2.0 mg/l	Monthly	Composite	March – October
Lead, Total (As Pb)	0.32 lbs/day	1.12 lbs/day	-	REPORT mg/l	REPORT mg/l	Monthly	Composite	-

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 flow proportional composite samples collected using automatic sampling equipment or a minimum of eight (8) equal volume grab samples collected over equal discharge volumes. 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.B for Stream Flow/Tier Monitoring Requirements.

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

5/ Stream Flow (Mean Daily) should reflect the previous 24-hour average as recorded at the stream flow monitoring station.

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 following point source(s) outfall(s), described more fully in the permittee's application:

DSN0013 (continued): Process and cooling waters from steel manufacturing processes 3/ 4/

Such discharge shall be limited and monitored by the permittee as specified below:

	DISCHARGE LIMITATIONS			MONITORING REQUIREMENTS 1/				
EFFLUENT CHARACTERISTIC	Monthly Average	Daily Maximum	Daily Minimum	Monthly Average	Daily Maximum	Measurement Frequency 2/	Sample Type	Seasonal
Zinc, Total (As Zn)	0.56 lbs/day	1.68 lbs/day	-	REPORT mg/l	REPORT mg/l	Monthly	Composite	-
Flow, In Conduit or Thru Treatment Plant	REPORT MGD	REPORT MGD	-	-	-	Daily	Totalizer	-
BOD, Carbonaceous 05 Day, 20C	-	-	-	98 mg/l	147 mg/l	Monthly	Composite	December - April
BOD, Carbonaceous 05 Day, 20C	-	-	-	50 mg/l	74 mg/l	Monthly	Composite	May - November

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 flow proportional composite samples collected using automatic sampling equipment or a minimum of eight (8) equal volume grab samples collected over equal discharge volumes. 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.B for Stream Flow/Tier Monitoring Requirements.

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

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 following point source(s) outfall(s), described more fully in the permittee's application:

DSN001T: Process and cooling waters from steel manufacturing processes 2/

Such discharge shall be limited and monitored by the permittee as specified below:

	DISCHARGE LIMITATIONS					MONITORING REQUIREMENTS 1/		
EFFLUENT CHARACTERISTIC	Monthly Average	Daily Maximum	Daily Minimum	Monthly Average	Daily Maximum	Measurement Frequency 2/	Sample Type	Seasonal
Toxicity, Ceriodaphnia Chronic	-	0 pass(0)/fail(1)	-	-	-	Quarterly	Composite	-
Toxicity, Pimephales Chronic	-	0 pass(0)/fail(1)	-	-	-	Quarterly	Composite	-

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 flow proportional composite samples collected using automatic sampling equipment or a minimum of eight (8) equal volume grab samples collected over equal discharge volumes. 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.D for Effluent Toxicity Testing and Biomonitoring Requirements.

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 following point source(s) outfall(s), described more fully in the permittee's application:

DSN0031: Groundwater used for flow augmentation 5/

Such discharge shall be limited and monitored by the permittee as specified below:

	DISCHARGE LIMITATIONS					MONITORING REQUIREMENTS 1/		
EFFLUENT CHARACTERISTIC	Monthly Average	Daily Maximum	Daily Minimum	Monthly Average	Daily Maximum	Measurement Frequency 2/	Sample Type	Seasonal
Flow, In Conduit or Thru Treatment Plant	REPORT MGD	REPORT MGD	-	-	-	Daily	Totalizer	-
Chlorine, Total Residual 3/ 4/	-	-	-	0.011 mg/l	0.019 mg/l	2X Monthly	Grab	-

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 flow proportional composite samples collected using automatic sampling equipment or a minimum of eight (8) equal volume grab samples collected over equal discharge volumes. 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/ A measurement of Total Residual Chlorine below 0.05 mg/l will be considered in compliance with the permit limitations above and should be reported as *B on the discharge monitoring report.

4/ Monitoring for Total Residual Chlorine is required only during periods when municipal water is being used for flow augmentation. If municipal water is not used during a reporting period, the permittee shall report *9 on the discharge monitoring report.

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

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 by utilizing the Department's web-based Electronic Environmental (E2) Reporting System.

(1) If the permittee is unable to complete the electronic submittal of DMR data due to technical problems originating with the Department's E2 Reporting 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 E2 Reporting 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 E2 Reporting System resuming operation, the permittee shall enter the data into the E2 Reporting System, unless an alternate timeframe is approved by the Department. An attachment should be included with the E2 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
Permits and Services Division
Environmental Data Section
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
Permits and Services Division
Environmental Data Section
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;

(2) quantities to be used;

(3) frequencies of use;

(4) 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:

(a) one hundred micrograms per liter;

(b) 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;

(c) 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:

(a) five hundred micrograms per liter;

(b) one milligram per liter for antimony;

(c) 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.

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, 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 appropriate plant 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. STREAM FLOW/TIER MONITORING AND REPORTING REQUIREMENTS

1. The permittee shall operate a stream flow monitoring station on the receiving stream for the effluent (the unnamed tributary to Village Creek). 24-hour average flow will be calculated as a daily basis as noted in Part I.A of the permit.

2. The permittee shall be responsible for complying with the limitations associated with the appropriate Part I.A Tier (0, 1, 2, or 3), based on the monthly average stream flow reported within each monitoring period. Flow tiers shall not change more frequently than monthly (i.e. the monitoring period).

3. The permittee shall be responsible for complying with the discharge reporting requirements in Part I.C. Each required DMR submittal shall include the point source outfall associated with the appropriate flow tier, as defined by Part I.A and Part IV.B.2 to include the monitoring results and the corresponding limitations. The DMRs associated with the non-reporting flow tiers/point source outfalls shall be annotated as "No Discharge" and submitted in accordance with the requirements of Part I.C.

C. COOLING WATER INTAKE STRUCTURE (CWIS) REQUIREMENTS

1. 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 or groundwater, 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 – Tier 0

      (1) The samples shall be diluted using appropriate control water, to the Instream Waste Concentration (IWC), which is 100% effluent. The IWC is the actual concentration of effluent, after mixing, in the receiving stream during a 7-day, 10-year low-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 indicate chronic toxicity and constitute noncompliance with this permit.

   b. Test Requirements – Tier 1, Tier 2, and Tier 3

      (1) The definitive test shall only be used when the facility's compliance is determined by limitations applicable to Tier 1, Tier 2, and Tier 3.

         (a) For Tier 1, the IWC shall be tested with appropriate replicates of 24%, a control and a minimum of four serial dilutions of 6%, 12%, 62%, and 100% effluent.

         (b) For Tier 2, the IWC shall be tested with appropriate replicates of 21%, a control and a minimum of four serial dilutions of 5%, 10%, 60%, and 100% effluent.

         (c) For Tier 3, the IWC shall be tested with appropriate replicates of 18%, a control and a minimum of four serial dilutions of 4%, 9%, 59%, and 100% effluent.

      (2) Noncompliance with the toxicity limit will be demonstrated if the IC_{25} (Inhibition Concentration) for reproduction or growth is less than the IWC. The average reproduction for Ceriodaphnia shall be calculated by dividing the total number of live Ceriodaphnia young in each concentration by the total number of organisms used to initiate that concentration; the average growth for the fathead minnows shall be calculated by dividing the total weight of the surviving minnow larvae in each replicated by the total number of organisms used to initiate that replicate.

   c. 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.

d. 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.

e. 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 coudition. 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.)

f. Test Methods

(1) 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 suspeud 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 he taken

1/ 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: April 20, 2020
PREPARED BY: Alex Chavers
REVISED DATE: September 4, 2020

Permittee Name: SMI Steel LLC

Facility Name: CMC Steel Alabama

Permit Number: AL0001554

PERMIT IS REISSUANCE DUE TO EXPIRATION

DISCHARGE SERIAL NUMBERS & DESCRIPTIONS:

DSN001:	Process and cooling waters from steel manufacturing processes
DSN003:	Groundwater and municipal water used for flow augmentation

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

MAJOR: Y

STREAM INFORMATION:

Receiving Stream:	Unnamed Tributary to Village Creek
Classification:	Fish & Wildlife
River Basin:	Black Warrior River Basin
7Q10:	0.0 CFS
7Q2:	0.0 CFS
1Q10:	0.0 CFS
Annual Average Flow:	0.12 CFS
303(d) List:	NO
Impairment:	N/A
TMDL:	NO*

*The discharge is within 24-hour travel time of Village Creek, which has a developed TMDL for pH, metals (Zinc), and siltation and is listed on the 303(d) List of Impaired Waters for pesticides (Dieldrin) and pathogens. Additionally, the facility is located in the Locust Fork watershed, which has a developed TMDL for nutrients.

DISCUSSION:
CMC Steel Alabama operates a melt shop and rolling mill to produce steel products. The melt shop produces a semi-finished product, called a billet, which is rolled into a final shape in the rolling mill. Finished products include flats, channels, angles, and beams. Ancillary operations located on the site include maintenance shops, garages, scrap handling areas, and shipping and receiving areas.

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 new or expanded discharge. Therefore, the applicant is not required to demonstrate that the discharge is necessary for economic and social development.

001T:

Parameter	Monthly Avg Loading	Daily Max Loading	Daily Min Concentration	Monthly Avg Concentration	Daily Max Concentration	Sample Frequency	Sample Type	Basis*
Toxicity, Ceriodaphnia Chronic	-	0 pass(0)/fail(1)	-	-	-	Quarterly	Composite	WQBEL
Toxicity, Pimephales Chronic	-	0 pass(0)/fail(1)	-	-	-	Quarterly	Composite	WQBEL

0010:

Parameter	Monthly Avg Loading	Daily Max Loading	Daily Min Concentration	Monthly Avg Concentration	Daily Max Concentration	Sample Frequency	Sample Type	Basis*
Stream Flow, Mean. Daily	REPORT cfs	REPORT cfs	-	-	-	Daily	Measured	BPJ
Oxygen, Dissolved (DO)	-	-	6 mg/l	-	-	Monthly	Grab	WQBEL
pH	-	-	6.0 S.U.	-	8.5 S.U.	Weekly	Grab	WQBEL
Solids, Total Suspended	423 lbs/day	1154 lbs/day	-	-	-	Monthly	Composite	TMDL
Oil & Grease	108 lbs/day	360 lbs/day	-	-	15 mg/l	Monthly	Grab	EGL/BPJ
Nitrogen, Ammonia Total (As N)	-	-	-	1 mg/l	1.5 mg/l	Monthly	Composite	WQBEL
Phosphorus, Total (As P)	-	-	-	-	2.0 mg/l	Monthly	Composite	TMDL
Lead, Total (As Pb)	0.06 lbs/day	1.12 lbs/day	-	REPORT mg/l	REPORT mg/l	Monthly	Composite	WQBEL/ EGL
Zinc, Total (As Zn)	0.56 lbs/day	1.68 lbs/day	-	REPORT mg/l	REPORT mg/l	Monthly	Composite	EGL
Copper Total Recoverable	-	-	-	-	0.0346 mg/l	Monthly	Composite	WQBEL
Flow, In Conduit or Thru Treatment Plant	REPORT MGD	REPORT MGD	-	-	-	Daily	Totalizer	BPJ
BOD, Carbonaceous 05 Day, 20C	-	-	-	9 mg/l	13.5 mg/l	Monthly	Composite	WQBEL
BOD, Carbonaceous 05 Day, 20C	-	-	-	4.9 mg/l	7.4 mg/l	Monthly	Composite	WQBEL

0011:

Parameter	Monthly Avg Loading	Daily Max Loading	Daily Min Concentration	Monthly Avg Concentration	Daily Max Concentration	Sample Frequency	Sample Type	Basis*
Stream Flow, Mean. Daily	REPORT cfs	REPORT cfs	-	-	-	Daily	Measured	BPJ
Oxygen, Dissolved (DO)	-	-	6 mg/l	-	-	Monthly	Grab	WQBEL
pH	-	-	6.0 S.U.	-	8.5 S.U.	Weekly	Grab	WQBEL
Solids, Total Suspended	423 lbs/day	1154 lbs/day	-	-	-	Monthly	Composite	TMDL
Oil & Grease	108 lbs/day	360 lbs/day	-	-	15 mg/l	Monthly	Grab	EGL

Nitrogen, Ammonia Total (As N)	-	-	-	1 mg/l	1.5 mg/l	Monthly	Composite	WQBEL
Phosphorus, Total (As P)	-	-	-	-	2.0 mg/l	Monthly	Composite	TMDL
Lead, Total (As Pb)	0.25 lbs/day	1.12 lbs/day	-	REPORT mg/l	REPORT mg/l	Monthly	Composite	WQBEL/ EGL
Zinc, Total (As Zn)	0.56 lbs/day	1.68 lbs/day	-	REPORT mg/l	REPORT mg/l	Monthly	Composite	EGL
Flow, In Conduit or Thru Treatment Plant	REPORT MGD	REPORT MGD	-	-	-	Daily	Totalizer	BPJ
BOD, Carbonaceous 05 Day, 20C	-	-	-	50 mg/l	75 mg/l	Monthly	Composite	WQBEL
BOD, Carbonaceous 05 Day, 20C	-	-	-	27 mg/l	40.5 mg/l	Monthly	Composite	WQBEL

0012:

Parameter	Monthly Avg Loading	Daily Max Loading	Daily Min Concentration	Monthly Avg Concentration	Daily Max Concentration	Sample Frequency	Sample Type	Basis*
Stream Flow, Mean. Daily	REPORT cfs	REPORT cfs	-	-	-	Daily	Measured	BPJ
Oxygen, Dissolved (DO)	-	-	6 mg/l	-	-	Monthly	Grab	WQBEL
pH	-	-	6.0 S.U.	-	8.5 S.U.	Weekly	Grab	WQBEL
Solids, Total Suspended	423 lbs/day	1154 lbs/day	-	-	-	Monthly	Composite	TMDL
Oil & Grease	108 lbs/day	360 lbs/day	-	-	15 mg/l	Monthly	Grab	EGL/BPJ
Nitrogen, Ammonia Total (As N)	-	-	-	1 mg/l	1.5 mg/l	Monthly	Composite	WQBEL
Phosphorus, Total (As P)	-	-	-	-	2.0 mg/l	Monthly	Composite	TMDL
Lead, Total (As Pb)	0.28 lbs/day	1.12 lbs/day	-	REPORT mg/l	REPORT mg/l	Monthly	Composite	WQBEL/ EGL
Zinc, Total (As Zn)	0.56 lbs/day	1.68 lbs/day	-	REPORT mg/l	REPORT mg/l	Monthly	Composite	EGL
Flow, In Conduit or Thru Treatment Plant	REPORT MGD	REPORT MGD	-	-	-	Daily	Totalizer	BPJ
BOD, Carbonaceous 05 Day, 20C	-	-	-	70 mg/l	105 mg/l	Monthly	Composite	WQBEL
BOD, Carbonaceous 05 Day, 20C	-	-	-	36 mg/l	54 mg/l	Monthly	Composite	WQBEL

0013:

Parameter	Monthly Avg Loading	Daily Max Loading	Daily Min Concentration	Monthly Avg Concentration	Daily Max Concentration	Sample Frequency	Sample Type	Basis*
Stream Flow, Mean. Daily	REPORT cfs	REPORT cfs	-	-	-	Daily	Measured	BPJ
Oxygen, Dissolved (DO)	-	-	6 mg/l	-	-	Monthly	Grab	WQBEL
pH	-	-	6.0 S.U.	-	8.5 S.U.	Weekly	Grab	WQBEL
Solids, Total Suspended	423 lbs/day	1154 lbs/day	-	-	-	Monthly	Composite	TMDL
Oil & Grease	108 lbs/day	360 lbs/day	-	-	15 mg/l	Monthly	Grab	EGL/BPJ
Nitrogen, Ammonia Total (As N)	-	-	-	1 mg/l	1.5 mg/l	Monthly	Composite	WQBEL
Phosphorus, Total (As P)	-	-	-	-	2.0 mg/l	Monthly	Composite	TMDL
Lead, Total (As Pb)	0.32 lbs/day	1.12 lbs/day	-	REPORT mg/l	REPORT mg/l	Monthly	Composite	WQBEL/ EGL
Zinc, Total (As Zn)	0.56 lbs/day	1.68 lbs/day	-	REPORT mg/l	REPORT mg/l	Monthly	Composite	EGL
Flow, In Conduit or Thru Treatment Plant	REPORT MGD	REPORT MGD	-	-	-	Daily	Totalizer	BPJ
BOD, Carbonaceous 05 Day, 20C	-	-	-	98 mg/l	147 mg/l	Monthly	Composite	WQBEL
BOD, Carbonaceous 05 Day, 20C	-	-	-	50 mg/l	74 mg/l	Monthly	Composite	WQBEL

0031:

Parameter	Monthly Avg Loading	Daily Max Loading	Daily Min Concentration	Monthly Avg Concentration	Daily Max Concentration	Sample Frequency	Sample Type	Basis*
Flow, In Conduit or Thru Treatment Plant	REPORT MGD	REPORT MGD	-	-	-	Daily	Totalizer	BPJ
Chlorine, Total Residual	-	-	-	0.011 mg/l	0.019 mg/l	2X Monthly	Grab	WQBEL

*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

DSN001 – *Process wastewater and noncontact cooling waters from steel manufacturing*
This permit authorizes the discharge of process wastewater from DSN001. The receiving stream is an unnamed tributary to Village Creek, which the Department has historically considered a zero-flow stream during critical periods. The facility has implemented a stream flow monitoring station in coordination with the USGS to be able to use representative stream flows to determine permit limitations. The facility has also implemented, during the previous permit issuance, a *flow augmentation system* to ensure compliance with those limitations.

Limitations at DSN001 are broken into four tiers, decided by the monthly average stream flow* reported within each monitoring period. Discharges from DSN001 must be sampled prior to the addition of any flow augmentation waters. The tiers have been modified from the previous permit to accommodate higher flows available in the receiving stream and are as follows:

Designation	Flow Range
Tier 0 (Zero-Flow)	Less than 3.0 CFS
Tier 1	Greater than or equal to 3.0 CFS but less than 3.5 CFS
Tier 2	Greater than or equal to 3.5 CFS but less than 4.3 CFS
Tier 3	Greater than or equal to 4.3 CFS

*The "stream flow" values will be the measured value at the stream gauge, which includes the facility's flow, water used for flow augmentation and the stream contribution. This "stream flow" is only used to determine the applicable tier for a given month.

Flow Augmentation
The flow augmentation system uses a combination of groundwater and municipal water sources to increase the available flow in the receiving stream. While dilution is not an acceptable alternative to treatment, the use of flow augmentation can be considered on a case-by-case basis if the permittee shows that treatment with best available technology (BAT) is not enough to meet the stringent water quality standards of low-flow streams. Additional information regarding the flow augmentation system can be found in the *Treatment and Discharge Alternatives Engineering Report* and a letter to the Department dated February 20, 2009, which can both be found in ADEM's eFile system.

In particular, the permittee provided documentation that it would be unlikely to meet whole effluent toxicity and $CBOD_5$ limitations for a zero-flow receiving stream. By establishing a tiered permit, the Department is able to abandon the zero-flow assumption and place the burden of meeting limitations according to the current flow on the permittee. The flow augmentation system will allow the permittee to avoid violating water quality standards during periods of low flow in the receiving stream.

Technology Based Effluent Limitations (TBELs)
EPA has promulgated effluent guidelines for the Iron and Steel Manufacturing Category, which are applicable to discharges from this facility. Specifically, the facility performs operations that meet the applicability criteria found in Subpart F – Continuous Casting Subcategory and Subpart G – Hot Forming Subcategory. Determination of production based effluent guideline limitations can be found in Attachment A to this rationale.

Water Quality Based Effluent Limitations
A reasonable potential analysis was performed for those parameters identified as pollutants of concern based on knowledge of the facility and other similar industries, historical monitoring, analytical data submitted with the application and impairments or developed TMDLs that apply to the receiving stream or the watershed in which the receiving stream is located. This analysis will ensure that limitations that are more stringent will be placed in the permit to protect water quality. For this particular permit, a reasonable potential analysis was performed separately for each stream flow tier to ensure the permit limits at each tier are representative of the discharge scenario and protective of the receiving stream. The reasonable potential analysis can be found in Attachment B to this rationale. The low-flows (7Q10, 7Q2, 1Q10) are set to match the minimum flow for each tier.

In addition to the reasonable potential analysis, the Department has prepared a waste load allocation (see Attachment C) for Ammonia, as Nitrogen and Carbonaceous Biochemical Oxygen Demand (5-Day) (CBOD5) to ensure the dissolved oxygen in the receiving stream remains above the minimum of 6.0 mg/L. The facility previously requested that the Ammonia be fixed for each tier at 1 and 1.5 mg/L for the monthly average and daily maximum respectively to provide the largest possible allocation for CBOD5.

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

Impairments and developed TMDLs for the receiving stream or the watershed in which the receiving stream is located were considered in the development of these permit limits. The receiving stream is not listed on the 2018 List of Impaired Waters nor has a TMDL been developed; however, Village Creek, which is within a 24-hour travel time of the receiving, is listed for Pathogens and Pesticides (Dieldrin) and has a developed TMDL for pH, Siltation, and Metals (Zinc). Additionally, the facility is located within the Locust Fork watershed, which has a developed TMDL for nutrients and requires facilities to meet certain phosphorus limitations. The proposed permit limits comply with the requirements of the TMDL, which applies to all facilities in the identified watershed; therefore, it is not expected that the discharges from this facility will cause or contribute to a violation of water quality.

Effluent Discharge Limitations and Requirements

Facility Flow, Stream Flow (MGD)

It is proposed to include reporting of the facility's wastewater flow to have an accurate depiction of the facility's contribution to the total flow of the stream. It is also proposed to report the stream flow to ensure the proper tier has been applied for the monitoring period.

Solids, Total Suspended

The limitations for Total Suspended Solids are the most stringent of effluent guideline limitations, total maximum daily load allowances and current permit limits.

	Tier 0		Tier 1		Tier 2		Tier 3	
	Monthly Average	*Daily Maximum*	*Monthly Average*	*Daily Maximum*	*Monthly Average*	*Daily Maximum*	*Monthly Average*	*Daily Maximum*
TBEL (ppd)	504	1377	504	1377	504	1377	504	1377
TMDL (WQBEL) (ppd)	423	-	423	-	423	-	423	-
Current Limits (ppd)	423	1154	423	1154	423	1154	423	1154
Final Limitation (ppd)	423	1154	423	1154	423	1154	423	1154

Oil & Grease

The limitations for Oil & Grease are the most stringent of the effluent guideline limitations and current permit limits and the limitations are identical for all tiers. Based on the proposed daily maximum limitation and the average discharge rate of 430 gpm, the discharge would exceed a BPJ-based concentration of 15 mg/L. The BPJ-based limit is expected to prevent a sheen on the surface and will be applied in addition to the effluent-guideline based limitations.

	Tiers 0-3	
	Monthly Average	*Daily Maximum*
TBEL (ppd)	108	360
BPJ @ 15 mg/L (ppd)	-	75.06
Current Limits (ppd)	120	401
Final Limitation (ppd)	108	360
Final Limitation (mg/L)		15

Lead, Total (as Pb)

The limitations for Lead are the most stringent of water quality based effluent limitations and effluent guideline limitations. The WQBELs on a mass-basis have increased due to an increased starting flow for each tier. For limitations that are a combination of both water quality and effluent guidelines, mass-based limitations will be applied, but the facility will be required to report the concentration.

	Tier 0		Tier 1		Tier 2		Tier 3	
	Monthly Average	*Daily Maximum*	*Monthly Average*	*Daily Maximum*	*Monthly Average*	*Daily Maximum*	*Monthly Average*	*Daily Maximum*
WQBEL (mg/L)	0.012	0.313	0.051	1.296	0.057	1.459	0.067	1.721
WQBEL (ppd)	0.06	1.57	0.25	6.48	0.28	7.30	0.34	8.61
TBEL (ppd)	0.37	1.12	0.37	1.12	0.37	1.12	0.37	1.12
Final Limitation (ppd)	0.06	1.12	0.25	1.12	0.28	1.12	0.32	1.12

Zinc, Total (As Zn)

The limitations for Zinc are the most stringent of water quality based effluent limitations and effluent guideline limitations. The WQBELs on a mass-basis have increased due to an increased starting flow for each tier.

The proposed limitations are more stringent than the requirements of the Village Creek TMDL. The current permit limits include a raw water intake allocation for zinc, which was developed during the 1993 permit issuance using 40 CFR 122(g)(ii). At that time, the facility was able to demonstrate that it would be out of compliance with proposed permit limitations solely based on the zinc in the raw water. Based a review of the available data, it appears the facility is able to meet its permit limits without the raw water intake credit; therefore, these credits have been removed from the proposed permit limitations.

	Zero-Flow		Tier 1		Tier 2		Tier 3	
	Monthly Average	*Daily Maximum*	*Monthly Average*	*Daily Maximum*	*Monthly Average*	*Daily Maximum*	*Monthly Average*	*Daily Maximum*
WQBEL (mg/L)	0.358	0.356	1.232	1.220	1.378	1.364	1.611	1.537
WQBEL (mg/L)	1.79	1.78	6.13	6.10	6.89	6.82	8.06	7.69
TBEL (ppd)	0.56	1.68	0.56	1.68	0.56	1.68	0.56	1.68
TMDL (lbs/day)	-	5.72	-	5.72	-	5.72	-	5.72
Final Limitation (ppd)	0.56	1.68	0.56	1.68	0.56	1.68	0.56	1.68

Total Recoverable Copper

Based on the reasonable potential analysis, copper has the reasonable potential to exceed the acute in-stream water quality standard for Tier 0; therefore, water-quality based effluent limitations will be included in this permit issuance for the daily maximum.

Total Recoverable Lead, Total Recoverable Zinc

Based on the reasonable potential analysis, these parameters do not have the reasonable potential to exceed the in-stream water quality standard at the discharge concentrations reported by the facility; therefore, no additional monitoring requirements are proposed based on the reasonable potential analysis; however, the facility will be require to report the concentrations under Total Lead and Total Zinc.

Biochemical Oxygen Demand (5-Day)

Based on the waste load allocation submitted by the permittee and reviewed by the Department, BOD5 monthly averages will be limited based on the minimum flow available for each tier and the assimilative capacity available in the receiving stream. The daily maximum limitations will be the monthly average * 1.5.

Nitrogen, Ammonia Total (As N)

The monthly average ammonia limitations for Tier 0-3 are fixed at 1.0 mg/L to ensure the maximum possible assimilative capacity is available for BOD5 loading. The daily maximums are based on the monthly average * 1.5.

Total Phosphorus

Based on the Locust Fork TMDL, the facility will be required to meet a 2.0 mg/L daily maximum limitation or Total Phosphorus during a growing season of March to October.

Dissolved Oxygen (D.O.)
ADEM Administrative Code, Division 6 Regulations, specifically 335-6-10-.09(5)(e)4(i) – Specific Water Quality for Fish and Wildlife classified streams states that "daily dissolved oxygen concentrations shall not be less than 5 mg/l at all times". The basis for the wasteload allocation is 6.0 mg/l, which is more stringent than the standard and will be applied in this permit issuance.

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 current limitations are consistent with this requirement and will be continued in this permit issuance.

Pathogens, Pesticides (Dieldrin)
The receiving stream is not listed on the most recent 303(d) List of Impaired Waters; however, Village Creek, which is located downstream, is listed for pathogens and pesticides. The discharge from the facility is not expected to contain levels of these pollutants that would contribute to this impairment.

pH, Metals (Zinc), Siltation
The Village Creek TMDL includes all discharges in the watershed for Village Creek; therefore, this TMDL was taken into consideration when developing limitations for this permit issuance. The proposed limitations are consistent with the requirements of the TMDL.

Whole Effluent Toxicity (Chronic)
In order to ensure the synergistic effects of the wastewater are protective of the receiving stream, toxicity-testing requirements will be continued in this permit issuance. The table below summarizes the toxicity testing requirements for each of the stream flow tiers.

