LANCE R. LEFLEUR
DIRECTOR

KAY IVEY
GOVERNOR

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

MAY 27, 2020

MR SCOT ALER
AVP - ENVIRONMENTAL SERVICES
US PIPE AND FOUNDRY – BESSEMER PIPE
2023 ST LOUIS AVENUE
BESSEMER AL 35020

RE: DRAFT PERMIT
NPDES PERMIT NUMBER AL0003271

Dear Mr. Aler:

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 time frame 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 you to voluntarily consider pollution prevention practices and alternatives at your facility. Pollution Prevention may assist you in complying with effluent limitations, and possibly reduce or eliminate monitoring requirements.

If you have questions regarding this permit or monitoring requirements, please contact 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: UNITED STATES PIPE AND FOUNDRY COMPANY LLC

FACILITY LOCATION: 2023 ST. LOUIS AVENUE
BESSEMER, AL 35020

PERMIT NUMBER: AL0003271

RECEIVING WATERS: DSN001, DSN006 – DSN010, DSN015:
VALLEY CREEK

DSN002 – DSN005, DSN011 – DSN014, DSN016, DSN017:
UNNAMED TRIBUTARY TO VALLEY CREEK

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

ISSUANCE DATE:

EFFECTIVE DATE:

EXPIRATION DATE:

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

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 wastewater from metal molding and casting operations 3/

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
Oxygen, Dissolved (DO)	-	-	5.0 mg/l	-	-	Daily	Grab	-
pH	-	-	7.0 S.U.	-	8.5 S.U.	Daily	Grab	-
Solids, Total Suspended 4/	2503 lbs/year	-	-	5.99 mg/l	15.2 mg/l	Once/2 Weeks	Grab	-
Oil & Grease 4/	1250 lbs/year	-	-	4.00 mg/l	12.0 mg/l	Once/2 Weeks	Grab	-
Nitrogen, Ammonia Total (As N)	-	-	-	6.0 mg/l	9.0 mg/l	Once/2 Weeks	Grab	-
Copper, Total (As Cu) 4/	16.26 lbs/year	-	-	.064 mg/l	0.116 mg/l	Once/2 Weeks	Grab	-
Lead, Total (As Pb) 4/	43.04 lbs/year	-	-	0.156 mg/l	0.316 mg/l	Once/2 Weeks	Grab	-
Zinc, Total (As Zn) 4/	76.08 lbs/year	-	-	0.224 mg/l	0.587 mg/l	Once/2 Weeks	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 time composite samples collected using automatic sampling equipment or a minimum of eight (8) equal volume grab samples collected over equal time intervals. All composite samples shall be collected for the total period of discharge not to exceed 24 hours.

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

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

4/ Monthly Average represents a 12-month rolling total. This total should be calculated as the total for the current month plus the 11 previous months and reported on a monthly basis. Records should be maintained for each individual monthly total, in addition to each monthly calculation.

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 wastewater from metal molding and casting operations 3/

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	-
Phenolic Compounds, Total 4/	15.76 lbs/day	-	-	.038 mg/l	0.108 mg/l	Once/2 Weeks	Grab	-
BOD, Carbonaceous 05 Day, 20C	-	-	-	25.0 mg/l	37.5 mg/l	Once/2 Weeks	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 time composite samples collected using automatic sampling equipment or a minimum of eight (8) equal volume grab samples collected over equal time intervals. All composite samples shall be collected for the total period of discharge not to exceed 24 hours.

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

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

4/ Monthly Average represents a 12-month rolling total. This total should be calculated as the total for the current month plus the 11 previous months and reported on a monthly basis. Records should be maintained for each individual monthly total, in addition to each monthly calculation.

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:

DSN001S: Process wastewater from metal molding and casting operations 3/

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
Mercury Total Recoverable 4/	-	-	-	-	REPORT ug/l	Semi-Annually	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 time composite samples collected using automatic sampling equipment or a minimum of eight (8) equal volume grab samples collected over equal time intervals. All composite samples shall be collected for the total period of discharge not to exceed 24 hours.

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

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

4/ EPA Methods 1631E/1669, or alternative method specifically approved by the Department, shall be used for the analysis of this parameter.

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 wastewater from metal molding and casting operations 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
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 time composite samples collected using automatic sampling equipment or a minimum of eight (8) equal volume grab samples collected over equal time intervals. All composite samples shall be collected for the total period of discharge not to exceed 24 hours.