	Test Requirements	IWC	Serial Dilution 1	Serial Dilution 2 (RWC+100)/2	Serial Dilution 3 (RWC/2)	Serial Dilution 4 (RWC/4)
Tier 0	Screening	100%	-	-	-	-
Tier 1	Definitive	24%	100%	62%	12%	6%
Tier 2	Definitive	21%	100%	60%	10%	5%
Tier 3	Definitive	18%	100%	59%	9%	4%

316(b) Cooling Water Intake Structure 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 or groundwater, which would otherwise be discharged; therefore, the permittee is exempt from the requirements of this permit condition.

DSN003 – *Groundwater and municipal water used for flow augmentation*

Flow
The volume of water used for flow augmentation shall be monitored daily and reported on a monthly basis

Total Residual Chlorine (TRC)
During the periods when municipal water is used for flow augmentation, the facility is required to monitor for TRC. Water quality based effluent limitations of 0.011 and 0.019 mg/l for the monthly average and daily maximum, respectively, will be imposed during these periods. If municipal water is not used in a given month, the facility is not required to monitor this parameter and should report *9 on the discharge monitoring report.

In accordance with a letter dated August 11, 1998 from EPA Headquarters and a 1991 memorandum from EPA Region 4's Environmental Services Division (ESD), due to testing and method detection limitations, a Total Residual Chlorine measurement below 0.05 mg/L shall be considered below detection for compliance purposes.

Stormwater Monitoring

Discharges of stormwater from the facility are authorized under NPDES General Permit ALG120472. Consistent with the requirements of that permit, the facility is required to maintain a Best Management Practices (BMP) plan. Best Management Practices (BMPs) are believed to be the most effective way to control the contamination of stormwater from areas of industrial activities. 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 require by ALG120472.

Revision (September 4, 2020)

Based on comments received by the facility, the following revisions were made to the permit and/or rationale.

- The dissolved oxygen daily minimum limitation for each flow tier was increased to 6.0 mg/l to be consistent with the assumptions of the TMDL.
- Concentration-based limitations for Total Lead and Total Zinc were removed from the draft permit and replaced with a REPORT only requirement. The facility presented historical data, which show that mass-based limitations are sufficient to protect water quality in the receiving stream.
- The monthly average WQBEL for Copper was removed. The reasonable potential showed that Copper had the reasonable potential to violate the daily maximum criteria for Copper in Tier 0 only.
- The Permit Limitations summary in Attachment A was revised to match the limit determinations and the permit and rationale was revised to ensure consistency.
- Footnote 1/ in Part I.A of the permit was modified to specify "flow proportional" composite samples for all tiers.
- The permit and rationale were modified to show that groundwater and recycled process water are used for cooling purposes.
- To maintain the existing IWC's, the stream flows for each Tier were adjusted upwards. The effect was negligible on the waste load allocation; therefore, no changes to BOD5 seasonal requirements were made. The permit and rationale toxicity requirements were revised to show the correct IWC's and serial dilutions for Tiers 1, 2, and 3.

ATTACHMENT A: EFFLUENT GUIDELINE LIMITATIONS

Attachment A

Effluent Limitation Guidelines Summary

2014 Permit Limitations

	Tier 0			Tier 1		
Parameter	Daily Max	Monthly Average	Basis	Daily Max	Monthly Average	Basis
Total Suspended Solids[1]	1154	423	TMDL	1154	423	TMDL
Oil & Grease[2]	401	120	EGL	401	120	EGL
Total Lead	0.44	0.02	WQBEL	1.24	0.06	EGL/WQBEL
Total Zinc	1.13	0.97	WQBEL/EGL	2.21	0.97	EGL
Total Copper	0.111	-	WQBEL	0.355	-	WQBEL
CBOD5 (Summer) (mg/L)	4.5	3	WQBEL	25.5	17	WQBEL
CBOD5 (Winter) (mg/L)	9	6	WQBEL	57	38	WQBEL

	Tier 2			Tier 3		
Parameter	Daily Max	Monthly Average	Basis	Daily Max	Monthly Average	Basis
Total Suspended Solids	1154	423	TMDL	1154	423	TMDL
Oil & Grease	401	120	EGL	401	120	EGL
Total Lead	1.24	0.07	EGL/WQBEL	1.24	0.08	EGL/WQBEL
Total Zinc	2.21	0.97	EGL	2.21	0.97	EGL
Total Copper	-	-	-	-	-	-
CBOD5 (Summer)	36	24	WQBEL	49.5	33	WQBEL
CBOD5 (Winter)	82.5	55	WQBEL	112.5	75	WQBEL

1) The Village Creek TMDL required no reduction to Total Suspended Solids loads from continuous sources; therefore, the previous limitations were continued in the 2014 permit issuance.

2) Oil & Grease limitations are based on the total allocations under the Hot Forming and Continuous Casting guidelines with the monthly average for continuous casting based on the ratio of monthly average to daily maximum (2.6/9) found in the 1982 Development Document Table A-3 (pg. 282).

Renewal Application Limitations

	Tier 0			Tier 1		
Parameter	Daily Max	Monthly Average	Basis	Daily Max	Monthly Average	Basis
Total Suspended Solids[1]	1154	423	TMDL	1154	423	TMDL
Oil & Grease[2]	360	108	EGL	360	108	EGL
Total Lead	1.12	0.06	EGL/WQBEL	1.12	0.25	EGL/WQBEL
Total Zinc[3]	1.68	0.56	WQBEL/EGL	1.68	0.56	EGL
Total Recoverable Copper (mg/L)	0.0346	-	WQBEL	-	-	-
CBOD5 (Summer) (mg/L)	7.4	4.9	WQBEL	40.5	27	WQBEL
CBOD5 (Winter) (mg/L)	13.5	9	WQBEL	75	50	WQBEL

	Tier 2			Tier 3		
Parameter	Daily Max	Monthly Average	Basis	Daily Max	Monthly Average	Basis
Total Suspended Solids	1154	423	TMDL	1154	423	TMDL
Oil & Grease	360	108	EGL	360	108	EGL
Total Lead	1.12	0.28	EGL/WQBEL	1.12	0.34	EGL/WQBEL
Total Zinc	1.68	0.56	EGL	1.68	0.56	EGL
Total Copper	-	-	-	-	-	-
CBOD5 (Summer)	54	36	WQBEL	74	50	WQBEL
CBOD5 (Winter)	105	70	WQBEL	147	98	WQBEL

1) The existing limitations remain unchnaged from the 2014 permit issuance. These limitations comply with the TMDL and are more stringent than the production-based effluent guideline limitations.

2) The limitations for Oil & Grease are being reduced based on the production values submitted with the application.

3) Zinc Intake Credit was removed for this permit issuance. See rationale for full description.

Proposed Permit Limtiations						
	Tier 0			Tier 1		
Parameter	Daily Max	Monthly Average	Basis	Daily Max	Monthly Average	Basis
Total Suspended Solids	1154	423	TMDL	1154	423	TMDL
Oil & Grease	360	108	EGL	360	108	EGL
Total Lead	1.12	0.06	EGL/WQBEL	1.12	0.25	EGL/WQBEL
Total Zinc	1.68	0.56	EGL	1.68	0.56	EGL
Total Recoverable Copper (mg/L)	0.0346	-	WQBEL	-	-	-
CBOD5 (Summer) (mg/L)	7.4	4.9	WQBEL	40.5	27	WQBEL
CBOD5 (Winter) (mg/L)	13.5	9	WQBEL	75	50	WQBEL
	Tier 2			Tier 3		
Parameter	Daily Max	Monthly Average	Basis	Daily Max	Monthly Average	Basis
Total Suspended Solids	1154	423	TMDL	1154	423	TMDL
Oil & Grease	360	108	EGL	360	108	EGL
Total Lead	1.12	0.28	EGL/WQBEL	1.12	0.32	EGL/WQBEL
Total Zinc	1.68	0.56	EGL	1.68	0.56	EGL
Total Recoverable Copper (mg/L)	-	-	-	-	-	-
CBOD5 (Summer)	54	36	WQBEL	74	50	WQBEL
CBOD5 (Winter)	105	70	WQBEL	147	98	WQBEL

Water Quality Based Effluent Limitations

Receiving Stream: Unnamed Tributary to Valley Creek

Facility LTA Flow: 0.6192 MGD

Hardness 100 mg/l

Flow Tiers*	
Tier 0	>= 0 and less than 3.0 CFS
Tier 1	>= 3.0 CFS and less than 3.5 CFS
Tier 2	>= 3.5 CFS and less than 4.3 CFS
Tier 3	>= 4.3 CFS

*Applicable tier is based on the monthly average stream flow reported for each monitoring period.

Flow-Tiered Concentration Limitations (ug/L)

Pollutant	Tier 0		Tier 1	
	Daily Maximum	*Monthly Average*	*Daily Maximum*	*Monthly Average*
Copper, Total Recoverable*	34.6	-	-	-
Lead, Total Recoverable	313.5	12.2	1295.2	50.5
Zinc, Total Recoverable	355.1	358.0	1219.6	1231.6
	Tier 2		**Tier 3**	
	Daily Maximum	*Monthly Average*	*Daily Maximum*	*Monthly Average*
Copper, Total Recoverable	-	-	-	-
Lead, Total Recoverable	1458.8	56.8	1720.6	67.0
Zinc, Total Recoverable	1363.7	1377.2	1536.6	1610.2

Flow-Tiered Concentration Limitations (lbs/day) (Average flow 430 gpm or 0.6 MGD)

Pollutant	Tier 0		Tier 1	
	Daily Maximum	*Monthly Average*	*Daily Maximum*	*Monthly Average*
Copper, Total Recoverable	0.17	-	-	-
Lead, Total Recoverable	1.57	0.06	6.48	0.25
Zinc, Total Recoverable	1.78	1.79	6.10	6.16
	Tier 2		**Tier 3**	
	Daily Maximum	*Monthly Average*	*Daily Maximum*	*Monthly Average*
Copper, Total Recoverable	-	-	-	-
Lead, Total Recoverable	7.30	0.28	8.61	0.34
Zinc, Total Recoverable	6.82	6.89	7.69	8.06

*Values are included for Copper where a reasonable potential exists for copper to violate the instream water quality standard.

Effluent Limitations Guidelines (2019 Renewal Application)

40 CFR 420 - Iron and Steel Manufacturing Category

Subpart F - Continuous Casting Subcategory

Production 3,915,397 lbs/day
3,915 1000 lbs/day

40 CFR 420.62 - Best Practicable Technology (BPT)

*Pollutant**	Guideline Factors		Allowable Loadings	
	Daily Maximum (lbs/1000 lbs product)	*Monthly Average (lbs/1000 lbs product)*	*Daily Maximum (lbs/day)*	*Monthly Average (lbs/day)*
TSS	0.078	0.026	305	102
Oil & Grease	0.0234	0.0078	92	31

*pH within the range of 6.0 to 9.0 S.U.

40 CFR 420.63 0 - Best Available Technology

Pollutant	Guideline Factors		Allowable Loadings	
	Daily Maximum (lbs/1000 lbs product)	*Monthly Average (lbs/1000 lbs product)*	*Daily Maximum (lbs/day)*	*Monthly Average (lbs/day)*
Lead	0.0000939	0.0000313	0.37	0.12
Zinc	0.000141	0.0000469	0.55	0.18

Subpart G - Hot Forming Subcategory

Production 3,000,610 lbs/day
3,001 1000 lbs/day

40 CFR 420.72(b)(1) - Section Mills: Carbon - Best Practicable Technology (BPT)

*Pollutant**	Guideline Factors		Allowable Loadings	
	Daily Maximum (lbs/1000 lbs product)	*Monthly Average (lbs/1000 lbs product)*	*Daily Maximum (lbs/day)*	*Monthly Average (lbs/day)*
TSS	0.357	0.134	1071	402
Oil & Grease	0.0894	-	268	-

*pH within the range of 6.0 to 9.0 S.U.

Iron and Steel Manufacturing Development Document: Volume IV - Hot Forming Subcategory
Alternative BAT Limitations - Option 1 (p. 345)

Pollutant	Guideline Factors		Allowable Loadings	
	Daily Maximum (lbs/1000 lbs product)	*Monthly Average (lbs/1000 lbs product)*	*Daily Maximum (lbs/day)*	*Monthly Average (lbs/day)*
Lead	0.00025	0.0000834	0.75	0.25
Zinc	0.000375	0.000125	1.13	0.38

Table A-3: Best Professional Judgment (Ratio of Monthly Average/Daily Maximum)

Pollutant	Concentration Basis			Allowable Loading
	Daily Maximum Basis	*Monthly Average Basis*	*Ratio*	*Subpart G Daily Max x Ratio (lbs/day)*
Oil & Grease	9	2.6	0.2889	77

Total Allocations (Subpart B)

Pollutant	Daily Maximum	
	Daily Maximum (lbs/day)	*Monthly Average (lbs/day)*
TSS	1377	504
Oil & Grease	360	108
Lead	1.12	0.37
Zinc	1.68	0.56

*pH within the range of 6.0 to 8.5 S.U.

ATTACHMENT B: REASONABLE POTENTIAL ANALYSIS

Facility Name: **CMC Steel Alabama - Tier 0**

NPDES No.: **AL0001554**

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

ID	Pollutant	Carcinogen "yes"	Type	Background from upstream source (C_{d2}) Daily Max	Background from upstream source (C_{d2}) Monthly Ave	Background Instream (C_s) Daily Max	Background Instream (C_s) Monthly Ave	Enter Max Daily Discharge as reported by Applicant (C_{dmax})	Enter Avg Daily Discharge as reported by Applicant (C_{davg})	Partition Coefficient (Stream / Lake)
				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	25	1.3	0.388
8	Lead**		Metals	0	0	0	0	0	0	0.206
9	Mercury**		Metals	0	0	0	0	0	0	0.000
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	0	0	79	79	42	0.2	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	100	100	-
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	Clorobenzene		VOC	0	0	0	0	0	0	-
26	**Chlorodibromo-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	**Dichlorobromo-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	**Tributyltine (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	P-Chloro-M-Cresol		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-methylophenol**	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		Bases	0	0	0	0	0	0	-
68	Acenaphthylene		Bases	0	0	0	0	0	0	-
69	Anthracene		Bases	0	0	0	0	0	0	-
70	Benzidine		Bases	0	0	0	0	0	0	-
71	**Benzo(A)Anthracene***	YES	Bases	0	0	0	0	0	0	-
72	**Benzo(A)Pyrene***	YES	Bases	0	0	0	0	0	0	-
73	3, 4 Benzo-Fluoranthene		Bases	0	0	0	0	0	0	-
74	Benzo(GHI)Perylene		Bases	0	0	0	0	0	0	-
75	Benzo(K)Fluoranthene		Bases	0	0	0	0	0	0	-
76	Bis (2-Chloroethoxy) Methane		Bases	0	0	0	0	0	0	-
77	**Bis (2-Chloroethyl)-Ether***	YES	Bases	0	0	0	0	0	0	-
78	Bis (2-Chloroiso-Propyl) Ether		Bases	0	0	0	0	0	0	-
79	**Bis (2-Ethylhexyl) Phthalate***	YES	Bases	0	0	0	0	0	0	-
80	4-Bromophenyl Phenyl Ether		Bases	0	0	0	0	0	0	-
81	Butyl Benzyl Phthalate		Bases	0	0	0	0	0	0	-
82	2-Chloronaphthalene		Bases	0	0	0	0	0	0	-
83	4-Chlorophenyl Phenyl Ether		Bases	0	0	0	0	0	0	-
84	**Chrysene***	YES	Bases	0	0	0	0	0	0	-
85	Di-N-Butyl Phthalate		Bases	0	0	0	0	0	0	-
86	Di-N-Octyl Phthalate		Bases	0	0	0	0	0	0	-
87	**Dibenzo(A,H)Anthracene***	YES	Bases	0	0	0	0	0	0	-
88	1, 2-Dichlorobenzene		Bases	0	0	0	0	0	0	-
89	1, 3-Dichlorobenzene		Bases	0	0	0	0	0	0	-
90	1, 4-Dichlorobenzene		Bases	0	0	0	0	0	0	-
91	**3, 3-Dichlorobenzene***	YES	Bases	0	0	0	0	0	0	-
92	Diethyl Phthalate		Bases	0	0	0	0	0	0	-
93	Dimethyl Phthalate		Bases	0	0	0	0	0	0	-
94	**2, 4-Dinitrotoluene***	YES	Bases	0	0	0	0	0	0	-
95	2, 6-Dinitrotoluene		Bases	0	0	0	0	0	0	-
96	1,2-Diphenylhydrazine		Bases	0	0	0	0	0	0	-
97	**Endosulfan (alpha)**	YES	Bases	0	0	0	0	0	0	-
98	**Endosulfan (beta)**	YES	Bases	0	0	0	0	0	0	-
99	**Endosulfan sulfate**	YES	Bases	0	0	0	0	0	0	-
100	**Endrin**	YES	Bases	0	0	0	0	0	0	-
101	**Endrin Aldeyhide**	YES	Bases	0	0	0	0	0	0	-
102	Fluoranthene		Bases	0	0	0	0	0	0	-
103	Fluorene		Bases	0	0	0	0	0	0	-
104	Heptochlor	YES	Bases	0	0	0	0	0	0	-
105	Heptachlor Epoxide	YES	Bases	0	0	0	0	0	0	-
106	**Hexachlorobenzene***	YES	Bases	0	0	0	0	0	0	-
107	**Hexachlorobutadiene***	YES	Bases	0	0	0	0	0	0	-
108	**Hexachlorocyclohexan (alpa)**	YES	Bases	0	0	0	0	0	0	-
109	**Hexachlorocyclohexan (beta)**	YES	Bases	0	0	0	0	0	0	-
110	**Hexachlorocyclohexan (gamma)**	YES	Bases	0	0	0	0	0	0	-
111	HexachlorocycloPentadiene		Bases	0	0	0	0	0	0	-
112	Hexachloroethane		Bases	0	0	0	0	0	0	-
113	**Indeno(1, 2, 3-CK)Pyrene***	YES	Bases	0	0	0	0	0	0	-
114	Isophorone		Bases	0	0	0	0	0	0	-
115	Naphthalene		Bases	0	0	0	0	0	0	-
116	Nitrobenzene		Bases	0	0	0	0	0	0	-
117	**N-Nitrosodi-N-Propylamine***	YES	Bases	0	0	0	0	0	0	-
118	**N-Nitrosodi-N-Methylamine***	YES	Bases	0	0	0	0	0	0	-
119	**N-Nitrosodi-N-Phenylamine***	YES	Bases	0	0	0	0	0	0	-
120	**PCB-1016**	YES	Bases	0	0	0	0	0	0	-
121	**PCB-1221**	YES	Bases	0	0	0	0	0	0	-
122	**PCB-1232**	YES	Bases	0	0	0	0	0	0	-
123	**PCB-1242**	YES	Bases	0	0	0	0	0	0	-
124	**PCB-1248**	YES	Bases	0	0	0	0	0	0	-
125	**PCB-1254**	YES	Bases	0	0	0	0	0	0	-
126	**PCB-1260**	YES	Bases	0	0	0	0	0	0	-
127	Phenanthrene		Bases	0	0	0	0	0	0	-
128	Pyrene		Bases	0	0	0	0	0	0	-
129	1, 2, 4-Trichlorobenzene		Bases	0	0	0	0	0	0	-

0.6192	Enter Q_d = wastewater discharge flow from facility (MGD)
0.958044	Q_d = wastewater discharge flow (cfs) (this value is calculated from the MGD)
0	Enter or estimated, Qd2 = background stream flow from upstream source (cfs)
0	Enter 7Q10, Q_s = background stream flow in cfs above point of discharge
0	Enter or estimated, 1Q10, Q_s = background stream flow in cfs above point of discharge (1Q10 estimated at 75% of 7Q10)
0	Enter flow from upstream discharge Qd2 = background stream flow in MGD above point of discharge
0.12	Enter Mean Annual Flow, Q_s = background stream flow in cfs above point of discharge
-	Enter 7Q2, Q_s = background stream flow in cfs above point of discharge (For LWF class streams)
Enter to Left	Enter C_s = background in-stream pollutant concentration in µg/l (assuming this is zero "0" unless there is data)
Q_s +Qd2+Q_d	Q_r = resultant in-stream flow, after discharge
Calculated on other sheets	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 Birmingham)
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

September 4, 2020

Facility Name: CMC Steel Alabama - Tier 0

NPDES No.: AL0001554

Freshwater F&W classification.					Max Daily Discharge as reported by Applicant ($C_{e(max)}$)	Freshwater Acute (µg/l) Q_s =1Q10				Avg Daily Discharge as reported by Applicant ($C_{e(avg)}$)	Freshwater Chronic (µg/l) Q_s = 7Q10				Human Health Consumption Fish only (µg/l) Carcinogen Q_s = Annual Average Non-Carcinogen Q_s = 7Q10			
ID	Pollutant	RP?	Carcinogen yes	Background from upstream source (Cd2) Daily Max		Water Quality Criteria (C_t)	Draft Permit Limit (C_{draft})	20% of Draft Permit Limit	RP?	Background from upstream source (Cd2) Monthly Ave		Water Quality Criteria (C_t)	Draft Permit Limit (C_{draft})	20% of Draft Permit Limit	RP?	Water Quality Criteria (C_t)	Draft Permit Limit (C_{draft})	20% of Draft Permit Limit	RP?
1	Antimony			0	0	-	-	-	-	0	0	-	-	-	-	3.73E+02	3.73E+02	7.47E+01	No
2	Arsenic		YES	0	0	592.334	592.334	118.467	No	0	0	261.324	261.324	52.265	No	3.03E-01	3.41E-01	6.82E-02	No
3	Beryllium			0	0	-	-	-	-	0	0	-	-	-	-	-	-	-	-
4	Cadmium			0	0	8.533	8.533	1.707	No	0	0	1.042	1.042	0.208	No	-	-	-	-
5	Chromium/ Chromium III			0	0	2713.159	2713.159	542.632	No	0	0	352.926	352.926	70.585	No	-	-	-	-
6	Chromium/ Chromium VI			0	0	16.000	16.000	3.200	No	0	0	11.000	11.000	2.200	No	-	-	-	-
7	Copper	YES		0	25	34.637	34.637	6.927	Yes	0	1.3	23.082	23.082	4.616	No	1.30E+03	1.30E+03	2.60E+02	No
8	Lead			0	0	313.502	313.502	62.700	No	0	0	12.217	12.217	2.443	No	-	-	-	-
9	Mercury			0	0	2.400	2.400	0.480	No	0	0	0.012	0.012	0.002	No	4.24E-02	4.24E-02	8.48E-03	No
10	Nickel			0	0	927.200	927.200	185.440	No	0	0	102.983	102.983	20.597	No	9.93E+02	9.93E+02	1.99E+02	No
11	Selenium			0	0	20.000	20.000	4.000	No	0	0	5.000	5.000	1.000	No	2.43E+03	2.43E+03	4.86E+02	No
12	Silver			0	0	3.217	3.217	0.643	No	0	0	-	-	-	-	-	-	-	-
13	Thallium			0	0	-	-	-	-	0	0	-	-	-	-	2.74E-01	2.74E-01	5.47E-02	No
14	Zinc			0	42	355.092	355.092	71.018	No	0	0.2	357.997	357.997	71.599	No	1.49E+04	1.49E+04	2.98E+03	No
15	Cyanide			0	0	22.000	22.000	4.400	No	0	0	5.200	5.200	1.040	No	9.33E+03	9.33E+03	1.87E+03	No
16	Total Phenolic Compounds			0	0	-	-	-	-	0	0	-	-	-	-	-	-	-	-
17	Hardness (As CaCO3)			0	100	-	-	-	-	0	100	-	-	-	-	-	-	-	-
18	Acrolein			0	0	-	-	-	-	0	0	-	-	-	-	5.43E+00	5.43E+00	1.09E+00	No
19	Acrylonitrile		YES	0	0	-	-	-	-	0	0	-	-	-	-	1.44E-01	1.62E-01	3.24E-02	No
20	Aldrin		YES	0	0	3.000	3.000	0.600	No	0	0	1.300	1.300	0.260	No	2.94E-05	3.31E-05	6.61E-06	No
21	Benzene		YES	0	0	-	-	-	-	0	0	-	-	-	-	1.55E+01	1.74E+01	3.48E+00	No
22	Bromoform		YES	0	0	-	-	-	-	0	0	-	-	-	-	7.88E+01	8.86E+01	1.77E+01	No
23	Carbon Tetrachloride		YES	0	0	-	-	-	-	0	0	-	-	-	-	9.57E-01	1.08E+00	2.15E-01	No
24	Chlordane		YES	0	0	2.400	2.400	0.480	No	0	0	0.004	0.004	0.001	No	4.73E-04	5.32E-04	1.06E-04	No
25	Clorobenzene			0	0	-	-	-	-	0	0	-	-	-	-	9.06E+02	9.06E+02	1.81E+02	No
26	Chlorodibromo-Methane		YES	0	0	-	-	-	-	0	0	-	-	-	-	7.41E+00	8.34E+00	1.67E+00	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	1.15E+02	2.30E+01	No
30	4,4' - DDD		YES	0	0	-	-	-	-	0	0	-	-	-	-	1.81E-04	2.04E-04	4.08E-05	No
31	4,4' - DDE		YES	0	0	-	-	-	-	0	0	-	-	-	-	1.28E-04	1.44E-04	2.88E-05	No
32	4,4' - DDT		YES	0	0	-	-	-	-	0	0	-	-	-	-	1.28E-04	1.44E-04	2.88E-05	No
33	Dichlorobromo-Methane		YES	0	0	-	-	-	-	0	0	-	-	-	-	1.00E+01	1.13E+01	2.26E+00	No
34	1, 1-Dichloroethane			0	0	-	-	-	-	0	0	-	-	-	-	-	-	-	-
35	1, 2-Dichloroethane		YES	0	0	-	-	-	-	0	0	-	-	-	-	2.14E+01	2.40E+01	4.81E+00	No
36	Trans-1, 2-Dichloro-Ethylene			0	0	-	-	-	-	0	0	-	-	-	-	5.91E+03	5.91E+03	1.18E+03	No
37	1, 1-Dichloroethylene		YES	0	0	-	-	-	-	0	0	-	-	-	-	4.17E+03	4.69E+03	9.38E+02	No
38	1, 2-Dichloropropane			0	0	-	-	-	-	0	0	-	-	-	-	8.49E+00	8.49E+00	1.70E+00	No
39	1, 3-Dichloro-Propylene			0	0	-	-	-	-	0	0	-	-	-	-	1.23E+01	1.23E+01	2.46E+00	No
40	Dieldrin		YES	0	0	0.240	0.240	0.048	No	0	0	0.056	0.056	0.011	No	3.12E-05	3.51E-05	7.03E-06	No
41	Ethylbenzene			0	0	-	-	-	-	0	0	-	-	-	-	1.24E+03	1.24E+03	2.49E+02	No
42	Methyl Bromide			0	0	-	-	-	-	0	0	-	-	-	-	8.71E+02	8.71E+02	1.74E+02	No
43	Methyl Chloride			0	0	-	-	-	-	0	0	-	-	-	-	-	-	-	-
44	Methylene Chloride		YES	0	0	-	-	-	-	0	0	-	-	-	-	3.46E+02	3.89E+02	7.78E+01	No
45	1, 1, 2, 2-Tetrachloro-Ethane		YES	0	0	-	-	-	-	0	0	-	-	-	-	2.33E+00	2.63E+00	5.25E-01	No
46	Tetrachloro-Ethylene		YES	0	0	-	-	-	-	0	0	-	-	-	-	1.92E+00	2.16E+00	4.31E-01	No
47	Toluene			0	0	-	-	-	-	0	0	-	-	-	-	8.72E+03	8.72E+03	1.74E+03	No
48	Toxaphene		YES	0	0	0.730	0.730	0.146	No	0	0	0.0002	0.000	0.000	No	1.62E-04	1.82E-04	3.64E-05	No
49	Tributyltin (TBT)		YES	0	0	0.460	0.460	0.092	No	0	0	0.072	0.072	0.014	No	-	-	-	-
50	1, 1, 1-Trichloroethane			0	0	-	-	-	-	0	0	-	-	-	-	-	-	-	-
51	1, 1, 2-Trichloroethane		YES	0	0	-	-	-	-	0	0	-	-	-	-	9.10E+00	1.02E+01	2.05E+00	No
52	Trichlorethylene		YES	0	0	-	-	-	-	0	0	-	-	-	-	1.75E+01	1.97E+01	3.93E+00	No
53	Vinyl Chloride		YES	0	0	-	-	-	-	0	0	-	-	-	-	1.42E+00	1.60E+00	3.21E-01	No
54	P-Chloro-M-Cresol			0	0	-	-	-	-	0	0	-	-	-	-	-	-	-	-
55	2-Chlorophenol			0	0	-	-	-	-	0	0	-	-	-	-	8.71E+01	8.71E+01	1.74E+01	No
56	2, 4-Dichlorophenol			0	0	-	-	-	-	0	0	-	-	-	-	1.72E+02	1.72E+02	3.44E+01	No
57	2, 4-Dimethylphenol			0	0	-	-	-	-	0	0	-	-	-	-	4.98E+02	4.98E+02	9.95E+01	No
58	4, 6-Dinitro-O-Cresol			0	0	-	-	-	-	0	0	-	-	-	-	-	-	-	-
59	2, 4-Dinitrophenol			0	0	-	-	-	-	0	0	-	-	-	-	3.11E+03	3.11E+03	6.22E+02	No
60	4,6-Dinitro-2-methylphenol		YES	0	0	-	-	-	-	0	0	-	-	-	-	1.65E+02	1.86E+02	3.72E+01	No
61	Dioxin (2,3,7,8-TCDD)		YES	0	0	-	-	-	-	0	0	-	-	-	-	2.67E-08	3.00E-08	6.00E-09	No
62	2-Nitrophenol			0	0	-	-	-	-	0	0	-	-	-	-	-	-	-	-
63	4-Nitrophenol			0	0	-	-	-	-	0	0	-	-	-	-	-	-	-	-
64	Pentachlorophenol		YES	0	0	8.723	8.723	1.745	No	0	0	6.693	6.693	1.339	No	1.77E+00	1.99E+00	3.98E-01	No
65	Phenol			0	0	-	-	-	-	0	0	-	-	-	-	5.00E+05	5.00E+05	1.00E+05	No
66	2, 4, 6-Trichlorophenol		YES	0	0	-	-	-	-	0	0	-	-	-	-	1.41E+00	1.59E+00	3.18E-01	No
67	Acenaphthene			0	0	-	-	-	-	0	0	-	-	-	-	5.79E+02	5.79E+02	1.16E+02	No
68	Acenaphthylene			0	0	-	-	-	-	0	0	-	-	-	-	-	-	-	-
69	Anthracene			0	0	-	-	-	-	0	0	-	-	-	-	2.33E+04	2.33E+04	4.67E+03	No
70	Benzidine			0	0	-	-	-	-	0	0	-	-	-	-	1.16E-04	1.16E-04	2.32E-05	No
71	Benzo(A)Anthracene		YES	0	0	-	-	-	-	0	0	-	-	-	-	1.07E-02	1.20E-02	2.40E-03	No
72	Benzo(A)Pyrene		YES	0	0	-	-	-	-	0	0	-	-	-	-	1.07E-02	1.20E-02	2.40E-03	No
73	3, 4 Benzo-Fluoranthene			0	0	-	-	-	-	0	0	-	-	-	-	1.07E-02	1.07E-02	2.13E-03	No
74	Benzo(GHI)Perylene			0	0	-	-	-	-	0	0	-	-	-	-	-	-	-	-
75	Benzo(K)Fluoranthene			0	0	-	-	-	-	0	0	-	-	-	-	1.07E-02	1.07E-02	2.13E-03	No
76	Bis (2-Chloroethoxy) Methane			0	0	-	-	-	-	0	0	-	-	-	-	-	-	-	-
77	Bis (2-Chloroethyl)-Ether		YES	0	0	-	-	-	-	0	0	-	-	-	-	3.07E-01	3.46E-01	6.92E-02	No
78	Bis (2-Chloroiso-Propyl) Ether			0	0	-	-	-	-	0	0	-	-	-	-	3.78E+04	3.78E+04	7.56E+03	No
79	Bis (2-Ethylhexyl) Phthalate		YES	0	0	-	-	-	-	0	0	-	-	-	-	1.28E+00	1.44E+00	2.89E-01	No
80	4-Bromophenyl Phenyl Ether			0	0	-	-	-	-	0	0	-	-	-	-	-	-	-	-
81	Butyl Benzyl Phthalate			0	0	-	-	-	-	0	0	-	-	-	-	1.13E+03	1.13E+03	2.25E+02	No
82	2-Chloronaphthalene			0	0	-	-	-	-	0	0	-	-	-	-	9.24E+02	9.24E+02	1.85E+02	No
83	4-Chlorophenyl Phenyl Ether			0	0	-	-	-	-	0	0	-	-	-	-	-	-	-	-
84	Chrysene		YES	0	0	-	-	-	-	0	0	-	-	-	-	1.07E-02	1.20E-02	2.40E-03	No
85	Di-N-Butyl Phthalate			0	0	-	-	-	-	0	0	-	-	-	-	2.62E+03	2.62E+03	5.24E+02	No
86	Di-N-Octyl Phthalate			0	0	-	-	-	-	0	0	-	-	-	-	-	-	-	-
87	Dibenzo(A,H)Anthracene		YES	0	0	-	-	-	-	0	0	-	-	-	-	1.07E-02	1.20E-02	2.40E-03	No
88	1, 2-Dichlorobenzene			0	0	-	-	-	-	0	0	-	-	-	-	7.56E+02	7.56E+02	1.51E+02	No
89	1, 3-Dichlorobenzene			0	0	-	-	-	-	0	0	-	-	-	-	5.62E+02	5.62E+02	1.12E+02	No
90	1, 4-Dichlorobenzene			0	0	-	-	-	-	0	0	-	-	-	-	1.12E+02	1.12E+02	2.25E+01	No
91	3, 3-Dichlorobenzene		YES	0	0	-	-	-	-	0	0	-	-	-	-	1.66E-02	1.87E-02	3.74E-03	No
92	Diethyl Phthalate			0	0	-	-	-	-	0	0	-	-	-	-	2.56E+04	2.56E+04	5.11E+03	No
93	Dimethyl Phthalate			0	0	-	-	-	-	0	0	-	-	-	-	6.48E+05	6.48E+05	1.30E+05	No
94	2, 4-Dinitrotoluene		YES	0	0	-	-	-	-	0	0	-	-	-	-	1.96E+00	2.23E+00	4.46E-01	No
95	2, 6-Dinitrotoluene			0	0	-	-	-	-	0	0	-	-	-	-	-	-	-	-
96	1,2-Diphenylhydrazine			0	0	-	-	-	-	0	0	-	-	-	-	1.17E-01	1.17E-01	2.34E-02	No
97	Endosulfan (alpha)		YES	0	0	0.22	0.220	0.044	No	0	0	0.056	0.056	0.011	No	5.19E+01	5.83E+01	1.17E+01	No
98	Endosulfan (beta)		YES	0	0	0.22	0.220	0.044	No	0	0	0.056	0.056	0.011	No	5.19E+01	5.83E+01	1.17E+01	No
99	Endosulfan sulfate		YES	0	0	-	-	-	-	0	0	-	-	-	-	5.19E+01	5.83E+01	1.17E+01	No
100	Endrin		YES	0	0	0.086	0.086	0.017	No	0	0	0.036	0.036	0.007	No	3.53E-02	3.97E-02	7.94E-03	No
101	Endrin Aldeyhde		YES	0	0	-	-	-	-	0	0	-	-	-	-	1.79E+00	1.98E+00	3.97E-01	No
102	Fluoranthene			0	0	-	-	-	-	0	0	-	-	-	-	8.12E+01	8.12E+01	1.62E+01	No
103	Fluorene			0	0	-	-	-	-	0	0	-	-	-	-	3.11E+03	3.11E+03	6.22E+02	No
104	Heptochlor		YES	0	0	0.52	0.520	0.104	No	0	0	0.004	0.004	0.001	No	4.63E-05	5.21E-05	1.04E-05	No
105	Heptachlor Epoxide		YES	0	0	0.52	0.520	0.104	No	0	0	0.004	0.004	0.001	No	2.29E-05	2.58E-05	5.15E-06	No
106	Hexachlorobenzene		YES	0	0	-	-	-	-	0	0	-	-	-	-	1.68E-04	1.89E-04	3.78E-05	No
107	Hexachlorobutadiene		YES	0	0	-	-	-	-	0	0	-	-	-	-	1.08E+01	1.21E+01	2.42E+00	No
108	Hexachlorocyclohexan (alpha)		YES	0	0	-	-	-	-	0	0	-	-	-	-	2.85E-03	3.21E-03	6.41E-04	No
109	Hexachlorocyclohexan (beta)		YES	0	0	-	-	-	-	0	0	-	-	-	-	9.97E-03	1.12E-02	2.24E-03	No
110	Hexachlorocyclohexan (gamma)		YES	0	0	0.95	0.950	0.190	No	0	0	-	-	-	-	1.08E+00	1.21E+00	2.42E-01	No
111	HexachlorocycloPentadiene			0	0	-	-	-	-	0	0	-	-	-	-	6.45E+02	6.45E+02	1.29E+02	No
112	Hexachloroethane			0	0	-	-	-	-	0	0	-	-	-	-	1.92E+00	1.92E+00	3.84E-01	No
113	Indeno(1, 2, 3-CK)Pyrene		YES	0	0	-	-	-	-	0	0	-	-	-	-	1.07E-02	1.20E-02	2.40E-03	No
114	Isophorone			0	0	-	-	-	-	0	0	-	-	-	-	5.61E+02	5.61E+02	1.12E+02	No
115	Naphthalene			0	0	-	-	-	-	0	0	-	-	-	-	-	-	-	-
116	Nitrobenzene			0	0	-	-	-	-	0	0	-	-	-	-	4.04E+02	4.04E+02	8.07E+01	No
117	N-Nitrosodi-N-Propylamine		YES	0	0	-	-	-	-	0	0	-	-	-	-	2.95E-01	3.32E-01	6.64E-02	No
118	N-Nitrosodi-N-Methylamine		YES	0	0	-	-	-	-	0	0	-	-	-	-	1.76E+00	1.98E+00	3.96E-01	No
119	N-Nitrosodi-N-Phenylamine		YES	0	0	-	-	-	-	0	0	-	-	-	-	3.50E+00	3.84E+00	7.88E-01	No
120	PCB-1016		YES	0	0	-	-	-	-	0	0	0.014	0.014	0.003	No	3.74E-05	4.21E-05	8.42E-06	No
121	PCB-1221		YES	0	0	-	-	-	-	0	0	0.014	0.014	0.003	No	3.74E-05	4.21E-05	8.42E-06	No
122	PCB-1232		YES	0	0	-	-	-	-	0	0	0.014	0.014	0.003	No	3.74E-05	4.21E-05	8.42E-06	No
123	PCB-1242		YES	0	0	-	-	-	-	0	0	0.014	0.014	0.003	No	3.74E-05	4.21E-05	8.42E-06	No
124	PCB-1248		YES	0	0	-	-	-	-	0	0	0.014	0.014	0.003	No	3.74E-05	4.21E-05	8.42E-06	No
125	PCB-1254		YES	0	0	-	-	-	-	0	0	0.014	0.014	0.003	No	3.74E-05	4.21E-05	8.42E-06	No
126	PCB-1260		YES	0	0	-	-	-	-	0	0	0.014	0.014	0.003	No	3.74E-05	4.21E-05	8.42E-06	No
127	Phenanthrene			0	0	-	-	-	-	0	0	-	-	-	-	-	-	-	-
128	Pyrene			0	0	-	-	-	-	0	0	-	-	-	-	2.33E+03	2.33E+03	4.67E+02	No
129	1, 2, 4-Trichlorobenzene			0	0	-	-	-	-	0	0	-	-	-	-	4.09E+01	4.09E+01	8.19E+00	No

Facility Name: **CMC Steel - Tier 1**

NPDES No.: **AL0001554**

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

ID	Pollutant	Carcinogen "yes"	Type	Background from upstream source (C_{d2}) Daily Max	Background from upstream source (C_{d2}) Monthly Ave	Background Instream (C_s) Daily Max	Background Instream (C_s) Monthly Ave	**Enter** Max Daily Discharge as reported by Applicant (C_{dmax})	**Enter** Avg Daily Discharge as reported by Applicant (C_{davg})	Partition Coefficient (Stream / Lake)
				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	26	1.3	0.388
8	Lead**		Metals	0	0	0	0	0	0	0.206
9	Mercury**		Metals	0	0	0	0	0	0	0.000
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	0	0	79	79	42	0.2	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	100	100	-
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	Clorobenzene		VOC	0	0	0	0	0	0	-
26	**Chlorodibromo-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	**Dichlorobromo-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	Ethylberzene		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	**Tributyltine (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	**Trichlorethylene***	YES	VOC	0	0	0	0	0	0	-
53	**Vinyl Chloride***	YES	VOC	0	0	0	0	0	0	-
54	P-Chloro-M-Cresol		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-Dintro-2-methylophenol**	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		Bases	0	0	0	0	0	0	-
68	Acenaphthylene		Bases	0	0	0	0	0	0	-
69	Anthracene		Bases	0	0	0	0	0	0	-
70	Benzidine		Bases	0	0	0	0	0	0	-
71	**Benzo(A)Anthracene***	YES	Bases	0	0	0	0	0	0	-
72	**Benzo(A)Pyrene***	YES	Bases	0	0	0	0	0	0	-
73	3, 4 Benzo-Fluoranthene		Bases	0	0	0	0	0	0	-
74	Benzo(GHI)Perylene		Bases	0	0	0	0	0	0	-
75	Benzo(K)Fluoranthene		Bases	0	0	0	0	0	0	-
76	Bis (2-Chloroethoxy) Methane		Bases	0	0	0	0	0	0	-
77	**Bis (2-Chloroethyl)-Ether***	YES	Bases	0	0	0	0	0	0	-
78	Bis (2-Chloroiso-Propyl) Ether		Bases	0	0	0	0	0	0	-
79	**Bis (2-Ethylhexyl) Phthalate***	YES	Bases	0	0	0	0	0	0	-
80	4-Bromophenyl Phenyl Ether		Bases	0	0	0	0	0	0	-
81	Butyl Benzyl Phthalate		Bases	0	0	0	0	0	0	-
82	2-Chloronaphthalene		Bases	0	0	0	0	0	0	-
83	4-Chlorophenyl Phenyl Ether		Bases	0	0	0	0	0	0	-
84	**Chrysene***	YES	Bases	0	0	0	0	0	0	-
85	Di-N-Butyl Phthalate		Bases	0	0	0	0	0	0	-
86	Di-N-Octyl Phthalate		Bases	0	0	0	0	0	0	-
87	**Dibenzo(A,H)Anthracene***	YES	Bases	0	0	0	0	0	0	-
88	1, 2-Dichlorobenzene		Bases	0	0	0	0	0	0	-
89	1, 3-Dichlorobenzene		Bases	0	0	0	0	0	0	-
90	1, 4-Dichlorobenzene		Bases	0	0	0	0	0	0	-
91	**3, 3-Dichlorobenzene***	YES	Bases	0	0	0	0	0	0	-
92	Diethyl Phthalate		Bases	0	0	0	0	0	0	-
93	Dimethyl Phthalate		Bases	0	0	0	0	0	0	-
94	**2, 4-Dinitrotoluene***	YES	Bases	0	0	0	0	0	0	-
95	2, 6-Dinitrotoluene		Bases	0	0	0	0	0	0	-
96	1,2-Diphenylhydrazine		Bases	0	0	0	0	0	0	-
97	**Endosulfan (alpha)**	YES	Bases	0	0	0	0	0	0	-
98	**Endosulfan (beta)**	YES	Bases	0	0	0	0	0	0	-
99	**Endosulfan sulfate**	YES	Bases	0	0	0	0	0	0	-
100	**Endrin**	YES	Bases	0	0	0	0	0	0	-
101	**Endrin Aldeyhide**	YES	Bases	0	0	0	0	0	0	-
102	Fluoranthene		Bases	0	0	0	0	0	0	-
103	Fluorene		Bases	0	0	0	0	0	0	-
104	Heptochlor	YES	Bases	0	0	0	0	0	0	-
105	Heptachlor Epoxide	YES	Bases	0	0	0	0	0	0	-
106	**Hexachlorobenzene***	YES	Bases	0	0	0	0	0	0	-
107	**Hexachlorobutadiene***	YES	Bases	0	0	0	0	0	0	-
108	**Hexachlorocyclohexan (alpa)**	YES	Bases	0	0	0	0	0	0	-
109	**Hexachlorocyclohexan (beta)**	YES	Bases	0	0	0	0	0	0	-
110	**Hexachlorocyclohexan (gamma)**	YES	Bases	0	0	0	0	0	0	-
111	HexachlorocycloPentadiene		Bases	0	0	0	0	0	0	-
112	Hexachloroethane		Bases	0	0	0	0	0	0	-
113	**Indeno(1, 2, 3-CK)Pyrene***	YES	Bases	0	0	0	0	0	0	-
114	Isophorone		Bases	0	0	0	0	0	0	-
115	Naphthalene		Bases	0	0	0	0	0	0	-
116	Nitrobenzene		Bases	0	0	0	0	0	0	-
117	**N-Nitrosodi-N-Propylamine***	YES	Bases	0	0	0	0	0	0	-
118	**N-Nitrosodi-N-Methylamine***	YES	Bases	0	0	0	0	0	0	-
119	**N-Nitrosodi-N-Phenylamine***	YES	Bases	0	0	0	0	0	0	-
120	**PCB-1016**	YES	Bases	0	0	0	0	0	0	-
121	**PCB-1221**	YES	Bases	0	0	0	0	0	0	-
122	**PCB-1232**	YES	Bases	0	0	0	0	0	0	-
123	**PCB-1242**	YES	Bases	0	0	0	0	0	0	-
124	**PCB-1248**	YES	Bases	0	0	0	0	0	0	-
125	**PCB-1254**	YES	Bases	0	0	0	0	0	0	-
126	**PCB-1260**	YES	Bases	0	0	0	0	0	0	-
127	Phenanthrene		Bases	0	0	0	0	0	0	-
128	Pyrene		Bases	0	0	0	0	0	0	-
129	1, 2, 4-Trichlorobenzene		Bases	0	0	0	0	0	0	-

0.6192	Enter Q_d = wastewater discharge flow from facility (MGD)
0.958044	Q_s = wastewater discharge flow (cfs) (this value is caluclated from the MGD)
0	**Enter or estimated,** Qd2 = background stream flow from upstream source (cfs)
3.0	**Enter 7Q10,** Q_s = background stream flow in cfs above point of discharge
3.0	**Enter or estimated, 1Q10,** Q_s = background stream flow in cfs above point of discharge (1Q10 estimated at 75% of 7Q10)
0	Enter flow from upstream discharge Qd2 = background stream flow in MGD above point of discharge
0.12	**Enter Mean Annual Flow.** Q_s = background stream flow in cfs above point of discharge
-	Enter 7Q2. Q_s = background stream flow in cfs above point of discharge (For LWF class streams)
Enter to Left	Enter C_s = background in-stream pollutant concentration in µg/l (assuming this is zero "0" unless there is data)
Q_s +Qd2+Q_s	Q_r = resultant in-stream flow, after discharge
Calculated on other sheets	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 Birmingham)
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