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

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

4/ See Part IV.D for Effluent Toxicity Limitations 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:

DSN002Y:	Stormwater from general processing areas 3/ 4
DSN003Y:	Stormwater from main processing areas 3/ 4
DSN004Y:	Stormwater from scrapyard storage areas 3/ 4
DSN005Y:	Stormwater from pipe storage areas 3/ 4
DSN006, DSN008-013, DSN016-017:	Stormwater from metal recycling storage areas 3/ 4
DSN007, DSN014-015:	Stormwater from metal recycling storage areas 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
pH	-	-	REPORT S.U.	-	REPORT S.U.	Annually	Grab	-
Solids, Total Suspended	-	-	-	-	REPORT mg/l	Annually	Grab	-
Oil & Grease	-	-	-	-	15.0 mg/l	Annually	Grab	-
Nitrogen, Total (As N)	-	-	-	-	REPORT mg/l	Annually	Grab	-
Carbon, Tot Organic (TOC)	-	-	-	-	REPORT mg/l	Annually	Grab	-
Cyanide, Total (As CN)	-	-	-	-	REPORT mg/l	Annually	Grab	-
Arsenic, Total Recoverable	-	-	-	-	REPORT mg/l	Annually	Grab	-
Nickel Total Recoverable	-	-	-	-	REPORT mg/l	Annually	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 time composite samples collected using automatic sampling equipment or a minimum of eight (8) equal volume grab samples collected over equal time intervals. All composite samples shall be collected for the total period of discharge not to exceed 24 hours.

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

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

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

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:

DSN002Y:	Stormwater from general processing areas 3/ 4
DSN003Y:	Stormwater from main processing areas 3/ 4
DSN004Y:	Stormwater from scrapyard storage areas 3/ 4
DSN005Y:	Stormwater from pipe storage areas 3/ 4
DSN006, DSN008-013, DSN016-017:	Stormwater from metal recycling storage areas 3/ 4
DSN007, DSN014-015:	Stormwater from metal recycling storage areas 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
Silver Total Recoverable	-	-	-	-	REPORT mg/l	Annually	Grab	-
Zinc Total Recoverable	-	-	-	-	REPORT mg/l	Annually	Grab	-
Aluminum, Total Recoverable	-	-	-	-	REPORT mg/l	Annually	Grab	-
Cadmium, Total Recoverable	-	-	-	-	REPORT mg/l	Annually	Grab	-
Lead, Total Recoverable	-	-	-	-	REPORT mg/l	Annually	Grab	-
Chromium Total Recoverable	-	-	-	-	REPORT mg/l	Annually	Grab	-
Copper Total Recoverable	-	-	-	-	REPORT mg/l	Annually	Grab	-
Flow, In Conduit or Thru Treatment Plant	-	REPORT MGD	-	-	-	Annually	Estimate	-

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

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

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

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

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

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:

DSN002Y:	Stormwater from general processing areas 3/ 4
DSN003Y:	Stormwater from main processing areas 3/ 4
DSN004Y:	Stormwater from scrapyard storage areas 3/ 4
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DSN007, DSN014-015:	Stormwater from metal recycling storage areas 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
Mercury Total Recoverable 5/	-	-	-	-	REPORT mg/l	Annually	Grab	-
Organics, Total Toxic (TTO)	-	-	-	-	REPORT mg/l	Annually	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 time composite samples collected using automatic sampling equipment or a minimum of eight (8) equal volume grab samples collected over equal time intervals. All composite samples shall be collected for the total period of discharge not to exceed 24 hours.

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

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

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

5/ EPA Methods 1631E/1669, or alternative method specifically approved by the Department, shall be used for the analysis of this parameter.

B. DISCHARGE MONITORING AND RECORD KEEPING REQUIREMENTS

1. Representative Sampling

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

2. Test Procedures

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

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

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

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

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

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

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

3. Recording of Results

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

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

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

c. The dates and times the analyses were performed;

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

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

f. The results of all required analyses.

4. Records Retention and Production

The permittee shall retain records of all monitoring information, including all calibration and maintenance records and all original strip chart recordings for continuous monitoring instrumentation, copies of all reports required by the permit, and records of all data used to complete the above reports or the application for this permit, for a period of at least three years from the date of the sample measurement, report or application. This period may be extended by request of the Director at any time. If litigation or other enforcement action, under the AWPCA and/or the FWPCA, is ongoing which involves any of the above records, the records shall be kept until the litigation is resolved. Upon the written request of the Director or his designee, the permittee shall provide the Director with a copy of any record required to be retained by this paragraph. Copies of these records shall not be submitted unless requested.

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

5. Monitoring Equipment and Instrumentation

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

C. DISCHARGE REPORTING REQUIREMENTS

1. Reporting of Monitoring Requirements

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

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

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

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

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

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

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

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

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

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

c. Except as allowed by Provision I.C.1.c.(1) or (2), the permittee shall submit all Discharge Monitoring Reports (DMRs) required by Provision I.C.1.b 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 335-6-5-.14 or a "duly authorized representative" of such official as defined in ADEM Administrative Code Rule 335-6-5-.14 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. **POLLUTANT MINIMIZATION PLAN**

The permittee shall develop and submit to the Department a report, which identifies the sources of pollutants in stormwater runoff to DSN002 through DSN017 and identifies measures to be implemented to prevent or minimize pollutant levels in the discharge. Such report shall be submitted to the Department within 180 days from the effective date of this permit.

3. 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 plant engineering staff and the plant manager; and

p. Bear the signature of the plant manager.