September 4, 2020

Facility Name: CMC Steel - Tier 1

NPDES No.: AL0001554

Freshwater F&W classification						Freshwater Acute (µg/l) Q_s =1Q10					Freshwater Chronic (µg/l) Q_s = 7Q10				Human Health Consumption Fish only (µg/l) Carcinogen Q_s = Annual Average Non-Carcinogen Q_s = 7Q10			
ID	Pollutant	RP?	Carcinogen yes	Background from upstream source (Cd2) Daily Max	Max Daily Discharge as reported by Applicant ($C_{e(max)}$)	Water Quality Criteria (C_c)	Draft Permit Limit (C_{lim})	20% of Draft Permit Limit	RP?	Background from upstream source (Cd2) Monthly Ave	Avg Daily Discharge as reported by Applicant ($C_{e(ave)}$)	Water Quality Criteria (C_c)	Draft Permit Limit (C_{lim})	20% of Draft Permit Limit	RP?	Water Quality Criteria (C_c)	Draft Permit Limit (C_{lim})	20% of Draft Permit Limit	RP?
1	Antimony			0	0	-	-	-	-	0	0	-	-	-	-	3.73E+02	1.54E+03	3.08E+02	No
2	Arsenic		YES	0	0	592.334	2447.159	489.432	No	0	0	261.324	1079.829	215.926	No	3.03E-01	3.41E-01	6.82E-02	No
3	Beryllium			0	0	-	-	-	-	0	0	-	-	-	-	-	-	-	-
4	Cadmium			0	0	8.533	35.252	7.050	No	0	0	1.042	4.306	0.861	No	-	-	-	-
5	Chromium/ Chromium III			0	0	2713.159	11209.091	2241.818	No	0	0	352.926	1458.072	291.614	No	-	-	-	-
6	Chromium/ Chromium VI			0	0	16.000	66.102	13.220	No	0	0	11.000	45.445	9.089	No	-	-	-	-
7	Copper			0	26	34.637	143.098	28.620	No	0	1.3	23.082	95.360	19.072	No	1.30E+03	5.37E+03	1.07E+03	No
8	Lead			0	0	313.502	1295.195	259.039	No	0	0	12.217	50.472	10.094	No	-	-	-	-
9	Mercury			0	0	2.400	9.915	1.983	No	0	0	0.012	0.050	0.010	No	4.24E-02	1.75E-01	3.51E-02	No
10	Nickel			0	0	927.200	3830.813	766.123	No	0	0	102.883	425.463	85.093	No	9.93E+02	4.10E+03	8.20E+02	No
11	Selenium			0	0	20.000	82.628	16.526	No	0	0	5.000	20.657	4.131	No	2.43E+03	1.00E+04	2.01E+03	No
12	Silver			0	0	3.217	13.290	2.658	No	0	0	-	-	-	-	-	-	-	-
13	Thallium			0	0	-	-	-	-	0	0	-	-	-	-	2.74E-01	1.13E+00	2.26E-01	No
14	Zinc			0	42	355.092	1219.642	243.928	No	0	0.2	357.997	1231.642	246.328	No	1.49E+04	6.13E+04	1.23E+04	No
15	Cyanide			0	0	22.000	90.880	18.176	No	0	0	5.200	21.483	4.297	No	9.33E+03	3.86E+04	7.71E+03	No
16	Total Phenolic Compounds			0	0	-	-	-	-	0	0	-	-	-	-	-	-	-	-
17	Hardness (As CaCO3)			0	100	-	-	-	-	0	100	-	-	-	-	-	-	-	-
18	Acrolein			0	0	-	-	-	-	0	0	-	-	-	-	5.43E+00	2.24E+01	4.48E+00	No
19	Acrylonitrile		YES	0	0	-	-	-	-	0	0	-	-	-	-	1.44E-01	1.62E-01	3.24E-02	No
20	Aldrin		YES	0	0	3.000	12.394	2.479	No	0	0	1.300	5.371	1.074	No	2.94E-05	3.31E-05	6.61E-06	No
21	Benzene		YES	0	0	-	-	-	-	0	0	-	-	-	-	1.55E+01	1.74E+01	3.48E+00	No
22	Bromoform		YES	0	0	-	-	-	-	0	0	-	-	-	-	7.88E+01	8.86E+01	1.77E+01	No
23	Carbon Tetrachloride		YES	0	0	-	-	-	-	0	0	-	-	-	-	9.57E-01	1.08E+00	2.15E-01	No
24	Chlordane		YES	0	0	2.400	9.915	1.983	No	0	0	0.004	0.018	0.004	No	4.73E-04	5.32E-04	1.06E-04	No
25	Clorobenzene			0	0	-	-	-	-	0	0	-	-	-	-	9.08E+02	3.74E+03	7.49E+02	No
26	Chlorodibromo-Methane		YES	0	0	-	-	-	-	0	0	-	-	-	-	7.41E+00	8.34E+00	1.67E+00	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	1.15E+02	2.30E+01	No
30	4,4' - DDD		YES	0	0	-	-	-	-	0	0	-	-	-	-	1.81E-04	2.04E-04	4.08E-05	No
31	4,4' - DDE		YES	0	0	-	-	-	-	0	0	-	-	-	-	1.28E-04	1.44E-04	2.88E-05	No
32	4,4' - DDT		YES	0	0	-	-	-	-	0	0	-	-	-	-	1.28E-04	1.44E-04	2.88E-05	No
33	Dichlorobromo-Methane		YES	0	0	-	-	-	-	0	0	-	-	-	-	1.00E+01	1.13E+01	2.26E+00	No
34	1, 1-Dichloroethane			0	0	-	-	-	-	0	0	-	-	-	-	-	-	-	-
35	1, 2-Dichloroethane		YES	0	0	-	-	-	-	0	0	-	-	-	-	2.14E+01	2.40E+01	4.81E+00	No
36	Trans-1, 2-Dichloro-Ethylene			0	0	-	-	-	-	0	0	-	-	-	-	5.91E+03	2.44E+04	4.88E+03	No
37	1, 1-Dichloroethylene		YES	0	0	-	-	-	-	0	0	-	-	-	-	4.17E+03	4.69E+03	9.38E+02	No
38	1, 2-Dichloropropane			0	0	-	-	-	-	0	0	-	-	-	-	8.49E+00	3.51E+01	7.02E+00	No
39	1, 3-Dichloro-Propylene			0	0	-	-	-	-	0	0	-	-	-	-	1.23E+01	5.07E+01	1.01E+01	No
40	Dieldrin		YES	0	0	0.240	0.992	0.198	No	0	0	0.056	0.231	0.046	No	3.12E-05	3.51E-05	7.03E-06	No
41	Ethylbenzene			0	0	-	-	-	-	0	0	-	-	-	-	1.24E+03	5.14E+03	1.03E+03	No
42	Methyl Bromide			0	0	-	-	-	-	0	0	-	-	-	-	8.71E+02	3.60E+03	7.20E+02	No
43	Methyl Chloride			0	0	-	-	-	-	0	0	-	-	-	-	-	-	-	-
44	Methylene Chloride		YES	0	0	-	-	-	-	0	0	-	-	-	-	3.46E+02	3.89E+02	7.78E+01	No
45	1, 1, 2, 2-Tetrachloro-Ethane		YES	0	0	-	-	-	-	0	0	-	-	-	-	2.33E+00	2.63E+00	5.25E-01	No
46	Tetrachloro-Ethylene		YES	0	0	-	-	-	-	0	0	-	-	-	-	1.92E+00	2.16E+00	4.31E-01	No
47	Toluene			0	0	-	-	-	-	0	0	-	-	-	-	8.72E+03	3.60E+04	7.21E+03	No
48	Toxaphene		YES	0	0	0.730	3.016	0.603	No	0	0	0.0002	0.001	0.000	No	1.62E-04	1.82E-04	3.64E-05	No
49	Tributyltin (TBT)		YES	0	0	0.460	1.900	0.380	No	0	0	0.072	0.297	0.059	No	-	-	-	-
50	1, 1, 1-Trichloroethane			0	0	-	-	-	-	0	0	-	-	-	-	-	-	-	-
51	1, 1, 2-Trichloroethane		YES	0	0	-	-	-	-	0	0	-	-	-	-	9.10E+00	1.02E+01	2.05E+00	No
52	Trichlorethylene		YES	0	0	-	-	-	-	0	0	-	-	-	-	1.75E+01	1.97E+01	3.93E+00	No
53	Vinyl Chloride		YES	0	0	-	-	-	-	0	0	-	-	-	-	1.42E+00	1.60E+00	3.21E-01	No
54	P-Chloro-M-Cresol			0	0	-	-	-	-	0	0	-	-	-	-	-	-	-	-
55	2-Chlorophenol			0	0	-	-	-	-	0	0	-	-	-	-	8.71E+01	3.60E+02	7.19E+01	No
56	2, 4-Dichlorophenol			0	0	-	-	-	-	0	0	-	-	-	-	1.72E+02	7.11E+02	1.42E+02	No
57	2, 4-Dimethylphenol			0	0	-	-	-	-	0	0	-	-	-	-	4.98E+02	2.06E+03	4.11E+02	No
58	4, 6-Dinitro-O-Cresol			0	0	-	-	-	-	0	0	-	-	-	-	-	-	-	-
59	2, 4-Dinitrophenol			0	0	-	-	-	-	0	0	-	-	-	-	3.11E+03	1.29E+04	2.57E+03	No
60	4,6-Dinitro-2-methylphenol		YES	0	0	-	-	-	-	0	0	-	-	-	-	1.65E+02	1.86E+02	3.72E+01	No
61	Dioxin (2,3,7,8-TCDD)		YES	0	0	-	-	-	-	0	0	-	-	-	-	2.67E-08	3.00E-08	6.00E-09	No
62	2-Nitrophenol			0	0	-	-	-	-	0	0	-	-	-	-	-	-	-	-
63	4-Nitrophenol			0	0	-	-	-	-	0	0	-	-	-	-	-	-	-	-
64	Pentachlorophenol		YES	0	0	8.723	36.039	7.208	No	0	0	6.693	27.650	5.530	No	1.77E+00	1.99E+00	3.98E-01	No
65	Phenol			0	0	-	-	-	-	0	0	-	-	-	-	5.00E+05	2.07E+06	4.13E+05	No
66	2, 4, 6-Trichlorophenol		YES	0	0	-	-	-	-	0	0	-	-	-	-	1.41E+00	1.59E+00	3.18E-01	No
67	Acenaphthene			0	0	-	-	-	-	0	0	-	-	-	-	5.75E+02	2.39E+03	4.78E+02	No
68	Acenaphthylene			0	0	-	-	-	-	0	0	-	-	-	-	-	-	-	-
69	Anthracene			0	0	-	-	-	-	0	0	-	-	-	-	2.33E+04	9.64E+04	1.93E+04	No
70	Benzidine			0	0	-	-	-	-	0	0	-	-	-	-	1.16E-04	4.79E-04	9.58E-05	No
71	Benzo(A)Anthracene		YES	0	0	-	-	-	-	0	0	-	-	-	-	1.07E-02	1.20E-02	2.40E-03	No
72	Benzo(A)Pyrene		YES	0	0	-	-	-	-	0	0	-	-	-	-	1.07E-02	1.20E-02	2.40E-03	No
73	3, 4 Benzo-Fluoranthene			0	0	-	-	-	-	0	0	-	-	-	-	1.07E-02	4.40E-02	8.80E-03	No
74	Benzo(GHI)Perylene			0	0	-	-	-	-	0	0	-	-	-	-	-	-	-	-
75	Benzo(K)Fluoranthene			0	0	-	-	-	-	0	0	-	-	-	-	1.07E-02	4.40E-02	8.80E-03	No
76	Bis (2-Chloroethoxy) Methane			0	0	-	-	-	-	0	0	-	-	-	-	-	-	-	-
77	Bis (2-Chloroethyl)-Ether		YES	0	0	-	-	-	-	0	0	-	-	-	-	3.07E-01	3.46E-01	6.92E-02	No
78	Bis (2-Chloroiso-Propyl) Ether			0	0	-	-	-	-	0	0	-	-	-	-	3.78E+04	1.56E+05	3.12E+04	No
79	Bis (2-Ethylhexyl) Phthalate		YES	0	0	-	-	-	-	0	0	-	-	-	-	1.28E+00	1.44E+00	2.88E-01	No
80	4-Bromophenyl Phenyl Ether			0	0	-	-	-	-	0	0	-	-	-	-	-	-	-	-
81	Butyl Benzyl Phthalate			0	0	-	-	-	-	0	0	-	-	-	-	1.13E+03	4.66E+03	9.31E+02	No
82	2-Chloronaphthalene			0	0	-	-	-	-	0	0	-	-	-	-	9.24E+02	3.82E+03	7.64E+02	No
83	4-Chlorophenyl Phenyl Ether			0	0	-	-	-	-	0	0	-	-	-	-	-	-	-	-
84	Chrysene		YES	0	0	-	-	-	-	0	0	-	-	-	-	1.07E-02	1.20E-02	2.40E-03	No
85	Di-N-Butyl Phthalate			0	0	-	-	-	-	0	0	-	-	-	-	2.62E+03	1.08E+04	2.17E+03	No
86	Di-N-Octyl Phthalate			0	0	-	-	-	-	0	0	-	-	-	-	-	-	-	-
87	Dibenzo(A,H)Anthracene		YES	0	0	-	-	-	-	0	0	-	-	-	-	1.07E-02	1.20E-02	2.40E-03	No
88	1, 2-Dichlorobenzene			0	0	-	-	-	-	0	0	-	-	-	-	7.55E+02	3.12E+03	6.24E+02	No
89	1, 3-Dichlorobenzene			0	0	-	-	-	-	0	0	-	-	-	-	5.62E+02	2.32E+03	4.65E+02	No
90	1, 4-Dichlorobenzene			0	0	-	-	-	-	0	0	-	-	-	-	1.12E+02	4.65E+02	9.29E+01	No
91	3, 3-Dichlorobenzene		YES	0	0	-	-	-	-	0	0	-	-	-	-	1.68E-02	1.87E-02	3.74E-03	No
92	Diethyl Phthalate			0	0	-	-	-	-	0	0	-	-	-	-	2.56E+04	1.06E+05	2.11E+04	No
93	Dimethyl Phthalate			0	0	-	-	-	-	0	0	-	-	-	-	6.48E+05	2.68E+06	5.36E+05	No
94	2, 4-Dinitrotoluene		YES	0	0	-	-	-	-	0	0	-	-	-	-	1.98E+00	2.23E+00	4.46E-01	No
95	2, 6-Dinitrotoluene			0	0	-	-	-	-	0	0	-	-	-	-	-	-	-	-
96	1,2-Diphenylhydrazine			0	0	-	-	-	-	0	0	-	-	-	-	1.17E-01	4.84E-01	9.68E-02	No
97	Endosulfan (alpha)		YES	0	0	0.22	0.909	0.182	No	0	0	0.056	0.231	0.046	No	5.19E+01	5.83E+01	1.17E+01	No
98	Endosulfan (beta)		YES	0	0	0.22	0.909	0.182	No	0	0	0.056	0.231	0.046	No	5.19E+01	5.83E+01	1.17E+01	No
99	Endosulfan sulfate		YES	0	0	-	-	-	-	0	0	-	-	-	-	5.19E+01	5.83E+01	1.17E+01	No
100	Endrin		YES	0	0	0.086	0.355	0.071	No	0	0	0.036	0.149	0.030	No	3.53E-02	3.97E-02	7.94E-03	No
101	Endrin Aldeyhde		YES	0	0	-	-	-	-	0	0	-	-	-	-	1.76E+00	1.98E+00	3.97E-01	No
102	Fluoranthene			0	0	-	-	-	-	0	0	-	-	-	-	8.12E+01	3.35E+02	6.71E+01	No
103	Fluorene			0	0	-	-	-	-	0	0	-	-	-	-	3.11E+03	1.29E+04	2.57E+03	No
104	Heptochlor		YES	0	0	0.52	2.148	0.430	No	0	0	0.004	0.016	0.003	No	4.83E-05	5.21E-05	1.04E-05	No
105	Heptachlor Epoxide		YES	0	0	0.52	2.148	0.430	No	0	0	0.004	0.016	0.003	No	2.29E-05	2.58E-05	5.15E-06	No
106	Hexachlorobenzene		YES	0	0	-	-	-	-	0	0	-	-	-	-	1.68E-04	1.89E-04	3.78E-05	No
107	Hexachlorobutadiene		YES	0	0	-	-	-	-	0	0	-	-	-	-	1.08E+01	1.21E+01	2.42E+00	No
108	Hexachlorocyclohexan (alpha)		YES	0	0	-	-	-	-	0	0	-	-	-	-	2.85E-03	3.21E-03	6.41E-04	No
109	Hexachlorocyclohexan (beta)		YES	0	0	-	-	-	-	0	0	-	-	-	-	9.97E-03	1.12E-02	2.24E-03	No
110	Hexachlorocyclohexan (gamma)		YES	0	0	0.95	3.925	0.785	No	0	0	-	-	-	-	1.08E+00	1.21E+00	2.42E-01	No
111	HexachlorocycloPentadiene			0	0	-	-	-	-	0	0	-	-	-	-	6.45E+02	2.67E+03	5.33E+02	No
112	Hexachloroethane			0	0	-	-	-	-	0	0	-	-	-	-	1.92E+00	7.92E+00	1.58E+00	No
113	Indeno(1, 2, 3-CK)Pyrene		YES	0	0	-	-	-	-	0	0	-	-	-	-	1.07E-02	1.20E-02	2.40E-03	No
114	Isophorone			0	0	-	-	-	-	0	0	-	-	-	-	5.61E+02	2.32E+03	4.63E+02	No
115	Naphthalene			0	0	-	-	-	-	0	0	-	-	-	-	-	-	-	-
116	Nitrobenzene			0	0	-	-	-	-	0	0	-	-	-	-	4.04E+02	1.67E+03	3.34E+02	No
117	N-Nitrosodi-N-Propylamine		YES	0	0	-	-	-	-	0	0	-	-	-	-	2.95E-01	3.32E-01	6.64E-02	No
118	N-Nitrosodi-N-Methylamine		YES	0	0	-	-	-	-	0	0	-	-	-	-	1.78E+00	1.98E+00	3.96E-01	No
119	N-Nitrosodi-N-Phenylamine		YES	0	0	-	-	-	-	0	0	-	-	-	-	3.50E+00	3.94E+00	7.88E-01	No
120	PCB-1016		YES	0	0	-	-	-	-	0	0	0.014	0.058	0.012	No	3.74E-05	4.21E-05	8.42E-06	No
121	PCB-1221		YES	0	0	-	-	-	-	0	0	0.014	0.058	0.012	No	3.74E-05	4.21E-05	8.42E-06	No
122	PCB-1232		YES	0	0	-	-	-	-	0	0	0.014	0.058	0.012	No	3.74E-05	4.21E-05	8.42E-06	No
123	PCB-1242		YES	0	0	-	-	-	-	0	0	0.014	0.058	0.012	No	3.74E-05	4.21E-05	8.42E-06	No
124	PCB-1248		YES	0	0	-	-	-	-	0	0	0.014	0.058	0.012	No	3.74E-05	4.21E-05	8.42E-06	No
125	PCB-1254		YES	0	0	-	-	-	-	0	0	0.014	0.058	0.012	No	3.74E-05	4.21E-05	8.42E-06	No
126	PCB-1260		YES	0	0	-	-	-	-	0	0	0.014	0.058	0.012	No	3.74E-05	4.21E-05	8.42E-06	No
127	Phenanthrene			0	0	-	-	-	-	0	0	-	-	-	-	-	-	-	-
128	Pyrene			0	0	-	-	-	-	0	0	-	-	-	-	2.33E+03	9.64E+03	1.93E+03	No
129	1, 2, 4-Trichlorobenzene			0	0	-	-	-	-	0	0	-	-	-	-	4.09E+01	1.69E+02	3.38E+01	No

Facility Name: **CMC Steel - Tier 2**

NPDES No.: **AL0001554**

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

ID	Pollutant	Carcinogen "yes"	Type	Background from upstream source (C_{d2}) Daily Max	Background from upstream source (C_{d2}) Monthly Ave	Background Instream (C_s) Daily Max	Background Instream (C_s) Monthly Ave	**Enter** Max Daily Discharge as reported by Applicant (C_{dmax})	**Enter** Avg Daily Discharge as reported by Applicant (C_{davg})	Partition Coefficient (Stream / Lake)
				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	26	1.3	0.368
8	Lead**		Metals	0	0	0	0	0	0	0.206
9	Mercury**		Metals	0	0	0	0	0	0	0.000
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	0	0	79	79	42	0.2	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	100	100	-
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	Clorobenzene		VOC	0	0	0	0	0	0	-
26	**Chlorodibromo-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	**Dichlorobromo-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	**Tributyltine (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	**Trichlorethylene***	YES	VOC	0	0	0	0	0	0	-
53	**Vinyl Chloride***	YES	VOC	0	0	0	0	0	0	-
54	P-Chloro-M-Cresol		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-Dintro-2-methylophenol**	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		Bases	0	0	0	0	0	0	-
68	Acenaphthylene		Bases	0	0	0	0	0	0	-
69	Anthracene		Bases	0	0	0	0	0	0	-
70	Benzidine		Bases	0	0	0	0	0	0	-
71	**Benzo(A)Anthracene***	YES	Bases	0	0	0	0	0	0	-
72	**Benzo(A)Pyrene***	YES	Bases	0	0	0	0	0	0	-
73	3, 4 Benzo-Fluoranthene		Bases	0	0	0	0	0	0	-
74	Benzo(GHI)Perylene		Bases	0	0	0	0	0	0	-
75	Benzo(K)Fluoranthene		Bases	0	0	0	0	0	0	-
76	Bis (2-Chloroethoxy) Methane		Bases	0	0	0	0	0	0	-
77	**Bis (2-Chloroethyl)-Ether***	YES	Bases	0	0	0	0	0	0	-
78	Bis (2-Chloroiso-Propyl) Ether		Bases	0	0	0	0	0	0	-
79	**Bis (2-Ethylhexyl) Phthalate***	YES	Bases	0	0	0	0	0	0	-
80	4-Bromophenyl Phenyl Ether		Bases	0	0	0	0	0	0	-
81	Butyl Benzyl Phthalate		Bases	0	0	0	0	0	0	-
82	2-Chloronaphthalene		Bases	0	0	0	0	0	0	-
83	4-Chlorophenyl Phenyl Ether		Bases	0	0	0	0	0	0	-
84	**Chrysene***	YES	Bases	0	0	0	0	0	0	-
85	Di-N-Butyl Phthalate		Bases	0	0	0	0	0	0	-
86	Di-N-Octyl Phthalate		Bases	0	0	0	0	0	0	-
87	**Dibenzo(A,H)Anthracene***	YES	Bases	0	0	0	0	0	0	-
88	1, 2-Dichlorobenzene		Bases	0	0	0	0	0	0	-
89	1, 3-Dichlorobenzene		Bases	0	0	0	0	0	0	-
90	1, 4-Dichlorobenzene		Bases	0	0	0	0	0	0	-
91	**3, 3-Dichlorobenzene***	YES	Bases	0	0	0	0	0	0	-
92	Diethyl Phthalate		Bases	0	0	0	0	0	0	-
93	Dimethyl Phthalate		Bases	0	0	0	0	0	0	-
94	**2, 4-Dinitrotoluene***	YES	Bases	0	0	0	0	0	0	-
95	2, 6-Dinitrotoluene		Bases	0	0	0	0	0	0	-
96	1,2-Diphenylhydrazine		Bases	0	0	0	0	0	0	-
97	**Endosulfan (alpha)**	YES	Bases	0	0	0	0	0	0	-
98	**Endosulfan (beta)**	YES	Bases	0	0	0	0	0	0	-
99	**Endosulfan sulfate**	YES	Bases	0	0	0	0	0	0	-
100	**Endrin**	YES	Bases	0	0	0	0	0	0	-
101	**Endrin Aldeyhide**	YES	Bases	0	0	0	0	0	0	-
102	Fluoranthene		Bases	0	0	0	0	0	0	-
103	Fluorene		Bases	0	0	0	0	0	0	-
104	Heptochlor	YES	Bases	0	0	0	0	0	0	-
105	Heptachlor Epoxide	YES	Bases	0	0	0	0	0	0	-
106	**Hexachlorobenzene***	YES	Bases	0	0	0	0	0	0	-
107	**Hexachlorobutadiene***	YES	Bases	0	0	0	0	0	0	-
108	**Hexachlorocyclohexan (alpa)**	YES	Bases	0	0	0	0	0	0	-
109	**Hexachlorocyclohexan (beta)**	YES	Bases	0	0	0	0	0	0	-
110	**Hexachlorocyclohexan (gamma)**	YES	Bases	0	0	0	0	0	0	-
111	HexachlorocycloPentadiene		Bases	0	0	0	0	0	0	-
112	Hexachloroethane		Bases	0	0	0	0	0	0	-
113	**Indeno(1, 2, 3-CK)Pyrene***	YES	Bases	0	0	0	0	0	0	-
114	Isophorone		Bases	0	0	0	0	0	0	-
115	Naphthalene		Bases	0	0	0	0	0	0	-
116	Nitrobenzene		Bases	0	0	0	0	0	0	-
117	**N-Nitrosodi-N-Propylamine***	YES	Bases	0	0	0	0	0	0	-
118	**N-Nitrosodi-N-Methylamine***	YES	Bases	0	0	0	0	0	0	-
119	**N-Nitrosodi-N-Phenylamine***	YES	Bases	0	0	0	0	0	0	-
120	**PCB-1016**	YES	Bases	0	0	0	0	0	0	-
121	**PCB-1221**	YES	Bases	0	0	0	0	0	0	-
122	**PCB-1232**	YES	Bases	0	0	0	0	0	0	-
123	**PCB-1242**	YES	Bases	0	0	0	0	0	0	-
124	**PCB-1248**	YES	Bases	0	0	0	0	0	0	-
125	**PCB-1254**	YES	Bases	0	0	0	0	0	0	-
126	**PCB-1260**	YES	Bases	0	0	0	0	0	0	-
127	Phenanthrene		Bases	0	0	0	0	0	0	-
128	Pyrene		Bases	0	0	0	0	0	0	-
129	1, 2, 4-Trichlorobenzene		Bases	0	0	0	0	0	0	-

0.6192	Enter Q_d = wastewater discharge flow from facility (MGD)
0.958044	Q_s = wastewater discharge flow (cfs) (this value is caluclated from the MGD)
0	Enter or estimated, Qd2 = background stream flow from upstream source (cfs)
3.5	Enter 7Q10, Q_s = background stream flow in cfs above point of discharge
3.5	Enter or estimated, 1Q10, Q_s = background stream flow in cfs above point of discharge (1Q10 estimated at 75% of 7Q10)
0	Enter flow from upstream discharge Qd2 = background stream flow in MGD above point of discharge
0.12	Enter Mean Annual Flow, Q_s = background stream flow in cfs above point of discharge
-	Enter 7Q2, Q_s = background stream flow in cfs above point of discharge (For LWF class streams)
Enter to Left	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 Calculated on other sheets	Q_r = resultant in-stream flow, after discharge
	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 Birmingham)
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

September 4, 2020

Facility Name: CMC Steel - Tier 2

NPDES No.: AL0001554

						Freshwater F&W classification.												Human Health Consumption Fish only (ug/l)			
						Freshwater Acute (µg/l) Q_s =1Q10						Freshwater Chronic (µg/l) Q_s = 7Q10				Carcinogen Q_s = Annual Average Non-Carcinogen Q_s = 7Q10			
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_c)	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_{ave})	Water Quality Criteria (C_c)	Draft Permit Limit (C_{ave})	20% of Draft Permit Limit	RP?	Water Quality Criteria (C_c)	Draft Permit Limit (C_{ave})	20% of Draft Permit Limit	RP?
1	Antimony			0	0	-	-	-	-	0	0	-	-	-	-	3.73E+02	1.74E+03	3.47E+02	No
2	Arsenic		YES	0	0	592.334	2756.296	551.259	No	0	0	261.324	1216.013	243.203	No	3.03E-01	3.41E-01	6.82E-02	No
3	Beryllium			0	0	-	-	-	-	0	0	-	-	-	-	-	-	-	-
4	Cadmium			0	0	8.533	39.705	7.941	No	0	0	1.042	4.850	0.970	No	-	-	-	-
5	Chromium/ Chromium III			0	0	2713.159	12625.080	2525.016	No	0	0	352.926	1642.284	328.453	No	-	-	-	-
6	Chromium/ Chromium VI			0	0	16.000	74.452	14.890	No	0	0	11.000	51.186	10.237	No	-	-	-	-
7	Copper			0	26	34.637	161.175	32.235	No	0	1.3	23.082	107.406	21.481	No	1.30E+03	6.05E+03	1.21E+03	No
8	Lead			0	0	313.502	1458.811	291.762	No	0	0	12.217	56.848	11.370	No	-	-	-	-
9	Mercury			0	0	2.400	11.168	2.234	No	0	0	0.012	0.055	0.011	No	4.24E-02	1.97E-01	3.95E-02	No
10	Nickel			0	0	927.200	4314.516	862.903	No	0	0	102.983	479.209	95.842	No	9.93E+02	4.62E+03	9.24E+02	No
11	Selenium			0	0	20.000	93.088	18.613	No	0	0	5.000	23.266	4.653	No	2.43E+03	1.13E+04	2.26E+03	No
12	Silver			0	0	3.217	14.968	2.994	No	0	0	-	-	-	-	-	-	-	-
13	Thallium			0	0	-	-	-	-	0	0	-	-	-	-	2.74E-01	1.27E+00	2.55E-01	No
14	Zinc			0	42	355.092	1363.734	272.747	No	0	0.2	357.997	1377.250	275.450	No	1.49E+04	6.90E+04	1.38E+04	No
15	Cyanide			0	0	22.000	102.372	20.474	No	0	0	5.200	24.197	4.839	No	9.33E+03	4.34E+04	8.69E+03	No
16	Total Phenolic Compounds			0	0	-	-	-	-	0	0	-	-	-	-	-	-	-	-
17	Hardness (As CaCO3)			0	100	-	-	-	-	0	100	-	-	-	-	-	-	-	-
18	Acrolein			0	0	-	-	-	-	0	0	-	-	-	-	5.43E+00	2.53E+01	5.05E+00	No
19	Acrylonitrile		YES	0	0	-	-	-	-	0	0	-	-	-	-	1.44E-01	1.62E-01	3.24E-02	No
20	Aldrin		YES	0	0	3.000	13.980	2.792	No	0	0	1.300	6.049	1.210	No	2.94E-05	3.31E-05	6.61E-06	No
21	Benzene		YES	0	0	-	-	-	-	0	0	-	-	-	-	1.55E+01	1.74E+01	3.48E+00	No
22	Bromoform		YES	0	0	-	-	-	-	0	0	-	-	-	-	7.88E+01	8.86E+01	1.77E+01	No
23	Carbon Tetrachloride		YES	0	0	-	-	-	-	0	0	-	-	-	-	9.57E-01	1.08E+00	2.15E-01	No
24	Chlordane		YES	0	0	2.400	11.168	2.234	No	0	0	0.004	0.020	0.004	No	4.73E-04	5.32E-04	1.06E-04	No
25	Clorobenzene			0	0	-	-	-	-	0	0	-	-	-	-	9.06E+02	4.22E+03	8.43E+02	No
26	Chlorodibromo-Methane		YES	0	0	-	-	-	-	0	0	-	-	-	-	7.41E+00	8.34E+00	1.67E+00	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	1.15E+02	2.30E+01	No
30	4,4' - DDD		YES	0	0	-	-	-	-	0	0	-	-	-	-	1.81E-04	2.04E-04	4.08E-05	No
31	4,4' - DDE		YES	0	0	-	-	-	-	0	0	-	-	-	-	1.28E-04	1.44E-04	2.88E-05	No
32	4,4' - DDT		YES	0	0	-	-	-	-	0	0	-	-	-	-	1.28E-04	1.44E-04	2.88E-05	No
33	Dichlorobromo-Methane		YES	0	0	-	-	-	-	0	0	-	-	-	-	1.00E+01	1.13E+01	2.26E+00	No
34	1, 1-Dichloroethane			0	0	-	-	-	-	0	0	-	-	-	-	-	-	-	-
35	1, 2-Dichloroethane		YES	0	0	-	-	-	-	0	0	-	-	-	-	2.14E+01	2.40E+01	4.81E+00	No
36	Trans-1, 2-Dichloro-Ethylene			0	0	-	-	-	-	0	0	-	-	-	-	5.91E+03	2.75E+04	5.50E+03	No
37	1, 1-Dichloroethylene		YES	0	0	-	-	-	-	0	0	-	-	-	-	4.17E+03	4.69E+03	9.38E+02	No
38	1, 2-Dichloropropane			0	0	-	-	-	-	0	0	-	-	-	-	8.49E+00	3.95E+01	7.91E+00	No
39	1, 3-Dichloro-Propylene			0	0	-	-	-	-	0	0	-	-	-	-	1.23E+01	5.71E+01	1.14E+01	No
40	Dieidrin		YES	0	0	0.240	1.117	0.223	No	0	0	0.056	0.261	0.052	No	3.12E-05	3.51E-05	7.03E-06	No
41	Ethylbenzene			0	0	-	-	-	-	0	0	-	-	-	-	1.24E+03	5.79E+03	1.16E+03	No
42	Methyl Bromide			0	0	-	-	-	-	0	0	-	-	-	-	8.71E+02	4.05E+03	8.11E+02	No
43	Methyl Chloride			0	0	-	-	-	-	0	0	-	-	-	-	-	-	-	-
44	Methylene Chloride		YES	0	0	-	-	-	-	0	0	-	-	-	-	3.46E+02	3.89E+02	7.78E+01	No
45	1, 1, 2, 2-Tetrachloro-Ethane		YES	0	0	-	-	-	-	0	0	-	-	-	-	2.33E+00	2.63E+00	5.25E-01	No
46	Tetrachloro-Ethylene		YES	0	0	-	-	-	-	0	0	-	-	-	-	1.92E+00	2.16E+00	4.31E-01	No
47	Toluene			0	0	-	-	-	-	0	0	-	-	-	-	6.72E+03	4.06E+04	8.12E+03	No
48	Toxaphene		YES	0	0	0.730	3.397	0.679	No	0	0	0.0002	0.001	0.000	No	1.62E-04	1.82E-04	3.64E-05	No
49	Tributyltin (TBT)		YES	0	0	0.460	2.141	0.428	No	0	0	0.072	0.335	0.067	No	-	-	-	-
50	1, 1, 1-Trichloroethane			0	0	-	-	-	-	0	0	-	-	-	-	-	-	-	-
51	1, 1, 2-Trichloroethane		YES	0	0	-	-	-	-	0	0	-	-	-	-	9.10E+00	1.02E+01	2.05E+00	No
52	Trichlorethylene		YES	0	0	-	-	-	-	0	0	-	-	-	-	1.75E+01	1.97E+01	3.93E+00	No
53	Vinyl Chloride		YES	0	0	-	-	-	-	0	0	-	-	-	-	1.42E+00	1.60E+00	3.21E-01	No
54	P-Chloro-M-Cresol			0	0	-	-	-	-	0	0	-	-	-	-	-	-	-	-
55	2-Chlorophenol			0	0	-	-	-	-	0	0	-	-	-	-	8.71E+01	4.05E+02	8.10E+01	No
56	2, 4-Dichlorophenol			0	0	-	-	-	-	0	0	-	-	-	-	1.72E+02	8.00E+02	1.60E+02	No
57	2, 4-Dimethylphenol			0	0	-	-	-	-	0	0	-	-	-	-	4.98E+02	2.32E+03	4.63E+02	No
58	4, 6-Dinitro-O-Cresol			0	0	-	-	-	-	0	0	-	-	-	-	-	-	-	-
59	2, 4-Dinitrophenol			0	0	-	-	-	-	0	0	-	-	-	-	3.11E+03	1.45E+04	2.90E+03	No
60	4,6-Dinitro-2-methylphenol		YES	0	0	-	-	-	-	0	0	-	-	-	-	1.65E+02	1.86E+02	3.72E+01	No
61	Dioxin (2,3,7,8-TCDD)		YES	0	0	-	-	-	-	0	0	-	-	-	-	2.67E-08	3.00E-08	6.00E-09	No
62	2-Nitrophenol			0	0	-	-	-	-	0	0	-	-	-	-	-	-	-	-
63	4-Nitrophenol			0	0	-	-	-	-	0	0	-	-	-	-	-	-	-	-
64	Pentachlorophenol		YES	0	0	8.723	40.592	8.118	No	0	0	6.693	31.142	6.228	No	1.77E+00	1.99E+00	3.98E-01	No
65	Phenol			0	0	-	-	-	-	0	0	-	-	-	-	5.00E+05	2.33E+06	4.65E+05	No
66	2, 4, 6-Trichlorophenol		YES	0	0	-	-	-	-	0	0	-	-	-	-	1.41E+00	1.59E+00	3.18E-01	No
67	Acenaphthene			0	0	-	-	-	-	0	0	-	-	-	-	5.79E+02	2.69E+03	5.38E+02	No
68	Acenaphthylene			0	0	-	-	-	-	0	0	-	-	-	-	-	-	-	-
69	Anthracene			0	0	-	-	-	-	0	0	-	-	-	-	2.33E+04	1.09E+05	2.17E+04	No
70	Benzidine			0	0	-	-	-	-	0	0	-	-	-	-	1.16E-04	5.40E-04	1.08E-04	No
71	Benzo(A)Anthracene		YES	0	0	-	-	-	-	0	0	-	-	-	-	1.07E-02	1.20E-02	2.40E-03	No
72	Benzo(A)Pyrene		YES	0	0	-	-	-	-	0	0	-	-	-	-	1.07E-02	1.20E-02	2.40E-03	No
73	3, 4 Benzo-Fluoranthene			0	0	-	-	-	-	0	0	-	-	-	-	1.07E-02	4.96E-02	9.92E-03	No
74	Benzo(GHI)Perylene			0	0	-	-	-	-	0	0	-	-	-	-	-	-	-	-
75	Benzo(K)Fluoranthene			0	0	-	-	-	-	0	0	-	-	-	-	1.07E-02	4.96E-02	9.92E-03	No
76	Bis (2-Chloroethoxy) Methane			0	0	-	-	-	-	0	0	-	-	-	-	-	-	-	-
77	Bis (2-Chloroethyl)-Ether		YES	0	0	-	-	-	-	0	0	-	-	-	-	3.07E-01	3.46E-01	6.92E-02	No
78	Bis (2-Chloroiso-Propyl) Ether			0	0	-	-	-	-	0	0	-	-	-	-	3.78E+04	1.76E+05	3.52E+04	No
79	Bis (2-Ethylhexyl) Phthalate		YES	0	0	-	-	-	-	0	0	-	-	-	-	1.28E+00	1.44E+00	2.89E-01	No
80	4-Bromophenyl Phenyl Ether			0	0	-	-	-	-	0	0	-	-	-	-	-	-	-	-
81	Butyl Benzyl Phthalate			0	0	-	-	-	-	0	0	-	-	-	-	1.13E+03	5.25E+03	1.05E+03	No
82	2-Chloronaphthalene			0	0	-	-	-	-	0	0	-	-	-	-	9.24E+02	4.30E+03	8.60E+02	No
83	4-Chlorophenyl Phenyl Ether			0	0	-	-	-	-	0	0	-	-	-	-	-	-	-	-
84	Chrysene		YES	0	0	-	-	-	-	0	0	-	-	-	-	1.07E-02	1.20E-02	2.40E-03	No
85	Di-N-Butyl Phthalate			0	0	-	-	-	-	0	0	-	-	-	-	2.62E+03	1.22E+04	2.44E+03	No
86	Di-N-Octyl Phthalate			0	0	-	-	-	-	0	0	-	-	-	-	-	-	-	-
87	Dibenzo(A,H)Anthracene		YES	0	0	-	-	-	-	0	0	-	-	-	-	1.07E-02	1.20E-02	2.40E-03	No
88	1, 2-Dichlorobenzene			0	0	-	-	-	-	0	0	-	-	-	-	7.56E+02	3.52E+03	7.03E+02	No
89	1, 3-Dichlorobenzene			0	0	-	-	-	-	0	0	-	-	-	-	5.62E+02	2.62E+03	5.23E+02	No
90	1, 4-Dichlorobenzene			0	0	-	-	-	-	0	0	-	-	-	-	1.12E+02	5.23E+02	1.05E+02	No
91	3, 3-Dichlorobenzene		YES	0	0	-	-	-	-	0	0	-	-	-	-	1.66E-02	1.87E-02	3.74E-03	No
92	Diethyl Phthalate			0	0	-	-	-	-	0	0	-	-	-	-	2.56E+04	1.19E+05	2.38E+04	No
93	Dimethyl Phthalate			0	0	-	-	-	-	0	0	-	-	-	-	6.48E+05	3.02E+06	6.03E+05	No
94	2, 4-Dinitrotoluene		YES	0	0	-	-	-	-	0	0	-	-	-	-	1.98E+00	2.23E+00	4.46E-01	No
95	2, 6-Dinitrotoluene			0	0	-	-	-	-	0	0	-	-	-	-	-	-	-	-
96	1,2-Diphenylhydrazine			0	0	-	-	-	-	0	0	-	-	-	-	1.17E-01	5.45E-01	1.09E-01	No
97	Endosulfan (alpha)		YES	0	0	0.22	1.024	0.205	No	0	0	0.056	0.261	0.052	No	5.19E+01	5.83E+01	1.17E+01	No
98	Endosulfan (beta)		YES	0	0	0.22	1.024	0.205	No	0	0	0.056	0.261	0.052	No	5.19E+01	5.83E+01	1.17E+01	No
99	Endosulfan sulfate		YES	0	0	-	-	-	-	0	0	-	-	-	-	5.19E+01	5.83E+01	1.17E+01	No
100	Endrin		YES	0	0	0.086	0.400	0.080	No	0	0	0.036	0.168	0.034	No	3.53E-02	3.97E-02	7.94E-03	No
101	Endrin Aldeyhde		YES	0	0	-	-	-	-	0	0	-	-	-	-	1.76E+00	1.98E+00	3.97E-01	No
102	Fluoranthene			0	0	-	-	-	-	0	0	-	-	-	-	8.12E+01	3.78E+02	7.55E+01	No
103	Fluorene			0	0	-	-	-	-	0	0	-	-	-	-	3.11E+03	1.45E+04	2.90E+03	No
104	Heptochlor		YES	0	0	0.52	2.420	0.484	No	0	0	0.004	0.018	0.004	No	4.63E-05	5.21E-05	1.04E-05	No
105	Heptachlor Epoxide		YES	0	0	0.52	2.420	0.484	No	0	0	0.004	0.018	0.004	No	2.29E-05	2.58E-05	5.15E-06	No
106	Hexachlorobenzene		YES	0	0	-	-	-	-	0	0	-	-	-	-	1.68E-04	1.89E-04	3.78E-05	No
107	Hexachlorobutadiene		YES	0	0	-	-	-	-	0	0	-	-	-	-	1.08E+01	1.21E+01	2.42E+00	No
108	Hexachlorocyclohexan (alpha)		YES	0	0	-	-	-	-	0	0	-	-	-	-	2.85E-03	3.21E-03	6.41E-04	No
109	Hexachlorocyclohexan (beta)		YES	0	0	-	-	-	-	0	0	-	-	-	-	9.97E-03	1.12E-02	2.24E-03	No
110	Hexachlorocyclohexan (gamma)		YES	0	0	0.95	4.421	0.884	No	0	0	-	-	-	-	1.03E+00	1.21E+00	2.42E-01	No
111	HexachlorocycloPentadiene			0	0	-	-	-	-	0	0	-	-	-	-	6.45E+02	3.00E+03	6.00E+02	No
112	Hexachloroethane			0	0	-	-	-	-	0	0	-	-	-	-	1.92E+00	8.92E+00	1.78E+00	No
113	Indeno(1, 2, 3-CK)Pyrene		YES	0	0	-	-	-	-	0	0	-	-	-	-	1.07E-02	1.20E-02	2.40E-03	No
114	Isophorone			0	0	-	-	-	-	0	0	-	-	-	-	5.61E+02	2.61E+03	5.22E+02	No
115	Naphthalene			0	0	-	-	-	-	0	0	-	-	-	-	-	-	-	-
116	Nitrobenzene			0	0	-	-	-	-	0	0	-	-	-	-	4.04E+02	1.88E+03	3.76E+02	No
117	N-Nitrosodi-N-Propylamine		YES	0	0	-	-	-	-	0	0	-	-	-	-	2.95E-01	3.32E-01	6.64E-02	No
118	N-Nitrosodi-N-Methylamine		YES	0	0	-	-	-	-	0	0	-	-	-	-	1.76E+00	1.98E+00	3.96E-01	No
119	N-Nitrosodi-N-Phenylamine		YES	0	0	-	-	-	-	0	0	-	-	-	-	3.50E+00	3.94E+00	7.88E-01	No
120	PCB-1016		YES	0	0	-	-	-	-	0	0	0.014	0.065	0.013	No	3.74E-05	4.21E-05	8.42E-06	No
121	PCB-1221		YES	0	0	-	-	-	-	0	0	0.014	0.065	0.013	No	3.74E-05	4.21E-05	8.42E-06	No
122	PCB-1232		YES	0	0	-	-	-	-	0	0	0.014	0.065	0.013	No	3.74E-05	4.21E-05	8.42E-06	No
123	PCB-1242		YES	0	0	-	-	-	-	0	0	0.014	0.065	0.013	No	3.74E-05	4.21E-05	8.42E-06	No
124	PCB-1248		YES	0	0	-	-	-	-	0	0	0.014	0.065	0.013	No	3.74E-05	4.21E-05	8.42E-06	No
125	PCB-1254		YES	0	0	-	-	-	-	0	0	0.014	0.065	0.013	No	3.74E-05	4.21E-05	8.42E-06	No
126	PCB-1260		YES	0	0	-	-	-	-	0	0	0.014	0.065	0.013	No	3.74E-05	4.21E-05	8.42E-06	No
127	Phenanthrene			0	0	-	-	-	-	0	0	-	-	-	-	-	-	-	-
128	Pyrene			0	0	-	-	-	-	0	0	-	-	-	-	2.33E+03	1.09E+04	2.17E+03	No
129	1, 2, 4-Trichlorobenzene			0	0	-	-	-	-	0	0	-	-	-	-	4.09E+01	1.90E+02	3.81E+01	No

Facility Name: **CMC Steel - Tier 3**

NPDES No.: **AL0001554**

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

ID	Pollutant	Carcinogen "yes"	Type	Background from upstream source (C_{d2}) Daily Max µg/l	Background from upstream source (C_{d2}) Monthly Ave µg/l	Background Instream (C_s) Daily Max µg/l	Background Instream (C_s) Monthly Ave µg/l	**Enter** Max Daily Discharge as reported by Applicant (C_{dmax}) µg/l	**Enter** Avg Daily Discharge as reported by Applicant (C_{davg}) µg/l	Partition Coefficient (Stream / Lake)
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	26	1.3	0.388
8	Lead**		Metals	0	0	0	0	0	0	0.206
9	Mercury**		Metals	0	0	0	0	0	0	0.000
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	0	0	79	79	42	0.2	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	100	100	-
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	Clorobenzene		VOC	0	0	0	0	0	0	-
26	**Chlorodibromo-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	**Dichlorobromo-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	**Tributyltine (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	P-Chloro-M-Cresol		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-Dintro-2-methylophenol**	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		Bases	0	0	0	0	0	0	-
68	Acenaphthylene		Bases	0	0	0	0	0	0	-
69	Anthracene		Bases	0	0	0	0	0	0	-
70	Benzidine		Bases	0	0	0	0	0	0	-
71	**Benzo(A)Anthracene***	YES	Bases	0	0	0	0	0	0	-
72	**Benzo(A)Pyrene***	YES	Bases	0	0	0	0	0	0	-
73	3, 4 Benzo-Fluoranthene		Bases	0	0	0	0	0	0	-
74	Benzo(GHI)Perylene		Bases	0	0	0	0	0	0	-
75	Benzo(K)Fluoranthene		Bases	0	0	0	0	0	0	-
76	Bis (2-Chloroethoxy) Methane		Bases	0	0	0	0	0	0	-
77	**Bis (2-Chloroethyl)-Ether***	YES	Bases	0	0	0	0	0	0	-
78	Bis (2-Chloroiso-Propyl) Ether		Bases	0	0	0	0	0	0	-
79	**Bis (2-Ethylhexyl) Phthalate***	YES	Bases	0	0	0	0	0	0	-
80	4-Bromophenyl Phenyl Ether		Bases	0	0	0	0	0	0	-
81	Butyl Benzyl Phthalate		Bases	0	0	0	0	0	0	-
82	2-Chloronaphthalene		Bases	0	0	0	0	0	0	-
83	4-Chlorophenyl Phenyl Ether		Bases	0	0	0	0	0	0	-
84	**Chrysene***	YES	Bases	0	0	0	0	0	0	-
85	Di-N-Butyl Phthalate		Bases	0	0	0	0	0	0	-
86	Di-N-Octyl Phthalate		Bases	0	0	0	0	0	0	-
87	**Dibenzo(A,H)Anthracene***	YES	Bases	0	0	0	0	0	0	-
88	1, 2-Dichlorobenzene		Bases	0	0	0	0	0	0	-
89	1, 3-Dichlorobenzene		Bases	0	0	0	0	0	0	-
90	1, 4-Dichlorobenzene		Bases	0	0	0	0	0	0	-
91	**3, 3-Dichlorobenzene***	YES	Bases	0	0	0	0	0	0	-
92	Diethyl Phthalate		Bases	0	0	0	0	0	0	-
93	Dimethyl Phthalate		Bases	0	0	0	0	0	0	-
94	**2, 4-Dinitrotoluene***	YES	Bases	0	0	0	0	0	0	-
95	2, 6-Dinitrotoluene		Bases	0	0	0	0	0	0	-
96	1,2-Diphenylhydrazine		Bases	0	0	0	0	0	0	-
97	**Endosulfan (alpha)**	YES	Bases	0	0	0	0	0	0	-
98	**Endosulfan (beta)**	YES	Bases	0	0	0	0	0	0	-
99	**Endosulfan sulfate**	YES	Bases	0	0	0	0	0	0	-
100	**Endrin**	YES	Bases	0	0	0	0	0	0	-
101	**Endrin Aldeyhide**	YES	Bases	0	0	0	0	0	0	-
102	Fluoranthene		Bases	0	0	0	0	0	0	-
103	Fluorene		Bases	0	0	0	0	0	0	-
104	Heptochlor	YES	Bases	0	0	0	0	0	0	-
105	Heptachlor Epoxide	YES	Bases	0	0	0	0	0	0	-
106	**Hexachlorobenzene***	YES	Bases	0	0	0	0	0	0	-
107	**Hexachlorobutadiene***	YES	Bases	0	0	0	0	0	0	-
108	**Hexachlorocyclohexan (alpa)**	YES	Bases	0	0	0	0	0	0	-
109	**Hexachlorocyclohexan (beta)**	YES	Bases	0	0	0	0	0	0	-
110	**Hexachlorocyclohexan (gamma)**	YES	Bases	0	0	0	0	0	0	-
111	HexachlorocycloPentadiene		Bases	0	0	0	0	0	0	-
112	Hexachloroethane		Bases	0	0	0	0	0	0	-
113	**Indeno(1, 2, 3-CK)Pyrene***	YES	Bases	0	0	0	0	0	0	-
114	Isophorone		Bases	0	0	0	0	0	0	-
115	Naphthalene		Bases	0	0	0	0	0	0	-
116	Nitrobenzene		Bases	0	0	0	0	0	0	-
117	**N-Nitrosodi-N-Propylamine***	YES	Bases	0	0	0	0	0	0	-
118	**N-Nitrosodi-N-Methylamine***	YES	Bases	0	0	0	0	0	0	-
119	**N-Nitrosodi-N-Phenylamine***	YES	Bases	0	0	0	0	0	0	-
120	**PCB-1016**	YES	Bases	0	0	0	0	0	0	-
121	**PCB-1221**	YES	Bases	0	0	0	0	0	0	-
122	**PCB-1232**	YES	Bases	0	0	0	0	0	0	-
123	**PCB-1242**	YES	Bases	0	0	0	0	0	0	-
124	**PCB-1248**	YES	Bases	0	0	0	0	0	0	-
125	**PCB-1254**	YES	Bases	0	0	0	0	0	0	-
126	**PCB-1260**	YES	Bases	0	0	0	0	0	0	-
127	Phenanthrene		Bases	0	0	0	0	0	0	-
128	Pyrene		Bases	0	0	0	0	0	0	-
129	1, 2, 4-Trichlorobenzene		Bases	0	0	0	0	0	0	-

0.6192	Enter Q_d = wastewater discharge flow from facility (MGD)
0.958044	Q_s = wastewater discharge flow (cfs) (this value is caluclated from the MGD)
0	Enter or estimated, Qd2 = background stream flow from upstream source (cfs)
4.3	Enter 7Q10, Q_s = background stream flow in cfs above point of discharge
4.3	Enter or estimated, 1Q10, Q_s = background stream flow in cfs above point of discharge (1Q10 estimated at 75% of 7Q10)
0	Enter flow from upstream discharge Qd2 = background stream flow in MGD above point of discharge
0.12	Enter **Mean Annual Flow**, Q_s = background stream flow in cfs above point of discharge
-	Enter 7Q2, Q_s = background stream flow in cfs above point of discharge (For LWF class streams)
Enter to Left	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 Calculated on other sheets	Q_r = resultant in-stream flow, after discharge
	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 Birmingham)
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

September 4, 2020

Facility Name: CMC Steel - Tier 3

NPDES No.: AL0001554

Freshwater F&W classification						Freshwater Acute (µg/l) Q_e =1Q10						Freshwater Chronic (µg/l) Q_e = 7Q10				Human Health Consumption Fish only (ug/l) Carcinogen Q_e = Annual Average Non-Carcinogen Q_e = 7Q10			
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_t)	Draft Permit Limit (C_{allow})	20% of Draft Permit Limit	RP?	Background from upstream source (Cd2) Monthly Ave	Avg Daily Discharge as reported by Applicant (C_{ave})	Water Quality Criteria (C_t)	Draft Permit Limit (C_{allow})	20% of Draft Permit Limit	RP?	Water Quality Criteria (C_t)	Draft Permit Limit (C_{allow})	20% of Draft Permit Limit	RP?
1	Antimony			0	0	-	-	-	-	0	0	-	-	-	-	3.73E+02	2.05E+03	4.10E+02	No
2	Arsenic		YES	0	0	582.334	3250.916	650.183	No	0	0	261.324	1434.228	286.846	No	3.03E-01	3.41E-01	6.82E-02	No
3	Beryllium			0	0	-	-	-	-	0	0	-	-	-	-	-	-	-	-
4	Cadmium			0	0	8.533	46.830	9.366	No	0	0	1.042	5.721	1.144	No	-	-	-	-
5	Chromium/ Chromium III			0	0	2713.159	14890.662	2978.132	No	0	0	352.926	1936.969	387.394	No	-	-	-	-
6	Chromium/ Chromium VI			0	0	16.000	87.813	17.563	No	0	0	11.000	60.371	12.074	No	-	-	-	-
7	Copper			0	26	34.637	190.098	38.020	No	0	1.3	23.082	126.680	25.336	No	1.30E+03	7.13E+03	1.43E+03	No
8	Lead			0	0	313.502	1720.596	344.119	No	0	0	12.217	67.049	13.410	No	-	-	-	-
9	Mercury			0	0	2.400	13.172	2.634	No	0	0	0.012	0.066	0.013	No	4.24E-02	2.33E-01	4.66E-02	No
10	Nickel			0	0	927.200	5088.759	1017.752	No	0	0	102.983	565.204	113.041	No	9.93E+02	5.45E+03	1.09E+03	No
11	Selenium			0	0	20.000	109.766	21.953	No	0	0	5.000	27.442	5.488	No	2.43E+03	1.33E+04	2.67E+03	No
12	Silver			0	0	3.217	17.655	3.531	No	0	0	-	-	-	-	-	-	-	-
13	Thallium			0	0	-	-	-	-	0	0	-	-	-	-	2.74E-01	1.50E+00	3.00E-01	No
14	Zinc			0	42	355.092	1594.280	318.856	No	0	0.2	357.997	1610.222	322.044	No	1.49E+04	8.14E+04	1.63E+04	No
15	Cyanide			0	0	22.000	120.743	24.149	No	0	0	5.200	28.539	5.708	No	9.33E+03	5.12E+04	1.02E+04	No
16	Total Phenolic Compounds			0	0	-	-	-	-	0	0	-	-	-	-	-	-	-	-
17	Hardness (As CaCO3)			0	100	-	-	-	-	0	100	-	-	-	-	-	-	-	-
18	Acrolein			0	0	-	-	-	-	0	0	-	-	-	-	5.43E+00	2.98E+01	5.96E+00	No
19	Acrylonitrile		YES	0	0	-	-	-	-	0	0	-	-	-	-	1.44E-01	1.62E-01	3.24E-02	No
20	Aldrin		YES	0	0	3.000	16.465	3.293	No	0	0	1.300	7.135	1.427	No	2.94E-05	3.31E-05	6.61E-06	No
21	Benzene		YES	0	0	-	-	-	-	0	0	-	-	-	-	1.55E+01	1.74E+01	3.48E+00	No
22	Bromoform		YES	0	0	-	-	-	-	0	0	-	-	-	-	7.88E+01	8.86E+01	1.77E+01	No
23	Carbon Tetrachloride		YES	0	0	-	-	-	-	0	0	-	-	-	-	9.57E-01	1.08E+00	2.15E-01	No
24	Chlordane		YES	0	0	2.400	13.172	2.634	No	0	0	0.004	0.024	0.005	No	4.73E-04	5.32E-04	1.06E-04	No
25	Clorobenzene			0	0	-	-	-	-	0	0	-	-	-	-	9.06E+02	4.97E+03	9.95E+02	No
26	Chlorodibromo-Methane		YES	0	0	-	-	-	-	0	0	-	-	-	-	7.41E+00	8.34E+00	1.67E+00	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	1.15E+02	2.30E+01	No
30	4,4' - DDD		YES	0	0	-	-	-	-	0	0	-	-	-	-	1.81E-04	2.04E-04	4.08E-05	No
31	4,4' - DDE		YES	0	0	-	-	-	-	0	0	-	-	-	-	1.28E-04	1.44E-04	2.88E-05	No
32	4,4' - DDT		YES	0	0	-	-	-	-	0	0	-	-	-	-	1.28E-04	1.44E-04	2.88E-05	No
33	Dichlorobromo-Methane		YES	0	0	-	-	-	-	0	0	-	-	-	-	1.00E+01	1.13E+01	2.26E+00	No
34	1, 1-Dichloroethane			0	0	-	-	-	-	0	0	-	-	-	-	-	-	-	-
35	1, 2-Dichloroethane		YES	0	0	-	-	-	-	0	0	-	-	-	-	2.14E+01	2.40E+01	4.81E+00	No
36	Trans-1, 2-Dichloro-Ethylene			0	0	-	-	-	-	0	0	-	-	-	-	5.91E+03	3.24E+04	6.48E+03	No
37	1, 1-Dichloroethylene		YES	0	0	-	-	-	-	0	0	-	-	-	-	4.17E+03	4.69E+03	9.38E+02	No
38	1, 2-Dichloropropane			0	0	-	-	-	-	0	0	-	-	-	-	8.49E+00	4.66E+01	9.32E+00	No
39	1, 3-Dichloro-Propylene			0	0	-	-	-	-	0	0	-	-	-	-	1.23E+01	6.74E+01	1.35E+01	No
40	Dieldrin		YES	0	0	0.240	1.317	0.263	No	0	0	0.056	0.307	0.061	No	3.12E-05	3.51E-05	7.03E-06	No
41	Ethylbenzene			0	0	-	-	-	-	0	0	-	-	-	-	1.24E+03	6.83E+03	1.37E+03	No
42	Methyl Bromide			0	0	-	-	-	-	0	0	-	-	-	-	8.71E+02	4.78E+03	9.56E+02	No
43	Methyl Chloride			0	0	-	-	-	-	0	0	-	-	-	-	-	-	-	-
44	Methylene Chloride		YES	0	0	-	-	-	-	0	0	-	-	-	-	3.46E+02	3.89E+02	7.78E+01	No
45	1, 1, 2, 2-Tetrachloro-Ethane		YES	0	0	-	-	-	-	0	0	-	-	-	-	2.33E+00	2.63E+00	5.25E-01	No
46	Tetrachloro-Ethylene		YES	0	0	-	-	-	-	0	0	-	-	-	-	1.92E+00	2.16E+00	4.31E-01	No
47	Toluene			0	0	-	-	-	-	0	0	-	-	-	-	8.72E+03	4.79E+04	9.57E+03	No
48	Toxaphene		YES	0	0	0.730	4.006	0.801	No	0	0	0.0002	0.001	0.000	No	1.62E-04	1.82E-04	3.64E-05	No
49	Tributyltin (TBT)		YES	0	0	0.460	2.525	0.505	No	0	0	0.072	0.395	0.079	No	-	-	-	-
50	1, 1, 1-Trichloroethane			0	0	-	-	-	-	0	0	-	-	-	-	-	-	-	-
51	1, 1, 2-Trichloroethane		YES	0	0	-	-	-	-	0	0	-	-	-	-	9.10E+00	1.02E+01	2.05E+00	No
52	Trichlorethylene		YES	0	0	-	-	-	-	0	0	-	-	-	-	1.75E+01	1.97E+01	3.93E+00	No
53	Vinyl Chloride		YES	0	0	-	-	-	-	0	0	-	-	-	-	1.42E+00	1.60E+00	3.21E-01	No
54	P-Chloro-M-Cresol			0	0	-	-	-	-	0	0	-	-	-	-	-	-	-	-
55	2-Chlorophenol			0	0	-	-	-	-	0	0	-	-	-	-	8.71E+01	4.78E+02	9.56E+01	No
56	2, 4-Dichlorophenol			0	0	-	-	-	-	0	0	-	-	-	-	1.72E+02	9.44E+02	1.89E+02	No
57	2, 4-Dimethylphenol			0	0	-	-	-	-	0	0	-	-	-	-	4.98E+02	2.73E+03	5.46E+02	No
58	4, 6-Dinitro-O-Cresol			0	0	-	-	-	-	0	0	-	-	-	-	-	-	-	-
59	2, 4-Dinitrophenol			0	0	-	-	-	-	0	0	-	-	-	-	3.11E+03	1.71E+04	3.41E+03	No
60	4,6-Dinitro-2-methylphenol		YES	0	0	-	-	-	-	0	0	-	-	-	-	1.65E+02	1.86E+02	3.72E+01	No
61	Dioxin (2,3,7,8-TCDD)		YES	0	0	-	-	-	-	0	0	-	-	-	-	2.67E-08	3.00E-08	6.00E-09	No
62	2-Nitrophenol			0	0	-	-	-	-	0	0	-	-	-	-	-	-	-	-
63	4-Nitrophenol			0	0	-	-	-	-	0	0	-	-	-	-	-	-	-	-
64	Pentachlorophenol		YES	0	0	8.723	47.876	9.575	No	0	0	6.693	36.731	7.348	No	1.77E+00	1.99E+00	3.98E-01	No
65	Phenol			0	0	-	-	-	-	0	0	-	-	-	-	5.00E+05	2.74E+06	5.49E+05	No
66	2, 4, 6-Trichlorophenol		YES	0	0	-	-	-	-	0	0	-	-	-	-	1.41E+00	1.59E+00	3.18E-01	No
67	Acenaphthene			0	0	-	-	-	-	0	0	-	-	-	-	5.79E+02	3.18E+03	6.35E+02	No
68	Acenaphthylene			0	0	-	-	-	-	0	0	-	-	-	-	-	-	-	-
69	Anthracene			0	0	-	-	-	-	0	0	-	-	-	-	2.33E+04	1.28E+05	2.56E+04	No
70	Benzidine			0	0	-	-	-	-	0	0	-	-	-	-	1.16E-04	6.36E-04	1.27E-04	No
71	Benzo(A)Anthracene		YES	0	0	-	-	-	-	0	0	-	-	-	-	1.07E-02	1.20E-02	2.40E-03	No
72	Benzo(A)Pyrene		YES	0	0	-	-	-	-	0	0	-	-	-	-	1.07E-02	1.20E-02	2.40E-03	No
73	3, 4 Benzo-Fluoranthene			0	0	-	-	-	-	0	0	-	-	-	-	1.07E-02	5.85E-02	1.17E-02	No
74	Benzo(GHI)Perylene			0	0	-	-	-	-	0	0	-	-	-	-	-	-	-	-
75	Benzo(K)Fluoranthene			0	0	-	-	-	-	0	0	-	-	-	-	1.07E-02	5.85E-02	1.17E-02	No
76	Bis (2-Chloroethoxy) Methane			0	0	-	-	-	-	0	0	-	-	-	-	-	-	-	-
77	Bis (2-Chloroethyl)-Ether		YES	0	0	-	-	-	-	0	0	-	-	-	-	3.07E-01	3.46E-01	6.92E-02	No
78	Bis (2-Chloroiso-Propyl) Ether			0	0	-	-	-	-	0	0	-	-	-	-	3.78E+04	2.07E+05	4.15E+04	No
79	Bis (2-Ethylhexyl) Phthalate		YES	0	0	-	-	-	-	0	0	-	-	-	-	1.28E+00	1.44E+00	2.89E-01	No
80	4-Bromophenyl Phenyl Ether			0	0	-	-	-	-	0	0	-	-	-	-	-	-	-	-
81	Butyl Benzyl Phthalate			0	0	-	-	-	-	0	0	-	-	-	-	1.13E+03	6.19E+03	1.24E+03	No
82	2-Chloronaphthalene			0	0	-	-	-	-	0	0	-	-	-	-	9.24E+02	5.07E+03	1.01E+03	No
83	4-Chlorophenyl Phenyl Ether			0	0	-	-	-	-	0	0	-	-	-	-	-	-	-	-
84	Chrysene		YES	0	0	-	-	-	-	0	0	-	-	-	-	1.07E-02	1.20E-02	2.40E-03	No
85	Di-N-Butyl Phthalate			0	0	-	-	-	-	0	0	-	-	-	-	2.62E+03	1.44E+04	2.88E+03	No
86	Di-N-Octyl Phthalate			0	0	-	-	-	-	0	0	-	-	-	-	-	-	-	-
87	Dibenzo(A,H)Anthracene		YES	0	0	-	-	-	-	0	0	-	-	-	-	1.07E-02	1.20E-02	2.40E-03	No
88	1, 2-Dichlorobenzene			0	0	-	-	-	-	0	0	-	-	-	-	7.55E+02	4.15E+03	8.29E+02	No
89	1, 3-Dichlorobenzene			0	0	-	-	-	-	0	0	-	-	-	-	5.62E+02	3.09E+03	6.17E+02	No
90	1, 4-Dichlorobenzene			0	0	-	-	-	-	0	0	-	-	-	-	1.12E+02	6.17E+02	1.23E+02	No
91	3, 3-Dichlorobenzene		YES	0	0	-	-	-	-	0	0	-	-	-	-	1.66E-02	1.87E-02	3.74E-03	No
92	Diethyl Phthalate			0	0	-	-	-	-	0	0	-	-	-	-	2.56E+04	1.40E+05	2.81E+04	No
93	Dimethyl Phthalate			0	0	-	-	-	-	0	0	-	-	-	-	6.48E+05	3.56E+06	7.11E+05	No
94	2, 4-Dinitrotoluene		YES	0	0	-	-	-	-	0	0	-	-	-	-	1.98E+00	2.23E+00	4.46E-01	No
95	2, 6-Dinitrotoluene			0	0	-	-	-	-	0	0	-	-	-	-	-	-	-	-
96	1,2-Diphenylhydrazine			0	0	-	-	-	-	0	0	-	-	-	-	1.17E-01	6.43E-01	1.29E-01	No
97	Endosulfan (alpha)		YES	0	0	0.22	1.207	0.241	No	0	0	0.056	0.307	0.061	No	5.19E+01	5.83E+01	1.17E+01	No
98	Endosulfan (beta)		YES	0	0	0.22	1.207	0.241	No	0	0	0.056	0.307	0.061	No	5.19E+01	5.83E+01	1.17E+01	No
99	Endosulfan sulfate		YES	0	0	-	-	-	-	0	0	-	-	-	-	5.19E+01	5.83E+01	1.17E+01	No
100	Endrin		YES	0	0	0.086	0.472	0.094	No	0	0	0.036	0.198	0.040	No	3.53E-02	3.97E-02	7.94E-03	No
101	Endrin Aldeyhde		YES	0	0	-	-	-	-	0	0	-	-	-	-	1.76E+00	1.98E+00	3.97E-01	No
102	Fluoranthene			0	0	-	-	-	-	0	0	-	-	-	-	8.12E+01	4.45E+02	8.91E+01	No
103	Fluorene			0	0	-	-	-	-	0	0	-	-	-	-	3.11E+03	1.71E+04	3.41E+03	No
104	Heptochlor		YES	0	0	0.52	2.854	0.571	No	0	0	0.004	0.021	0.004	No	4.63E-05	5.21E-05	1.04E-05	No
105	Heptachlor Epoxide		YES	0	0	0.52	2.854	0.571	No	0	0	0.004	0.021	0.004	No	2.29E-05	2.58E-05	5.15E-06	No
106	Hexachlorobenzene		YES	0	0	-	-	-	-	0	0	-	-	-	-	1.68E-04	1.89E-04	3.78E-05	No
107	Hexachlorobutadiene		YES	0	0	-	-	-	-	0	0	-	-	-	-	1.08E+01	1.21E+01	2.42E+00	No
108	Hexachlorocyclohexan (alpha)		YES	0	0	-	-	-	-	0	0	-	-	-	-	2.85E-03	3.21E-03	6.41E-04	No
109	Hexachlorocyclohexan (beta)		YES	0	0	-	-	-	-	0	0	-	-	-	-	9.97E-03	1.12E-02	2.24E-03	No
110	Hexachlorocyclohexan (gamma)		YES	0	0	0.95	5.214	1.043	No	0	0	-	-	-	-	1.08E+00	1.21E+00	2.42E-01	No
111	HexachlorocycloPentadiene			0	0	-	-	-	-	0	0	-	-	-	-	6.45E+02	3.54E+03	7.08E+02	No
112	Hexachloroethane			0	0	-	-	-	-	0	0	-	-	-	-	1.92E+00	1.05E+01	2.11E+00	No
113	Indeno(1, 2, 3-CK)Pyrene		YES	0	0	-	-	-	-	0	0	-	-	-	-	1.07E-02	1.20E-02	2.40E-03	No
114	Isophorone			0	0	-	-	-	-	0	0	-	-	-	-	5.61E+02	3.08E+03	6.16E+02	No
115	Naphthalene			0	0	-	-	-	-	0	0	-	-	-	-	-	-	-	-
116	Nitrobenzene			0	0	-	-	-	-	0	0	-	-	-	-	4.04E+02	2.22E+03	4.43E+02	No
117	N-Nitrosodi-N-Propylamine		YES	0	0	-	-	-	-	0	0	-	-	-	-	2.95E-01	3.32E-01	6.64E-02	No
118	N-Nitrosodi-N-Methylamine		YES	0	0	-	-	-	-	0	0	-	-	-	-	1.76E+00	1.98E+00	3.96E-01	No
119	N-Nitrosodi-N-Phenylamine		YES	0	0	-	-	-	-	0	0	-	-	-	-	3.50E+00	3.94E+00	7.88E-01	No
120	PCB-1016		YES	0	0	-	-	-	-	0	0	0.014	0.077	0.015	No	3.74E-05	4.21E-05	8.42E-06	No
121	PCB-1221		YES	0	0	-	-	-	-	0	0	0.014	0.077	0.015	No	3.74E-05	4.21E-05	8.42E-06	No
122	PCB-1232		YES	0	0	-	-	-	-	0	0	0.014	0.077	0.015	No	3.74E-05	4.21E-05	8.42E-06	No
123	PCB-1242		YES	0	0	-	-	-	-	0	0	0.014	0.077	0.015	No	3.74E-05	4.21E-05	8.42E-06	No
124	PCB-1248		YES	0	0	-	-	-	-	0	0	0.014	0.077	0.015	No	3.74E-05	4.21E-05	8.42E-06	No
125	PCB-1254		YES	0	0	-	-	-	-	0	0	0.014	0.077	0.015	No	3.74E-05	4.21E-05	8.42E-06	No
126	PCB-1260		YES	0	0	-	-	-	-	0	0	0.014	0.077	0.015	No	3.74E-05	4.21E-05	8.42E-06	No
127	Phenanthrene			0	0	-	-	-	-	0	0	-	-	-	-	-	-	-	-
128	Pyrene			0	0	-	-	-	-	0	0	-	-	-	-	2.33E+03	1.28E+04	2.56E+03	No
129	1, 2, 4-Trichlorobenzene			0	0	-	-	-	-	0	0	-	-	-	-	4.09E+01	2.25E+02	4.49E+01	No

ATTACHMENT C: WASTE LOAD ALLOCATION

Waste Load Allocation Summary

REQUEST INFORMATION

Request Number: 3661

From:	Alex Chavers	**In Branch/Section**	Industrial		
Date Submitted	11/14/2019	**Date Required**	12/14/2019	**FUND Code**	605
Receiving Waterbody	UT to Village Creek	Date Permit application received by NPDES program	5/6/2019		
Previous Stream Name					
Facility Name	CMC Steel Alabama	(Name of Discharger-WQ will use to file)			
		Previous Discharger Name			
River Basin	Black Warrior	**Outfall Latitude**	33.548145	(decimal degrees)	
***County**	Jefferson	**Outfall Longitude**	-86.760879	(decimal degrees)	
Permit Number	AL0001554	**Permit Type**	Expansion and Permit Modification		
		Permit Status	Active		
		Type of Discharger	INDUSTRIAL		

Do other discharges exist that may impact the model? ☑ Yes ☐ No

If yes, impacting dischargers names.	VCWWTP Outfall #1 VCWWTP Outfall #2	**Impacting dischargers permit numbers.**	AL0023647

Existing Discharge Design Flow	0.6	MGD	**Note: The flow rates given should be those requested for modeling.**
Proposed Discharge Design Flow	0.6	MGD	

Comments included ☑ Yes ☐ No

Information Verified By JBS

Year File Was Created 2007

Response ID Number 1735

Lat/Long Method GPS

12 Digit HUC Code	031601110408		
Use Classification	F&W		
Site Visit Completed?	☑ Yes ☐ No	**Date of Site Visit**	1/23/2020
Waterbody Impaired?	☐ Yes ☑ No	**Date of WLA Response**	4/10/2020
Antidegradation	☐ Yes ☑ No	**Approved TMDL?**	☑ Yes ☐ No
Waterbody Tier Level	Tier I		
Use Support Category	3	**Approval Date of TMDL**	1/22/2018

Waste Load Allocation Information

Modeled Reach Length	13.77	**Miles**	**Date of Allocation**	3/12/2020	
Name of Model Used	SWQM		**Allocation Type**	2 Seasons	

Model Completed by	Jacobs Engineering	Type of Model Used	Desk-top
Allocation Developed by	Consultant		

Waste Load Allocation Summary

Annual Effluent Limits		Conventional Parameters		Conventional Parameters		Other Parameters		Other Parameters	
		Qw 0.6 MGD		Qw 0.6 MGD		Qw 0.6 MGD		Qw MGD	
		Season	Summer	Season	Winter	Season	Summer	Season	
		From	May	From	Dec	From	Mar	From	
		Through	Nov	Through	Apr	Through	Oct	Through	
Qw MGD		CBOD5	4.9 mg/L	CBOD5	9 mg/L	TP	2 mg/L	TP	
CBOD5		NH3-N	1 mg/L	NH3-N	1 mg/L	TN		TN	
NH3-N		TKN		TKN		TSS		TSS	
TKN		D.O.	6 mg/L	D.O.	6 mg/L				
D.O.									

"Monitor Only" Parameters for Effluent:	Parameter	Frequency	Parameter	Frequency
	TKN	Monthly (Apr-Oct)		
	NO2+NO3-N	Monthly (Apr-Oct)		

Water Quality Characteristics Immediately Upstream of Discharge

Parameter	Summer		Winter	
CBODu	2	mg/l	2	mg/l
NH3-N	0.11	mg/l	0.11	mg/l
Temperature	28	°C	18	°C
pH	7	su	7	su

Hydrology at Discharge Location

Drainage Area Qualifier				Method Used to Calculate
Estimated	Drainage Area	3.35	sq mi	
	Stream 7Q10	0	cfs	<5.0 sq mi
	Stream 1Q10	0	cfs	<5.0 sq mi
	Stream 7Q2	0	cfs	<5.0 sq mi
	Annual Average	7.39	cfs	ADEM Estimate w/USGS Gage Data

Comments and/or Notations

CMC Steel Alabama has applied for a permit expansion and modification. There are 4 flow tiers for both summer and winter seasons. Limits above are for the scenario where the gauge is less than 2.9 cfs. See memo and report for the limits for the remaining flow scenarios. CMC Steel Alabama is listed in the Locust Fork TMDL and is therefore assigned a monthly average Total Phosphorus (TP) limit of 2.0 mg/L throughout the growing season (March-October).

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

April 8, 2020

MEMORANDUM

TO: Alex Chavers, Industrial/Municipal Branch

FROM: Jonathan Straiton, Water Quality Branch

RE: Seasonal and Tiered Waste Load Allocation for CMC Steel Alabama

A desktop model review was completed by ADEM for CMC Steel Alabama on April 8, 2020. Original modeling was completed by Jacobs Engineering Group. The modeling consists of 4 flow regimes for the summer and winter seasons, totaling 8 scenarios. The facility has proposed a discharge flow rate of 0.6 million gallons per day (MGD).

The models predict that the following effluent limits under the proposed scenarios will maintain the required dissolved oxygen concentration of 5.0 mg/L in the UT to Village Creek. The flows below include the flow from CMC Steel Alabama.

	Tier 0 Limits		Tier 1 Limits		Tier 2 Limits		Tier 3 Limits	
	0 cfs ≤ USGS< 2.9 cfs		2.9 cfs ≤ USGS< 3.4 cfs		3.4 cfs ≤ USGS< 4.1 cfs		USGS ≥ 4.1 cfs	
	Summer	Winter	Summer	Winter	Summer	Winter	Summer	Winter
CBOD5 (mg/L)	4.9	9	27	50	36	70	50	98
NH3-N (mg/L)	1	1	1	1	1	1	1	1
Min. D.O. (mg/L)	6	6	6	6	6	6	6	6

USGS gauge 02458190 will be used to determine the appropriate flow tier for CMC Steel Alabama. The limits proposed to ADEM by Jacobs were determined to be acceptable.

This facility is included in the Locust Fork and Village Creek Nutrients TMDL, which assigns a Total Phosphorus limit of 2.0 mg/L for CMC Steel Alabama. The UT to Village Creek (Jefferson County, AL) is classified as Fish and Wildlife (F&W) and is considered to be a Tier I water.

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
4171 Commanders Drive
Mobile, AL 36615-1421
(251) 432-6533
(251) 432-6598 (FAX)

Chavers, Alexander

From: Bunn, Michelle K <Michelle.Bunn@cmc.com>
Sent: Monday, June 1, 2020 3:30 PM
To: Alex Chavers (adchavers@adem.state.al.us)
Cc: Gillespie, Alan J.; Moody, Kelly (Houston)
Subject: CMC Steel AL Comments to ADEM draft permit dated 5-7-2020
Attachments: CMC Steel AL Comments to ADEM draft permit dated 5-7-2020.pdf

Alex,

Please find attached comments to the draft waste water permit. We appreciate the opportunity to provide the comments. Should you have any questions, you can contact Alan or me.

Thanks

MICHELLE BUNN, *CHMM* | *Area Environmental Manager* | **CMC STEEL ALABAMA**
101 South 50th Street | Birmingham AL 35212
Office 205.599.7485 | Mobile 205.966.6499 | michelle.bunn@cmc.com | www.cmc.com

June 1, 2020

Mr. Alex Chavers
Alabama Department of Environmental Management
Water Division
P.O. Box 301463
Montgomery, AL 36130-1463

RE: SMI Steel LLC dba CMC Steel Alabama
NPDES Permit No. AL0001554 Comments to Draft Permit
dated May 7, 2020

Dear Mr. Chavers:

Thank you for the opportunity to provide comments to the draft renewal permit AL0001554 dated May 7, 2020.

1. Part I.A. Discharge Limits, DSN001 (all tiers) – draft permit specifies DO minimum of 5 mg/L. However, the water quality model was run with DO daily minimum set to 6 mg/L (along with ammonia fixed at 1 mg/L) as requested by CMC for each flow tier. ***Please correct DO minimum to 6.0 mg/L.***

2. Part I.A. Discharge Limits, DSN001 – draft permit includes both mass and concentration-based limits for O&G, Lead, and Zinc. The current permit includes mass-based limits only, with a REPORT requirement for lead and zinc concentration. There is no O&G concentration reporting requirement or limit in the existing permit. The table below presents a summary of long-term average and maximum concentrations of the facility discharge over a 2-year period (May 2018 – April 2020) in comparison to the draft limits. The Tier 0 and Tier 3 draft limits are shown as these represent the range of concentrations included in the permit. [Note that CMC has historically and continues to operate the discharge at Tier 3, which reflects the highest value of the draft limits].

3.

Parameter	DSN001 Reported Concentrations (mg/L)		Draft Permit Limits, Tier 0 - Tier 3 (mg/L)	
	Long-term Avg	Maximum	Monthly Avg	Daily Maximum
Lead	< 0.0025	< 0.0025	0.012 – 0.064	0.313 – 1.655
Zinc	< 0.020	0.031	0.355 – 1.536	0.355 – 1.536
O&G	< 5	< 10.5	--	15

As noted in the data summary, the historical concentrations are consistently below the draft limits, and predominantly not detected. ***CMC requests that mass-based limits consistent with the effluent guidelines be the only limits specified for lead, zinc, and O&G; and that REPORT only be retained for lead and zinc concentration.*** Because the observed O&G data indicates that CMC's BMPs are sufficient to minimize O&G in the discharge, and because O&G is limited by the effluent guidelines on a mass basis and at the point of discharge by prohibiting the presence of a sheen and visible oil, ***CMC requests that the concentration limit for O&G be removed from all tiers.***

4. Part I.A. Discharge Limits, DSN001 (all tiers) - draft permit requires time composite samples; current permit specifies flow proportional composite samples. CMC requests that the draft permit be modified to reflect ***flow proportional*** sampling as currently permitted and most representative of the effluent quality.

5. Part I.A. Discharge Limits, DSN001 (all tiers) - ***CMC requests that credit be applied to the Zinc allocation to account for the intake water,*** as currently permitted and requested in the application. CMC collected a sample of the intake well water on April 10, 2019 and the city raw water on May 21, 2020, to verify the presence of zinc. The data indicates 0.033 mg/L is present in the well water and 0.46 mg/L of zinc in the city water. As noted in the table below, although the well water zinc concentration is lower than previous 1993 sample, the city water is 4 times greater than the original samples.

Water Source	Average Zinc Concentration (mg/L)		Flow (MGD)	Calculated Intake Credit (lbs/day)	
	Existing Permit Basis	2019 Permit Basis		Existing	2019/2020 Requested
City Water	0.103	0.46	0.1	0.086	0.384
Well Water	0.073	0.033	0.425	0.259	0.117

The existing intake credit zinc allocation of 0.345 lbs/day was calculated using the city and well water concentrations from the 1993 permit and updated city water flow of 0.1 MGD and well water flow of 0.425 MGD at the time of the last permit renewal. The calculated intake credit allocation using 2019/2020 data is 0.501 lbs/day. ADEM's rationale for omitting the credit is not consistent with the historical permitting basis and is counter to intake credit allowances. Notwithstanding ***CMC's request to remove the zinc concentration limits from the permit, it is noted that the zinc concentration in the city water is higher than the Tier 0 draft limit, which further supports the need to recognize the zinc credit.***

6. Part I.A. Discharge Limitations, DSN001T – ***CMC requests that toxicity monitoring be reduced from quarterly to annually*** based on the facility not having any toxicity issues since the permit was modified to specify definitive testing.

7. Part IV.A.2.o BMP Requirements, Plan Contents – this condition states that the BMP plan must be reviewed by "plant engineering." ***CMC requests that reference to plant engineering be removed*** and only the Plant Manager be noted for review.

8. Part IV.C.1 CWIS Requirements – The condition states that the plant's cooling water is either city water or recycled process water. ***Please modify to accurately reflect that groundwater is also a source of cooling water.***

9. Part IV.D. Effluent Toxicity/Biomonitoring – Paragraph 1.a.(1) regarding the IWC flow basis, should text read as "7-day, 10-year ***low*** flow period"?

10. Part IV.D.1.b. Effluent Toxicity Limitations – we understand that there is an error in calculation of the tiered-IWCs as included in the draft permit. Per an email from Alex Chavers on 5/28, the draft permit will be revised to reflect *IWCs at 24%, 21%, and 18%* for definitive testing at Tiers 1, 2, and 3 respectively. With this IWC correction, we request that ***the serial test dilutions also be corrected to reflect the existing dilutions.*** Note that the existing permit test dilutions are all 1% less than the values included in the 5/28 email; please verify that the existing dilution values will be retained or provide the basis for the increase. Also, **note *that the permit rationale discussion on toxicity incorrectly lists the Tiers as 1, 2, 3, and 4; they should be listed as Tiers 0, 1, 2, and 3 to be consistent with the rest of the permit.***

Please contact Alan Gillespie (205-599-7939) should you have any questions regarding the information.

Sincerely,
CMC Steel Alabama

Randy Marsh
Director of Operations

After printing this label:
1. Use the 'Print' button on this page to print your label to your laser or inkjet printer.
2. Fold the printed page along the horizontal line.
3. Place label in shipping pouch and affix it to your shipment so that the barcode portion of the label can be read and scanned.

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ALABAMA DEPARTMENT OF ENVIRONMENTAL MANAGEMENT (ADEM)
NPDES INDIVIDUAL PERMIT APPLICATION
SUPPLEMENTARY INFORMATION FOR INDUSTRIAL FACILITIES

Instructions: This form should be used to submit the required supplementary information for an application for an NPDES individual permit for industrial facilities. The completed application should be submitted to ADEM 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 not applicable to the applicant. **Please type or print legibly in blue or black ink.** Mail the completed application to:

ADEM-Water Division
Industrial Section
P O Box 301463
Montgomery, AL 36130-1463

RECEIVED
MAY 03 2019
IND. MUN BRANCH

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

* *An application for participation in the ADEM's Electronic Environmental (E2) Reporting must be submitted to allow permittee to electronically submit reports as required.*

SECTION A – GENERAL INFORMATION

1. Facility Name: SMI Steel LLC dba CMC Steel Alabama

   a. Operator Name: SMI Steel LLC dba CMC Steel Alabama

   b. Is the operator identified in A.1.a, the owner of the facility? ☒ Yes ☐ No
   If no, provide 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 1 5 5 4 (not applicable if initial permit application)

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

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

5. Facility Physical Location: (**Attach a map with location marked; street, route no. or other specific identifier**)
   Street: 101 South 50th Street
   City: Birmingham County: Jefferson State: Alabama Zip: 35212
   Facility Location (Front Gate): Latitude: _____ Longitude: _____

6. Facility Mailing Address: PO Box 321188
   City: Birmingham County: Jefferson State: Alabama Zip: 35232

7. Responsible Official (as described on the last page of this application):
   Name and Title: Randy Marsh, Director of Operations, CMC Steel Alabama
   Address: P.O. Box 321188
   City: Birmingham State: Alabama Zip: 35212
   Phone Number: 205-592-8981 Email Address: Randy.Marsh@cmc.com

8. Designated Facility Contact:
   Name and Title: Alan Gillespie, Regional Environmental Manager, CMC
   Phone Number: 205-599-7939 Email Address: james.gillespie@cmc.com

9. Designated Discharge Monitoring Report (DMR) Contact:

Name and Title: Michelle Bunn, Environmental Area Manager, CMC Steel Alabama

Phone Number: 205-599-7485 Email Address: michelle.bunn@cmc.com

10. Type of Business Entity:

☐ Corporation ☐ General Partnership ☐ Limited Partnership ■ Limited Liability Company ☐ Sole Proprietorship

☐ Other (Please Specify)

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

a) Location of Incorporation:

Address: 101 South 50th Street

City: Birmingham County: Jefferson State: Alabama Zip: 35212

b) Parent Corporation of Applicant:

Name: Commercial Metals Company

Address: PO Box 1046

City: Dallas State: Texas Zip: 75221

c) Subsidiary Corporation(s) of Applicant:

Name: NA

Address:

City: State: Zip:

d) Corporate Officers:

Name: Barbara Smith, President and CEO

Address: 6565 North MacArthur Blvd, Suite 800

City: Irving State: Texas Zip: 75039

Name: Paul Kirkpatrick, Vice President; General Counsel Corporate Secretary

Address: 6565 North MacArthur Blvd, Suite 800

City: Irving State: Texas Zip: 75039

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

Name: CSC - Lawyers Incorporating Service, Inc.

Address: 150 South Perry Street

City: Montgomery State: Alabama Zip: 36104

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

Name: NA Name:

Address: Address:

City: State: Zip: City: State: Zip:

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

Name: NA

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
NPDES General Permit	ALG120472	CMC Steel Alabama
Title V Air Permit	4-07-0080-04	CMC Steel Alabama
NPDES Individual Permit	AL0001554	CMC Steel Alabama

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
CMC Steel Alabama	AL0001554	NOV	11/30/2016

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

b. _____

c. _____

d. _____

e. _____

f. _____

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

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):

CMC Steel Alabama operates a melt shop and rolling mill for the production of steel products. The melt shop transforms raw metallic scrap into a semi-finished product of correct size and chemistry, called a billet. The billet is rolled into final shape in the rolling mill. Finished products include flats, channels, angles, and beams. Ancillary operations include maintenance shops, garage, scrap handling, shipping and receiving areas.

SECTION C – WASTEWATER DISCHARGE INFORMATION

Facilities that checked activities in B.2 and are considered Categorical Industrial Users should skip to C.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), enter the description that corresponds to each process. **(The flow schematic should include all treatment units as well as monitoring and discharge points).** [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 _____ (days of week) at _____ (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	Iron & Steel (40 CFR 420)	Subpart F	Continuous
Hot Forming	Iron & Steel (40 CFR 420)	Subpart G	Continuous

2b.

Process Description	Last 12 Months (gals/day), (lbs/day), etc. Highest Month Average*	Highest Flow Year of Last 5 (gals/day), (lbs/day), etc. Monthly Average*	Discharge Type (batch, continuous, intermittent)
Melt Shop Production	3,915,397 ppd	3,194,610 ppd	continuous
Rolled Mill Production	3,000,610 ppd	2,603,118 ppd	continuous

*** 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: NA 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

e. 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: NA 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

e. 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 C.3 – C.6.

3. Do you share an outfall with another facility? ☐ Yes ■ No (If no, continue to C.4)

For each shared outfall, provide the following:

Applicant's Outfall No.	Name of Other Permittee/Facility	NPDES Permit No.	Where is sample collected by Applicant?

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

Current:	Flow Metering	■ Yes	☐ No	☐ N/A
	Sampling Equipment	■ Yes	☐ No	☐ N/A
Planned:	Flow Metering	☐ Yes	☐ No	■ N/A
	Sampling Equipment	☐ Yes	☐ No	■ N/A

If so, please attach a schematic diagram of the sewer system indicating the present or future location of this equipment and describe the equipment below:

ISCO Signature Flow Meter and ISCO 4700 Refrigerated Composite Sampler

5. Are any process changes or expansions planned during the next three years that could alter wastewater volumes or characteristics?
☐ Yes ■ No (If no, continue to C.6)

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

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

Trade Name	Chemical Composition
see Attachment 187 - C.6	

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
- ■ 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: 0.100 MGD* Well: 0.425 MGD* Well Depth: **Attachment Ft. Latitude: **Attachment 187-D Longitude: **Attachment 187-D

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

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

Name of Surface Water Source: _____

*** MGD – Million Gallons per Day**

Cooling Water Intake Structure Information

Complete D.1 and D.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 & Sewer Board b) Location of Provider: Birmingham, AL

   c) Latitude: multiple locations Longitude: multiple locations

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.

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? _____%

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 D.6 – D.17)

6. a. Is the cooling water used in a once-through cooling system? ☐ Yes ☐ No

   b. Is the cooling water used in a 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. What is the actual intake flow (AIF) as defined in 40 CFR §125.92(a)? _____MGD

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

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

13. What is the intake screen flow-through area?_____

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

15. What is the through-screen actual velocity (in ft/sec)? _____ft/sec

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

17. Do you have any additional fish detraction technology on your intake? ☐ Yes ☐ No

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

19. 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
N/A	

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*
N/A		

***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 the 10-foot elevation contour and within the limits of Mobile or Baldwin County? ☐ Yes ■ No

If yes, complete items F.1 – F.12:

	Yes	No
1. Does the project require new construction?	☐	☐
2. Will the project be a source of new air emissions?	☐	☐

		Yes	No
3.	Does the project involve dredging and/or filling of a wetland area or water way?	☐	☐
	If Yes, has the Corps of Engineers (COE) permit been received?	☐	☐
	COE Project No. _____		
4.	Does the project involve wetlands and/or submersed grassbeds?	☐	☐
5.	Are oyster reefs located near the project site?	☐	☐
	If Yes, include a map showing project and discharge location with respect to oyster reefs		
6.	Does the project involve the site development, construction and operation of an energy facility as defined in ADEM Admin. Code r. 335-8-1-.02(bb)?	☐	☐
7.	Does the project involve mitigation of shoreline or coastal area erosion?	☐	☐
8.	Does the project involve construction on beaches or dune areas?	☐	☐
9.	Will the project interfere with public access to coastal waters?	☐	☐
10.	Does the project lie within the 100-year floodplain?	☐	☐
11.	Does the project involve the registration, sale, use, or application of pesticides?	☐	☐
12.	Does the project propose or require construction of a new well or to alter an existing groundwater well to pump more than 50 gallons per day (GPD)?	☐	☐
	If yes, has the applicable permit for groundwater recovery or for groundwater well installation been obtained?	☐	☐

SECTION G – ANTI-DEGRADATION EVALUATION

In accordance with 40 CFR §131.12 and the ADEM Admin. Code r. 335-6-10-.04 for anti-degradation, 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 G.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 G.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 G.2.A – G.2.F below and ADEM Forms 311 and 313 (attached). ADEM 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. The EPA application forms are found on the Department's website at http://www.adem.alabama.gov/programs/water/waterforms.cnt . 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

Outfall No.	Receiving Water(s)	303(d) Segment?	Included in TMDL?*
001	UT to Village Creek	☐ Yes ■ No	☐ Yes ■ No
		☐ Yes ☐ No	☐ Yes ☐ No
		☐ Yes ☐ No	☐ Yes ☐ No
		☐ Yes ☐ No	☐ Yes ☐ No
		☐ Yes ☐ No	☐ Yes ☐ No

*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 Code r. 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."

Signature of Responsible Official: Randy Marsh Date Signed: 5/1/19

Name and Title: Randy Marsh, Director of Operations, CMC Steel Alabama

If the Responsible Official signing this application is <u>not</u> identified in Section A.7, provide the following information:

Mailing Address: _____

City: _____ State: _____ Zip: _____

Phone Number: _____ Email Address: _____

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.

Facility Location Map

Attachment to ADEM Form 187
Section C, Part 6
Biocides and Corrosion Inhibitors

Additive Name	Trade Name	Frequency of Use	Purpose	Affected Areas	Quantities to be Used	Proposed Discharge Concentrations	EPA Registration Number	96-hour Median Tolerance Limit
Sodium chlorosulfamate (17172-27-9) Sodium bromosulfamate (134509-56-1) Sodium hydroxide (1310-73-2)	ChemTreat CL49	As Needed	Biocide	DSN001	3,666 lbs/year	0.01 mg/L	3377-55-15300	3.8 mg/L bluegill sunfish 2.6 mg/L algae 8.9 mg/L inland silverside
1-bromo-3-chloro-5,5-dimethylhydantion (16079-88-2)	ChemTreat C2189T	As needed	Biocide	DSN001	2,000 lbs/year	Negligible	83451-4-15300	2.25 mg/L fathead minnow 0.87 mg/L rainbow trout 20 mg/L sheepshead minnow 1.8 mg/L inland silverside
Sodium bromide (7647-15-6)	ChemTreat CL40	As needed	Biocide	DSN001	13,713 lbs/year	Negligible	5185-451-15300	>1,000 mg/L bluegill sunfish >1,000 mg/L rainblow trout >1,000 mg/L fathead minnow >10,000 mg/L inland silverside
2-2-dibromo-3-nitrilopropionamide	ChemTreat CL206	As needed	Biocide	DSN001	3,500 lbs/year	0.01 mg/L	464-426-15300	6.5 mg/L bluegill sunfish 5.0 mg/L rainbow trout 6.8 mg/L fathead minnow 7.0 mg/L sheepshead minnow
5-chloro-2-methyl-4-isothiazolin-3-one (26172-55-4)	ChemTreat CL215	As needed	Biocide	DSN001	8,370 lbs/year	0.1 mg/L	67071-38-15300	23 mg/L bluegill sunfish 16 mg/L rainbow trout
2-(tert-butylamino)-4-chloro-6-(ethylamino)-s-triazine (5915-41-3)	ChemTreat CL2032	As needed	Biocide	DSN001	2,250 lbs/year	1.2 mg/L	83451-9-15300	N/A
Sodium Hypochlorite (7681-52-9) Water (7732-18-5) Sodium Hydroxide (1310-73-2) Sodium Carbonate (497-19-8) Sodium Chloride (7647-14-5)	Sodium Hypochlorite	As needed	Biocide	DSN001	96,000 lbs/year	0.06 mg/L	72315-6-38836	0.6 mg/L bluegill sunfish
Nitrous Acid, Sodium Salt (7632-00-0) Sodium Hydroxide (1310-73-2) Tolyltriazole, Sodium Salt (64665-57-2)	ChemTreat CL2840D	As needed	Corrosion Inhibitor	DSN001	19,824 lbs/year	4.3 mg/L	N/A	N/A
Tolyltriazole, Sodium Salt (64665-57-2)	ChemTreat CL4125	As needed	Corrosion Inhibitor	DSN001	10,500 lbs/year	1.2 mg/L	N/A	173 mg/L bluegill sunfish 25 mg/L rainbow trout 70-154 mg/L fathead minnow 126 mg/L inland silverside
2-phosphono-1,2,4-butanetricarboxylic acid, Sodium Salt (40372-66-5) Sodium Hydroxide (1310-73-2) Tolyltriazole, Sodium Salt (64665-57-2)	ChemTreat CL4855	As needed	Corrosion Inhibitor	DSN001	23,310 lbs/year	0.3 mg/L	N/A	2,639 mg/L fathead minnow
Tetrapotassium pyrophosphate (7320-34-5)	ChemTreat CT709	As needed	Corrosion Inhibitor	DSN001	6,336 lbs/year	1.0 mg/L	N/A	>1,000 mg/L sheepshead minnow 637.3 mg/L fathead minnow
2-phosphono-1,2,4-butane tricarboxylic acid (37971-36-1)	ChemTreat CL3857	As needed	Corrosion Inhibitor	DSN001	31,500 lbs/year	1.7 mg/L	N/A	>1,000 mg/L fathead minnow

Attachment 187 - D
Water Supply

	Well 1 - 335 Ft.		**33° 32' 07"**		**86° 45' 26"**
	Well 2 - 403 Ft.		**33° 32' 03"**		**86° 45' 26"**
Well Depth	**Well 3 - 287** Ft.	Latitude:	**33° 32' 14"**	Longitude:	**86° 45' 09"**

Please print or type in the unshaded areas only.

Form Approved. OMB No. 2040-0086.

FORM 1 GENERAL

U.S. ENVIRONMENTAL PROTECTION AGENCY

GENERAL INFORMATION

Consolidated Permits Program

(Read the "General Instructions" before starting.)

I. EPA I.D. NUMBER

S		T/A	C
F	ALD067123570		D
1	2 — 13	14	15

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
A. Is this facility a **publicly owned treatment works** which results in a **discharge** to **waters of the U.S.**? (FORM 2A)		X	
	16	17	18
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	
	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
	22	23	24
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	
	25	26	27
E. Does or will this facility treat, store, or dispose of **hazardous wastes**? (FORM 3)		X	
	28	29	30
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	
	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	
	34	35	36
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	
	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	
	40	41	42
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	
	43	44	45

III. NAME OF FACILITY

C 1 SKIP: SMI Steel LLC dba CMC Steel Alabama

15 | 16 – 29 | 30 — 69

IV. FACILITY CONTACT

A. NAME & TITLE *(last, first, & title)*	B. PHONE *(area code & no.)*
C 2 Alan Gillespie, Regional Environmental Manager, CMC	(205) 599-7939
15 | 16 — 45	46 — 48 | 49 — 51 | 52 — 55

V. FACILTY MAILING ADDRESS

A. STREET OR P.O. BOX

C 3 PO Box 321188

15 | 16 — 45

B. CITY OR TOWN	C. STATE	D. ZIP CODE
C 4 Birmingham	AL	35232
15 | 16 — 40	41 — 42	47 — 51

VI. FACILITY LOCATION

A. STREET, ROUTE NO. OR OTHER SPECIFIC IDENTIFIER

C 5 101 South 50th Street

15 | 16 — 45

B. COUNTY NAME

Jefferson

46 — 70

C. CITY OR TOWN	D. STATE	E. ZIP CODE	F. COUNTY CODE *(if known)*
C 6 Birmingham	AL	35212	073
15 | 16 — 40	41 — 42	47 — 51	52 — 54

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CONTINUE ON REVERSE

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

A. FIRST	B. SECOND
3312 (specify) Steel Works, Blast Furnaces, and Rolling Mill	(specify)
C. THIRD	**D. FOURTH**
(specify)	(specify)

VIII. OPERATOR INFORMATION

A. NAME: Commercial Metals Company

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.)*: (214) 689-4354

E. STREET OR P.O. BOX: PO Box 1046

F. CITY OR TOWN: Dallas

G. STATE: TX

H. ZIP CODE: 75221

IX. INDIAN LAND

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)*
N AL0001554	P
B. UIC *(Underground Injection of Fluids)*	**E. OTHER** *(specify)*
U	ALG120472 (specify) General NPDES
C. RCRA *(Hazardous Wastes)*	**E. OTHER** *(specify)*
R	4-07-0080-04 (specify) Title V Air Permit

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)*

CMC Steel Alabama operates a melt shop and rolling mill for the production of steel products. The melt shop transforms raw metallic scrap into a semi-finished product of correct size and chemistry, called a billet. The billet is rolled into final shape in the rolling mill. Finished products include flats, channels, angles, and beams.

Ancillary operations include maintenance shops, garage, scrap handling, shipping and receiving areas.

XIII. CERTIFICATION *(see instructions)*

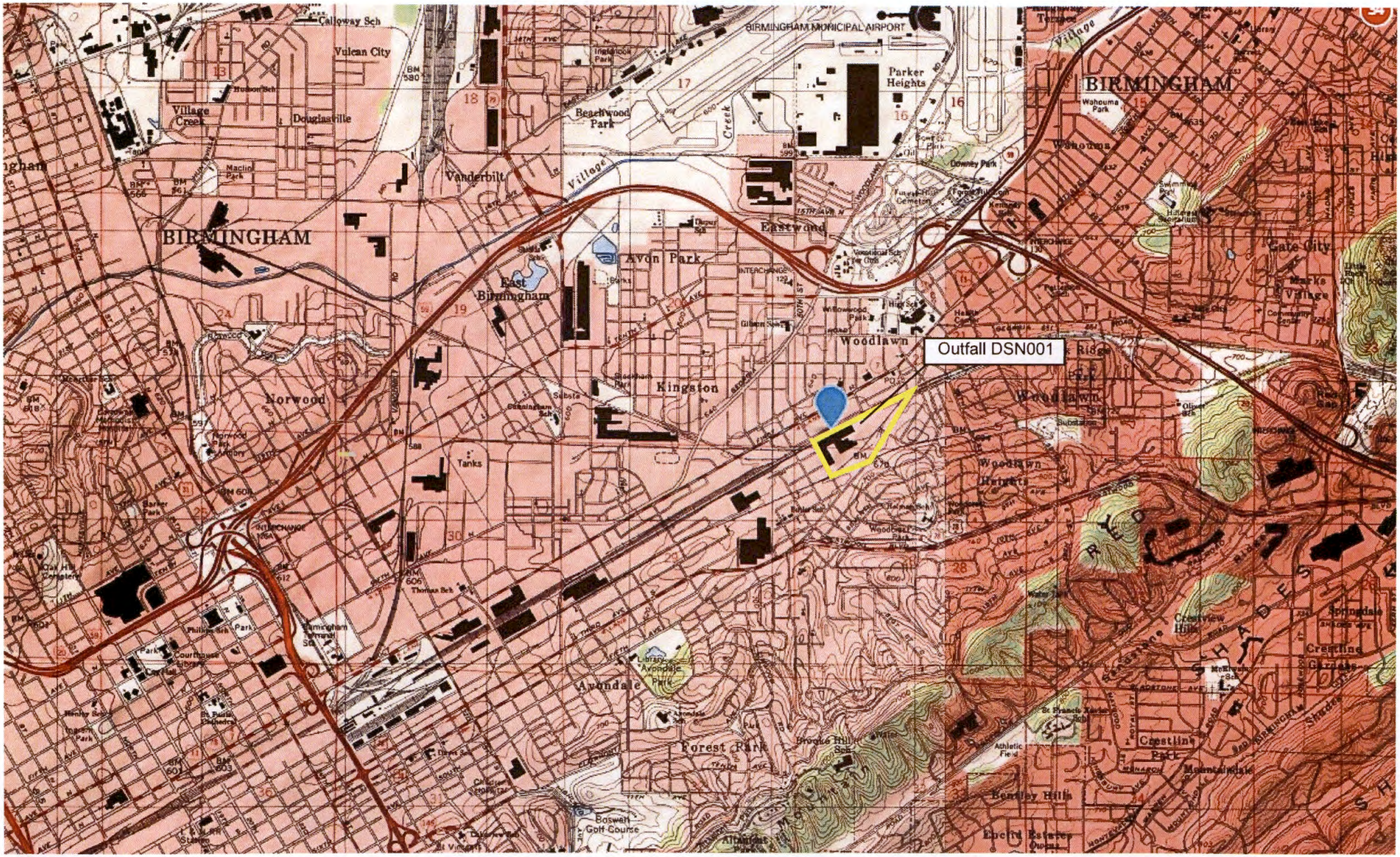
I certify under penalty of law that I have personally examined and am familiar with the information submitted in this application and all attachments and that, based on my inquiry of those persons immediately responsible for obtaining the information contained in the application, I believe that the information 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
Randy Marsh, Director of Operations, CMC Steel Alabama	Randy Marsh	5/1/19

COMMENTS FOR OFFICIAL USE ONLY

Topographic Map

SMI Steel LLC dba CMC Steel Alabama
Birmingham, Alabama



Please print or type in the unshaded areas only.

EPA I.D. NUMBER (*copy from Item 1 of Form 1*)
ALD067123570

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.	
DSN001	33.00	32.00	9.00	86.00	45.00	22.00	Unnamed Tributary to 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	
DSN001	Blowdown from cooling water systems*	430 gpm	Sedimentation, Neutralization, Oil Skimming**	1-U	2-K
	and Rolling Mill once-through coolin				
	* Caster Spray System, Compressor		** No code for oil skimming		
	Cooling Water System, Cooling Bed				
	Spray System, Mill Finishing Water				
	System, and Reheat Furnace Cooling				
	System				

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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		4. FLOW				
		a. DAYS PER WEEK (*specify average*)	b. MONTHS PER YEAR (*specify average*)	a. FLOW RATE (*in mgd*)		B. TOTAL VOLUME (*specify with units*)		C. DURATION (*in days*)
				1. LONG TERM AVERAGE	2. MAXIMUM DAILY	1. LONG TERM AVERAGE	2. MAXIMUM DAILY	
N/A								

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			2. AFFECTED OUTFALLS (*list outfall numbers*)
a. QUANTITY PER DAY	b. UNITS OF MEASURE	c. OPERATION, PRODUCT, MATERIAL, ETC. (*specify*)	
3,000,610	pounds/day	Rolling Mill Production (Hot Forming)	DSN001
3,915,397	pounds/day	Melt Shop Production (Continuous Casting)	DSN001

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		3. BRIEF DESCRIPTION OF PROJECT	4. FINAL COMPLIANCE DATE	
	a. NO.	b. SOURCE OF DISCHARGE		a. REQUIRED	b. PROJECTED
N/A					

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*)
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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*)

N/A

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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*)

Outfall: DSN001
Species: Water Flea (Ceridaphnia) and Fathead Minno (Pimephales)
Test Duration: 7-days
IWC or Effluent %: Definitive testing, variable % based on flow tier
Noncompliance: IC25 < IWC
Test Frequency: Quarterly
Results for past 3 years: Pass

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*)
Eurofins TestAmerica	5102 LaRoche Avenue Savannah, GA 31404	(912)354-7858	All

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.*)
Randy Marsh, Director of Operations, CMC Steel Alabama	(205) 592-8981
C. SIGNATURE: Randy Marsh	D. DATE SIGNED: 5/1/19

PLEASE PRINT OR TYPE IN THE UNSHADED AREAS ONLY. You may report some or all of this information on separate sheets (*use the same format*) instead of completing these pages.
SEE INSTRUCTIONS.

EPA I.D. NUMBER (*copy from Item 1 of Form 1*): ALD067123570

V. INTAKE AND EFFLUENT CHARACTERISTICS *(continued from page 3 of Form 2-C)*

OUTFALL NO.: DSN 001

PART A –You must provide the results of at least one analysis for every pollutant in this table. Complete one table for each outfall. See instructions for additional details.

1. POLLUTANT	2. EFFLUENT a. MAXIMUM DAILY VALUE (1) CONCENTRATION	a. MAXIMUM DAILY VALUE (2) MASS	b. MAXIMUM 30 DAY VALUE (*if available*) (1) CONCENTRATION	b. MAXIMUM 30 DAY VALUE (*if available*) (2) MASS	c. LONG TERM AVRG. VALUE (*if available*) (1) CONCENTRATION	c. LONG TERM AVRG. VALUE (*if available*) (2) MASS	d. NO. OF ANALYSES	3. UNITS (*specify if blank*) a. CONCEN-TRATION	3. UNITS b. MASS	4. INTAKE (*optional*) a. LONG TERM AVERAGE VALUE (1) CONCENTRATION	a. LONG TERM AVERAGE VALUE (2) MASS	4. INTAKE b. NO. OF ANALYSES
a. Biochemical Oxygen Demand (*BOD*)	20	149	20	149	8.96	553.27	13	mg/L	lb/d			
b. Chemical Oxygen Demand (*COD*)	45	335					1	mg/L	lb/d			
c. Total Organic Carbon (*TOC*)	13	97					1	mg/L	lb/d			
d. Total Suspended Solids (*TSS*)	2.2	16.4	2.79	16.4	1.54	7.78	13	mg/L	lb/d			
e. Ammonia (*as N*)	<0.25	<1.86	<0.25	<1.86	<0.25	<1.86	13	mg/L	lb/d			
f. Flow	VALUE 2.08		VALUE 0.94		VALUE 0.63		213	MGD		VALUE		
g. Temperature (*winter*)	VALUE 83.0		VALUE		VALUE		1	°C		VALUE		
h. Temperature (*summer*)	VALUE		VALUE		VALUE			°C		VALUE		
i. pH	MINIMUM 7.32	MAXIMUM 8.44	MINIMUM 7.32	MAXIMUM 8.44			47	STANDARD UNITS				

PART B – Mark "X" in column 2-a for each pollutant you know or have reason to believe is present. Mark "X" in column 2-b for each pollutant you believe to be absent. If you mark column 2a for any pollutant which is limited either directly, or indirectly but expressly, in an effluent limitations guideline, you must provide the results of at least one analysis for that pollutant. For other pollutants for which you mark column 2a, you must provide quantitative data or an explanation of their presence in your discharge. Complete one table for each outfall. See the instructions for additional details and requirements.

1. POLLUTANT AND CAS NO. (*if available*)	2. MARK "X" a. BELIEVED PRESENT	2. MARK "X" b. BELIEVED ABSENT	3. EFFLUENT a. MAXIMUM DAILY VALUE (1) CONCENTRATION	a. MAXIMUM DAILY VALUE (2) MASS	b. MAXIMUM 30 DAY VALUE (*if available*) (1) CONCENTRATION	b. MAXIMUM 30 DAY VALUE (*if available*) (2) MASS	c. LONG TERM AVRG. VALUE (*if available*) (1) CONCENTRATION	c. LONG TERM AVRG. VALUE (*if available*) (2) MASS	d. NO. OF ANALYSES	4. UNITS a. CONCEN-TRATION	4. UNITS b. MASS	5. INTAKE (*optional*) a. LONG TERM AVERAGE VALUE (1) CONCENTRATION	a. LONG TERM AVERAGE VALUE (2) MASS	5. INTAKE b. NO. OF ANALYSES
a. Bromide (24959-67-9)	X		0.2	1.5					1	mg/L	lb/d			
b. Chlorine, Total Residual	X		0.23	1.71					1	mg/L	lb/d			
c. Color	X		5.0	NA					1	PCU	NA			
d. Fecal Coliform		X												
e. Fluoride (16984-48-8)		X												
f. Nitrate-Nitrite (*as N*)	X		1.2	8.9					1	mg/L	lb/d			

ITEM V-B CONTINUED FROM FRONT

1. POLLUTANT AND CAS NO. (*if available*)	2. MARK "X"		3. EFFLUENT							4. UNITS		5. INTAKE (*optional*)		
	a. BELIEVED PRESENT	b. BELIEVED ABSENT	a. MAXIMUM DAILY VALUE		b. MAXIMUM 30 DAY VALUE (*if available*)		c. LONG TERM AVRG. VALUE (*if available*)		d. NO. OF ANALYSES	a. CONCENTRATION	b. MASS	a. LONG TERM AVERAGE VALUE		b. NO. OF ANALYSES
			(1) CONCENTRATION	(2) MASS	(1) CONCENTRATION	(2) MASS	(1) CONCENTRATION	(2) MASS				(1) CONCENTRATION	(2) MASS	
g. Nitrogen, Total Organic (*as N*)	X		0.46	3.43					1	mg/L	lb/d			
h. Oil and Grease		X	<5.2	<38.7	<5.2	<38.7	<1.03	<4.8	13	mg/L	lb/d			
i. Phosphorus (as P), Total (7723-14-0)		X	<0.10	<0.74					1	mg/L	lb/d			
j. Radioactivity														
(1) Alpha, Total		X												
(2) Beta, Total		X												
(3) Radium, Total		X												
(4) Radium 226, Total		X												
k. Sulfate (*as SO_4*) (14808-79-8)	X		44	328					1	mg/L	lb/d			
l. Sulfide (*as S*)		X												
m. Sulfite (*as SO_3*) (14265-45-3)		X												
n. Surfactants	X		<0.20	<1.49					1	mg/L	lb/d			
o. Aluminum, Total (7429-90-5)	X		<200	<1.49					1	ug/L	lb/d			
p. Barium, Total (7440-39-3)	X		<10	<0.07					1	ug/L	lb/d			
q. Boron, Total (7440-42-8)	X		<100	<0.74					1	ug/L	lb/d			
r. Cobalt, Total (7440-48-4)		X	<10	<0.07					1	ug/L	lb/d			
s. Iron, Total (7439-89-6)	X		400	3					1	ug/L	lb/d			
t. Magnesium, Total (7439-95-4)	X		25000	186					1	ug/L	lb/d			
u. Molybdenum, Total (7439-98-7)	X		66	0.491					1	ug/L	lb/d			
v. Manganese, Total (7439-96-5)	X		37	0.276					1	ug/L	lb/d			
w. Tin, Total (7440-31-5)		X	<50	<0.37					1	ug/L	lb/d			
x. Titanium, Total (7440-32-6)		X	<10	<0.07					1	ug/L	lb/d			

EPA I.D. NUMBER (*copy from Item 1 of Form 1*)	OUTFALL NUMBER
ALD067123570	DSN 001

CONTINUED FROM PAGE 3 OF FORM 2-C

PART C - If you are a primary industry and this outfall contains process wastewater, refer to Table 2c-2 in the instructions to determine which of the GC/MS fractions you must test for. Mark "X" in column 2-a for all such GC/MS fractions that apply to your industry and for ALL toxic metals, cyanides, and total phenols. If you are not required to mark column 2-a (*secondary industries, nonprocess wastewater outfalls, and nonrequired GC/MS fractions*), mark "X" in column 2-b for each pollutant you know or have reason to believe is present. Mark "X" in column 2-c for each pollutant you believe is absent. If you mark column 2a for any pollutant, you must provide the results of at least one analysis for that pollutant. If you mark column 2b for any pollutant, you must provide the results of at least one analysis for that pollutant if you know or have reason to believe it will be discharged in concentrations of 10 ppb or greater. If you mark column 2b for acrolein, acrylonitrile, 2,4 dinitrophenol, or 2-methyl-4, 6 dinitrophenol, you must provide the results of at least one analysis for each of these pollutants which you know or have reason to believe that you discharge in concentrations of 100 ppb or greater. Otherwise, for pollutants for which you mark column 2b, you must either submit at least one analysis or briefly describe the reasons the pollutant is expected to be discharged. Note that there are 7 pages to this part; please review each carefully. Complete one table (*all 7 pages*) for each outfall. See instructions for additional details and requirements.

1. POLLUTANT AND CAS NUMBER (*if available*)	2. MARK "X"			3. EFFLUENT							4. UNITS		5. INTAKE (*optional*)		
	a. TESTING REQUIRED	b. BELIEVED PRESENT	c. BELIEVED ABSENT	a. MAXIMUM DAILY VALUE		b. MAXIMUM 30 DAY VALUE (*if available*)		c. LONG TERM AVRG. VALUE (*if available*)		d. NO. OF ANALYSES	a. CONCENTRATION	b. MASS	a. LONG TERM AVERAGE VALUE		b. NO. OF ANALYSES
				(1) CONCENTRATION	(2) MASS	(1) CONCENTRATION	(2) MASS	(1) CONCENTRATION	(2) MASS				(1) CONCENTRATION	(2) MASS	
METALS, CYANIDE, AND TOTAL PHENOLS															
1M. Antimony, Total (7440-36-0)	X		X	<20	<0.15					1	ug/L	lb/d			
2M. Arsenic, Total (7440-38-2)	X		X	<20	<0.15					1	ug/L	lb/d			
3M. Beryllium, Total (7440-41-7)	X		X	<4.0	<0.030					1	ug/L	lb/d			
4M. Cadmium, Total (7440-43-9)	X		X	<5.0	<0.037					1	ug/L	lb/d			
5M. Chromium, Total (7440-47-3)	X		X	<10	<0.07					1	ug/L	lb/d			
6M. Copper, Total (7440-50-8)	X		X	<20	<0.15					1	ug/L	lb/d			
7M. Lead, Total (7439-92-1)	X		X	<10	<0.07	<10	<0.07	<13.85	<0.73	13	ug/L	lb/d			
8M. Mercury, Total (7439-97-6)	X		X	<0.20	<0.001					1	ug/L	lb/d			
9M. Nickel, Total (7440-02-0)	X		X	<40	<0.30					1	ug/L	lb/d			
10M. Selenium, Total (7782-49-2)	X		X	<20	<0.15					1	ug/L	lb/d			
11M. Silver, Total (7440-22-4)	X		X	<10	<0.07					1	ug/L	lb/d			
12M. Thallium, Total (7440-28-0)	X		X	<25	<0.186					1	ug/L	lb/d			
13M. Zinc, Total (7440-66-6)	X	X		0.0028	0.031			0.0028	0.031	13	ug/L	lb/d			
14M. Cyanide, Total (57-12-5)	X		X	<0.010	<0.000					1	mg/L	lb/d			
15M. Phenols, Total	X		X	<0.050	<0.000					1	mg/L	lb/d			
DIOXIN															
2,3,7,8-Tetra-chlorodibenzo-P-Dioxin (1764-01-6)			X	DESCRIBE RESULTS											

CONTINUED FROM THE FRONT

1. POLLUTANT AND CAS NUMBER (*if available*)	2. MARK "X"			3. EFFLUENT							4. UNITS		5. INTAKE (*optional*)		
	a. TESTING REQUIRED	b. BELIEVED PRESENT	c. BELIEVED ABSENT	a. MAXIMUM DAILY VALUE		b. MAXIMUM 30 DAY VALUE (*if available*)		c. LONG TERM AVRG. VALUE (*if available*)		d. NO. OF ANALYSES	a. CONCENTRATION	b. MASS	a. LONG TERM AVERAGE VALUE		b. NO. OF ANALYSES
				(1) CONCENTRATION	(2) MASS	(1) CONCENTRATION	(2) MASS	(1) CONCENTRATION	(2) MASS				(1) CONCENTRATION	(2) MASS	
GC/MS FRACTION – VOLATILE COMPOUNDS															
1V. Accrolein (107-02-8)	X		X	<20	<0.15					1	ug/L	lb/d			
2V. Acrylonitrile (107-13-1)	X		X	<20	<0.15					1	ug/L	lb/d			
3V. Benzene (71-43-2)	X		X	<1.0	<0.01					1	ug/L	lb/d			
4V. Bis (*Chloromethyl*) Ether (542-88-1)			X	Sampling no longer required											
5V. Bromoform (75-25-2)	X		X	<1.0	<0.01					1	ug/L	lb/d			
6V. Carbon Tetrachloride (56-23-5)	X		X	<1.0	<0.01					1	ug/L	lb/d			
7V. Chlorobenzene (108-90-7)	X		X	<1.0	<0.01					1	ug/L	lb/d			
8V. Chlorodibromomethane (124-48-1)	X		X	<1.0	<0.01					1	ug/L	lb/d			
9V. Chloroethane (75-00-3)	X		X	<5.0	<0.04					1	ug/L	lb/d			
10V. 2-Chloroethylvinyl Ether (110-75-8)	X		X	<10	<0.07					1	ug/L	lb/d			
11V. Chloroform (67-66-3)	X		X	<1.0	<0.01					1	ug/L	lb/d			
12V. Dichlorobromomethane (75-27-4)	X		X	<1.0	<0.01					1	ug/L	lb/d			
13V. Dichlorodifluoromethane (75-71-8)	X		X	<1.0	<1.0					1	ug/L	lb/d			
14V. 1,1-Dichloroethane (75-34-3)	X		X	<1.0	<0.01					1	ug/L	lb/d			
15V. 1,2-Dichloroethane (107-06-2)	X		X	<1.0	<0.01					1	ug/L	lb/d			
16V. 1,1-Dichloroethylene (75-35-4)	X		X	<1.0	<0.01					1	ug/L	lb/d			
17V. 1,2-Dichloropropane (78-87-5)	X		X	<1.0	<0.01					1	ug/L	lb/d			
18V. 1,3-Dichloropropylene (542-75-6)	X		X	<1.0	<0.01					1	ug/L	lb/d			
19V. Ethylbenzene (100-41-4)	X		X	<1.0	<0.01					1	ug/L	lb/d			
20V. Methyl Bromide (74-83-9)	X		X	<5.0	<0.04					1	ug/L	lb/d			
21V. Methyl Chloride (74-87-3)	X		X	<1.0	<0.01					1	ug/L	lb/d			

CONTINUED FROM PAGE V-4

1. POLLUTANT AND CAS NUMBER (*if available*)	2. MARK "X"			3. EFFLUENT							4. UNITS		5. INTAKE (*optional*)		
	a. TESTING REQUIRED	b. BELIEVED PRESENT	c. BELIEVED ABSENT	a. MAXIMUM DAILY VALUE		b. MAXIMUM 30 DAY VALUE (*if available*)		c. LONG TERM AVRG. VALUE (*if available*)		d. NO. OF ANALYSES	a. CONCENTRATION	b. MASS	a. LONG TERM AVERAGE VALUE		b. NO. OF ANALYSES
				(1) CONCENTRATION	(2) MASS	(1) CONCENTRATION	(2) MASS	(1) CONCENTRATION	(2) MASS				(1) CONCENTRATION	(2) MASS	
GC/MS FRACTION – VOLATILE COMPOUNDS (*continued*)															
22V. Methylene Chloride (75-09-2)	X		X	<5.0	<0.04					1	ug/L	lb/d			
23V. 1,1,2,2-Tetrachloroethane (79-34-5)	X		X	<1.0	<0.01					1	ug/L	lb/d			
24V. Tetrachloroethylene (127-18-4)	X		X	<1.0	<0.01					1	ug/L	lb/d			
25V. Toluene (108-88-3)	X		X	<1.0	<0.01					1	ug/L	lb/d			
26V. 1,2-Trans-Dichloroethylene (156-60-5)	X		X	<1.0	<0.01					1	ug/L	lb/d			
27V. 1,1,1-Trichloroethane (71-55-6)	X		X	<1.0	<0.01					1	ug/L	lb/d			
28V. 1,1,2-Trichloroethane (79-00-5)	X		X	<1.0	<0.01					1	ug/L	lb/d			
29V Trichloroethylene (79-01-6)	X		X	<1.0	<0.01					1	ug/L	lb/d			
30V. Trichlorofluoromethane (75-69-4)	X		X	<1.0	<0.01					1	ug/L	lb/d			
31V. Vinyl Chloride (75-01-4)	X		X	<1.0	<0.01					1	ug/L	lb/d			
GC/MS FRACTION – ACID COMPOUNDS															
1A. 2-Chlorophenol (95-57-8)	X		X	<9.6	<0.07					1	ug/L	lb/d			
2A. 2,4-Dichlorophenol (120-83-2)	X		X	<9.6	<0.07					1	ug/L	lb/d			
3A. 2,4-Dimethylphenol (105-67-9)	X		X	<9.6	<0.07					1	ug/L	lb/d			
4A. 4,6-Dinitro-O-Cresol (534-52-1)	X		X	<48	<0.36					1	ug/L	lb/d			
5A. 2,4-Dinitrophenol (51-28-5)	X		X	<48	<0.36					1	ug/L	lb/d			
6A. 2-Nitrophenol (88-75-5)	X		X	<9.6	<0.07					1	ug/L	lb/d			
7A. 4-Nitrophenol (100-02-7)	X		X	<48	<0.36					1	ug/L	lb/d			
8A. P-Chloro-M-Cresol (59-50-7)	X		X	<9.6	<0.07					1	ug/L	lb/d			
9A. Pentachlorophenol (87-86-5)	X		X	<48	<0.36					1	ug/L	lb/d			
10A. Phenol (108-95-2)	X		X	<9.6	<0.07					1	ug/L	lb/d			
11A. 2,4,6-Trichlorophenol (88-05-2)	X		X	<9.6	<0.07					1	ug/L	lb/d			

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1. POLLUTANT AND CAS NUMBER (*if available*)	2. MARK "X"			3. EFFLUENT							4. UNITS		5. INTAKE (*optional*)		
	a. TESTING REQUIRED	b. BELIEVED PRESENT	c. BELIEVED ABSENT	a. MAXIMUM DAILY VALUE		b. MAXIMUM 30 DAY VALUE (*if available*)		c. LONG TERM AVRG. VALUE (*if available*)		d. NO. OF ANALYSES	a. CONCENTRATION	b. MASS	a. LONG TERM AVERAGE VALUE		b. NO. OF ANALYSES
				(1) CONCENTRATION	(2) MASS	(1) CONCENTRATION	(2) MASS	(1) CONCENTRATION	(2) MASS				(1) CONCENTRATION	(2) MASS	
GC/MS FRACTION – BASE/NEUTRAL COMPOUNDS															
1B. Acenaphthene (83-32-9)	X		X	<9.6	<0.07					1	ug/L	lb/d			
2B. Acenaphtylene (208-96-8)	X		X	<9.6	<0.07					1	ug/L	lb/d			
3B. Anthracene (120-12-7)	X		X	<9.6	<0.07					1	ug/L	lb/d			
4B. Benzidine (92-87-5)	X		X	<77	<0.57					1	ug/L	lb/d			
5B. Benzo (*a*) Anthracene (56-55-3)	X		X	<9.6	<0.07					1	ug/L	lb/d			
6B. Benzo (*a*) Pyrene (50-32-8)	X		X	<9.6	<0.07					1	ug/L	lb/d			
7B. 3,4-Benzo-fluoranthene (205-99-2)	X		X	<9.6	<0.07					1	ug/L	lb/d			
8B. Benzo (*ghi*) Perylene (191-24-2)	X		X	<9.6	<0.07					1	ug/L	lb/d			
9B. Benzo (*k*) Fluoranthene (207-08-9)	X		X	<9.6	<0.07					1	ug/L	lb/d			
10B. Bis (*2-Chloro-ethoxy*) Methane (111-91-1)	X		X	<9.6	<0.07					1	ug/L	lb/d			
11B. Bis (*2-Chloro-ethyl*) Ether (111-44-4)	X		X	<9.6	<0.07					1	ug/L	lb/d			
12B. Bis (*2-Chloroisopropyl*) Ether (102-80-1)	X		X	<9.6	<0.07					1	ug/L	lb/d			
13B. Bis (*2-Ethyl-hexyl*) Phthalate (117-81-7)	X		X	160	1.19					1	ug/L	lb/d			
14B. 4-Bromophenyl Phenyl Ether (101-55-3)	X		X	<9.6	<0.07					1	ug/L	lb/d			
15B. Butyl Benzyl Phthalate (85-68-7)	X		X	<9.6	<0.07					1	ug/L	lb/d			
16B. 2-Chloro-naphthalene (91-58-7)	X		X	<9.6	<0.07					1	ug/L	lb/d			
17B. 4-Chloro-phenyl Phenyl Ether (7005-72-3)	X		X	<9.6	<0.07					1	ug/L	lb/d			
18B. Chrysene (218-01-9)	X		X	<9.6	<0.07					1	ug/L	lb/d			
19B. Dibenzo (*a,h*) Anthracene (53-70-3)	X		X	<9.6	<0.07					1	ug/L	lb/d			
20B. 1,2-Dichloro-benzene (95-50-1)	X		X	<9.6	<0.07					1	ug/L	lb/d			
21B. 1,3-Di-chloro-benzene (541-73-1)	X		X	<9.6	<0.07					1	ug/L	lb/d			

CONTINUED FROM PAGE V-6

1. POLLUTANT AND CAS NUMBER (*if available*)	2. MARK "X"			3. EFFLUENT							4. UNITS		5. INTAKE (*optional*)		
	a. TESTING REQUIRED	b. BELIEVED PRESENT	c. BELIEVED ABSENT	a. MAXIMUM DAILY VALUE		b. MAXIMUM 30 DAY VALUE (*if available*)		c. LONG TERM AVRG. VALUE (*if available*)		d. NO. OF ANALYSES	a. CONCENTRATION	b. MASS	a. LONG TERM AVERAGE VALUE		b. NO. OF ANALYSES
				(1) CONCENTRATION	(2) MASS	(1) CONCENTRATION	(2) MASS	(1) CONCENTRATION	(2) MASS				(1) CONCENTRATION	(2) MASS	
GC/MS FRACTION – BASE/NEUTRAL COMPOUNDS (*continued*)															
22B. 1,4-Dichlorobenzene (106-46-7)	X		X	<9.6	<0.07					1	ug/L	lb/d			
23B. 3,3-Dichlorobenzidine (91-94-1)	X		X	<58	<0.43					1	ug/L	lb/d			
24B. Diethyl Phthalate (84-66-2)	X		X	<9.6	<0.07					1	ug/L	lb/d			
25B. Dimethyl Phthalate (131 -11-3)	X		X	<9.6	<0.07					1	ug/L	lb/d			
26B. Di-N-Butyl Phthalate (84-74-2)	X		X	<9.6	<0.07					1	ug/L	lb/d			
27B. 2,4-Dinitrotoluene (121-14-2)	X		X	<9.6	<0.07					1	ug/L	lb/d			
28B. 2,6-Dinitrotoluene (606-20-2)	X		X	<9.6	<0.07					1	ug/L	lb/d			
29B. Di-N-Octyl Phthalate (117-84-0)	X		X	<9.6	<0.07					1	ug/L	lb/d			
30B. 1,2-Diphenylhydrazine (*as Azobenzene*) (122-66-7)	X		X	<9.6	<0.07					1	ug/L	lb/d			
31B. Fluoranthene (206-44-0)	X		X	<9.6	<0.07					1	ug/L	lb/d			
32B. Fluorene (86-73-7)	X		X	<9.6	<0.07					1	ug/L	lb/d			
33B. Hexachlorobenzene (118-74-1)	X		X	<9.6	<0.07					1	ug/L	lb/d			
34B. Hexachlorobutadiene (87-68-3)	X		X	<9.6	<0.07					1	ug/L	lb/d			
35B. Hexachlorocyclopentadiene (77-47-4)	X		X	<19	<0.14					1	ug/L	lb/d			
36B Hexachloroethane (67-72-1)	X		X	<9.6	<0.07					1	ug/L	lb/d			
37B. Indeno (*1,2,3-cd*) Pyrene (193-39-5)	X		X	<9.6	<0.07					1	ug/L	lb/d			
38B. Isophorone (78-59-1)	X		X	<9.6	<0.07					1	ug/L	lb/d			
39B. Naphthalene (91-20-3)	X		X	<9.6	<0.07					1	ug/L	lb/d			
40B. Nitrobenzene (98-95-3)	X		X	<9.6	<0.07					1	ug/L	lb/d			
41B. N-Nitrosodimethylamine (62-75-9)	X		X	<19	<0.14					1	ug/L	lb/d			
42B. N-Nitrosodi-N-Propylamine (621-64-7)	X		X	<9.6	<0.07					1	ug/L	lb/d			

CONTINUED FROM THE FRONT

1. POLLUTANT AND CAS NUMBER (*if available*)	2. MARK "X"			3. EFFLUENT							4. UNITS		5. INTAKE (*optional*)		
	a. TESTING REQUIRED	b. BELIEVED PRESENT	c. BELIEVED ABSENT	a. MAXIMUM DAILY VALUE		b. MAXIMUM 30 DAY VALUE (*if available*)		c. LONG TERM AVRG. VALUE (*if available*)		d. NO. OF ANALYSES	a. CONCENTRATION	b. MASS	a. LONG TERM AVERAGE VALUE		b. NO. OF ANALYSES
				(1) CONCENTRATION	(2) MASS	(1) CONCENTRATION	(2) MASS	(1) CONCENTRATION	(2) MASS				(1) CONCENTRATION	(2) MASS	
GC/MS FRACTION – BASE/NEUTRAL COMPOUNDS (*continued*)															
43B. N-Nitrosodiphenylamine (86-30-6)	X		X	<9.6	<0.07					1	ug/L	lb/d			
44B. Phenanthrene (85-01-8)	X		X	<9.6	<0.07					1	ug/L	lb/d			
45B. Pyrene (129-00-0)	X		X	<9.6	<0.07					1	ug/L	lb/d			
46B. 1,2,4-Trichlorobenzene (120-82-1)	X		X	<9.6	<0.07					1	ug/L	lb/d			
GC/MS FRACTION – PESTICIDES															
1P. Aldrin (309-00-2)			X												
2P. α-BHC (319-84-6)			X												
3P. β-BHC (319-85-7)			X												
4P. γ-BHC (58-89-9)			X												
5P. δ-BHC (319-86-8)			X												
6P. Chlordane (57-74-9)			X												
7P. 4,4'-DDT (50-29-3)			X												
8P. 4,4'-DDE (72-55-9)			X												
9P. 4,4'-DDD (72-54-8)			X												
10P. Dieldrin (60-57-1)			X												
11P. α-Enosulfan (115-29-7)			X												
12P. β-Endosulfan (115-29-7)			X												
13P. Endosulfan Sulfate (1031-07-8)			X												
14P. Endrin (72-20-8)			X												
15P. Endrin Aldehyde (7421-93-4)			X												
16P. Heptachlor (76-44-8)			X												

CONTINUE ON PAGE V-9

EPA I.D. NUMBER (*copy from Item 1 of Form 1*)	OUTFALL NUMBER
ALD067123570	DSN 001

CONTINUED FROM PAGE V-8

1. POLLUTANT AND CAS NUMBER (*if available*)	2. MARK "X"			3. EFFLUENT							4. UNITS		5. INTAKE (*optional*)		
	a. TESTING REQUIRED	b. BELIEVED PRESENT	c. BELIEVED ABSENT	a. MAXIMUM DAILY VALUE		b. MAXIMUM 30 DAY VALUE (*if available*)		c. LONG TERM AVRG. VALUE (*if available*)		d. NO. OF ANALYSES	a. CONCEN-TRATION	b. MASS	a. LONG TERM AVERAGE VALUE		b. NO. OF ANALYSES
				(1) CONCENTRATION	(2) MASS	(1) CONCENTRATION	(2) MASS	(1) CONCENTRATION	(2) MASS				(1) CONCENTRATION	(2) MASS	
GC/MS FRACTION – PESTICIDES (*continued*)															
17P. Heptachlor Epoxide (1024-57-3)			X												
18P. PCB-1242 (53469-21-9)			X												
19P. PCB-1254 (11097-69-1)			X												
20P. PCB-1221 (11104-28-2)			X												
21P. PCB-1232 (11141-16-5)			X												
22P. PCB-1248 (12672-29-6)			X												
23P. PCB-1260 (11096-82-5)			X												
24P. PCB-1016 (12674-11-2)			X												
25P. Toxaphene (8001-35-2)			X												

CMC Steel Alabama
Mill Water Use Diagram
Updated April 2019

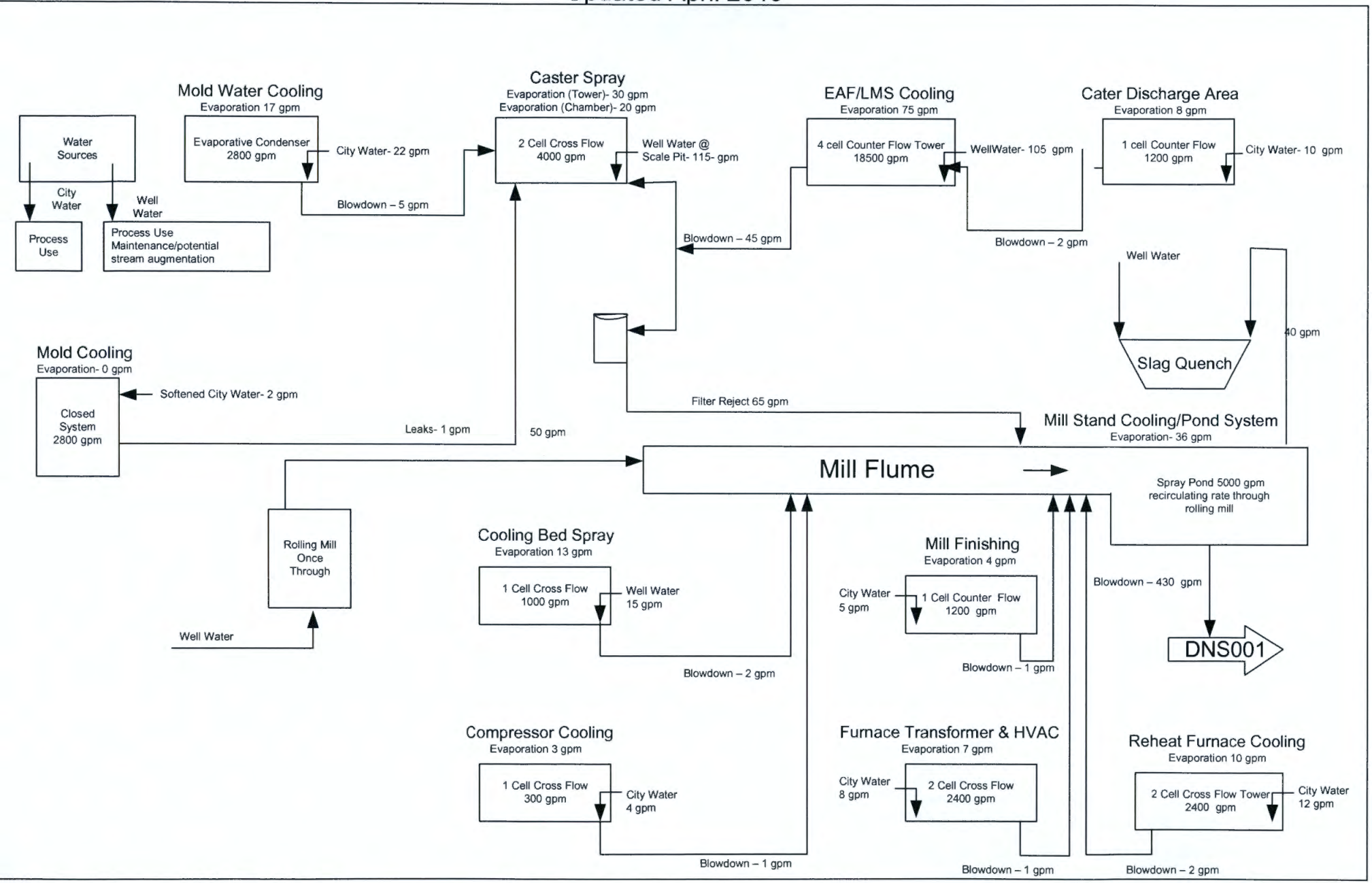

Table 1. Effluent Guideline Allocation Calculations - 2019 Permit Renewal Production Basis

2019 Permit Renewal Production Basis (2014-2018 production)

CC Production	3,915,397 ppd	3915 ppd/1,000
HF Production	3,000,610 ppd	3001 ppd/1,000

For reference, 2014 Permit based on the following production:

CC Production	4,205,794 ppd	4205.794 ppd/1,000
HF Production	3,388,667 ppd	3388.667 ppd/1,000

	Current Permitted Allocations		Allocation for CC				Allocation for HF				Total EGL Allocation for CC and HF		Other BPJ Allocations[1]		Total Allowable Allocations	
			Effluent Guideline Factors for CC		Calculated Allocation for CC		Effluent Guideline Factors for HF		Calculated Allocation for HF							
	Max	30-day Avg	Max	30-day Avg	Max	30-day Avg	Max	30-day Avg	Max	30-day Avg	Max	30-day Avg	Max	30-day Avg	Max	30-day Avg
Parameter	ppd	ppd	ppd	ppd	ppd	ppd	ppd	ppd	ppd	ppd	ppd	ppd	ppd	ppd	ppd	ppd
TSS	1538	563	0.078	0.026	305	102	0.357	0.134	1071	402	1377	504	--	--	1377	504
O&G	401	120	0.0234	0.0078	92	31	0.0894	--	268	--	360	31	--	77	360	108
Lead, Total	1.24	0.41	0.0000939	0.0000313	0.37	0.12	0.00025	0.0000834	0.75	0.25	1.12	0.37	--	--	1.12	0.37
Zinc, Total	2.21	0.97	0.000141	0.0000469	0.55	0.18	0.000375	0.000125	1.13	0.38	1.68	0.56	0.345	0.345	2.02	0.90
pH	6 to 8.5 s.u.															

CC = Continuous Casting

HF = Hot Forming

[1]Other Allocations include the following: O&G based on the ratio of monthly average to daily max provided in the EGL Development Document; Zinc credit for city and well water

May 1, 2019

Mr. Alex Chavers
Alabama Department of Environmental Management
Water Division
P.O. Box 301463
Montgomery, AL 36130-1463

RE: SMI Steel LLC dba CMC Steel Alabama
NPDES Permit No. AL0001554

Dear Mr. Chavers:

Per our February 8, 2019, meeting discussions, please find enclosed CMC Steel Alabama's application for renewal of CMC Steel Alabama's National Pollutant Discharge Elimination System (NPDES) Permit No. AL0001554 for the Birmingham facility. This letter provides summary documentation to support the proposed basis for renewal of this NPDES permit.

Effluent Guideline Production Basis and Limitations

CMC Steel is classified as a Continuous Casting and Hot Forming facility and its effluent is regulated by EPA Effluent Guidelines Limitations (EGLs) per 40 CFR 420, Subparts F and G. The guidelines are the basis of the calculations presented in this section. As reported in the attached application (ADEM Form 187 and EPA Form 2C), the production basis for this renewal reflects the highest monthly average in the previous 12 months (2018) and considers that CMC operates 365 days per year. The production values for Continuous Casting and Hot Forming in comparison to the current permit production basis (in pounds per day – ppd) is shown below:

2019 Renewal Production Basis			**Current (2014) Permit Basis**		
CC Production	3,915,397	ppd	CC Production	4,205,794	ppd
HF Production	3,000,610	ppd	HF Production	3,388,667	ppd

The slight decrease in production results in lower calculated EGL-based allocations during this permit renewal for total suspended solids (TSS), oil and grease (O&G), and total lead and zinc. A summary of the calculated technology-based limits is presented in Table 1 (attached).

CMC Steel Alabama
P.O. Box 321188, Birmingham, AL 35232-1188
101 South 50th Street, Birmingham, AL 35212
205-592-8981
www.cmc.com

Water Quality Limitations

During the last permit renewal, CMC implemented a flow augmentation system and stream monitoring station to meet water quality limits in the unnamed tributary (UT) to Village Creek. The existing permit allows discharge under one of four tiers of limits based on the monthly average stream flow shown below:

- Tier 0 – Stream flow greater than 0 but less than 1.9 cubic feet per second (cfs)
- Tier 1 – Stream flow greater than 1.9 cfs but less than 2.3 cfs
- Tier 2 – Stream flow greater than 2.3 cfs but less than 2.7 cfs
- Tier 3 – Stream flow greater than 2.7 cfs

CMC requests that the flow-based tiered approach be maintained for this permit renewal; however, CMC is evaluating whether the specified stream flows should be amended. If so, a request to modify the stream flows, including presentation of the water quality-based allocations in comparison to the EGL-based allocations in Table 1 will be provided to ADEM in a separate submittal to support permit renewal.

Other Permit Considerations

The following is also noted for ADEM's consideration during permit renewal:

- CMC requests that ADEM modify the outfall DSN003I description to remove reference to groundwater, as this outfall was included to monitor water quality (specifically total residual chlorine) when municipal water is used for flow augmentation.
- Note that both the 'other allocations' for O&G based on the development document and the intake credit for zinc (as documented in the 2014 permit rationale) are included in the Calculated Allocations, Effluent Guideline Total Allocation in Table 1.
- CMC requests to continue definitive toxicity testing. Because there have been no toxicity failures since definitive testing was initiated, CMC requests that testing frequency be reduced from quarterly to annually.

CMC appreciates ADEM's consideration of these requests. A check in the amount of $17,990 (fee for permit reissuance) is enclosed. Please contact me should you any questions regarding the information.

Sincerely,
CMC Steel Alabama

Alan Gillespie

Alan Gillespie
Regional Environmental Manager

enclosures