3. Compliance Schedule

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

4. Department Review

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

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

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

5. Administrative Procedures

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

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

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

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

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

B. STORMWATER FLOW MEASUREMENT AND SAMPLING REQUIREMENTS

1. Stormwater Flow Measurement

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

b. The total volume of stormwater discharged for the event must be monitored, including the date and duration (in hours) and rainfall (in inches) for storm event(s) sampled. The duration between the storm

event sampled and the end of the previous measurable (greater than 0.1 inch rainfall) storm event must be a minimum of 72 hours. This information must be recorded as part of the sampling procedure and records retained according to Part I.B. of this permit.

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

2. Stormwater Sampling

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

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

48.

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, which would otherwise be discharged; therefore, the permittee is exempt from this permit condition.

D. EFFLUENT TOXICITY LIMITATIONS AND BIOMONITORING REQUIREMENTS

2. 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

(1) The samples shall be diluted using appropriate control water, to the Instream Waste Concentration (IWC), which is 6% effluent. The IWC is the actual concentration of effluent, after mixing, in the receiving stream during a 7-day, 2-year flow period.

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

b. General Test Requirements

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

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

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

c. Reporting Requirements

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

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

d. Additional Testing Requirements

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

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

e. Test Methods

(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.

3. Effluent Toxicity Testing Reports

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

a. Introduction

(1) Facility name, location, and county

(2) Permit number

(3) Toxicity testing requirements of permit

(4) Name of receiving water body

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

(a) Name of firm
(b) Telephone number
(c) Address

(6) Objective of test

b. Plant Operation

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

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

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

c. Source of Effluent and Dilution Water

(1) Effluent samples

(a) Sampling point
(b) Sample collection dates and times (to include composite sample start and finish times)
(c) Sample collection method
(d) Physical and chemical data of undiluted effluent samples (water temperature, pH, alkalinity, hardness, specific conductance, total residual chlorine (if applicable), etc.)
(e) Lapsed time from sample collection to delivery
(f) Lapsed time from sample collection to test initiation
(g) Sample temperature when received at the laboratory

(2) Dilution Water

(a) Source
(b) Collection/preparation date(s) and time(s)
(c) Pretreatment (if applicable)
(d) Physical and chemical characteristics (water temperature, pH, alkalinity, hardness, specific conductance, etc.)

d. Test Conditions

(1) Toxicity test method utilized

(2) End point(s) of test

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

(4) Date and time test started

(5) Date and time test terminated

(6) Type and volume of test chambers

(7) Volume of solution per chamber

(8) Number of organisms per test chamber

(9) Number of replicate test chambers per treatment

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

(11) Specify if aeration was needed

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

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

(14) Light intensity (mean)

e. Test Organisms

(1) Scientific name

(2) Life stage and age

(3) Source

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

f. Quality Assurance

(1) Reference toxicant utilized and source

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

(3) Dilution water utilized in reference toxicant test

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

(5) Physical and chemical methods utilized

g. Results

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

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

(3) Indicate statistical methods used to calculate endpoints

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

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

h. Conclusions and Recommendations

(1) Relationship between test endpoints and permit limits

(2) Actions to be taken

g. Conclusions and Recommendations

(1) Relationship between test endpoints and permit limits

(2) Actions to be 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: March 23, 2020
PREPARED BY: Alex Chavers

Permittee Name: United States Pipe and Foundry Company LLC

Facility Name: U S Pipe And Foundry – Bessemer Pipe

Permit Number: AL0003271

PERMIT IS REISSUANCE DUE TO EXPIRATION

DISCHARGE SERIAL NUMBERS & DESCRIPTIONS:

DSN001:	Process wastewater from metal molding and casting operations
DSN002:	Stormwater from general processing areas
DSN003:	Stormwater from the main processing areas
DSN004:	Stormwater from scrapyard storage areas
DSN005:	Stormwater from pipe storage areas
DSN006, 008-013, 016, 017:	Stormwater from finished pipe storage areas
DSN007, 014, 015:	Stormwater from metal recycling storage areas

INDUSTRIAL CATEGORY:

MAJOR: N

STREAM INFORMATION:

Receiving Stream:	Valley Creek (DSN006-010, DSN015)
Classification:	Limited Warmwater Fishery
River Basin:	Black Warrior River Basin
7Q10:	2.6 CFS
7Q2:	6.48 CFS
1Q10:	1.95 CFS
Annual Average Flow:	120.98 CFS
303(d) List:	NO
Impairment:	N/A
TMDL:	NO

Receiving Stream:	Unnamed Tributary to Valley Creek (DSN002-005, DSN011-014, DSN016-017)
Classification:	Fish & Wildlife
River Basin:	Black Warrior River Basin
7Q10:	0.0 CFS
7Q2:	0.0 CFS
1Q10:	0.0 CFS
303(d) List:	NO
Impairment:	N/A
TMDL:	NO

DISCUSSION:
The US Pipe – Bessemer facility is approximately 184 acres, 159 for the Bessemer Facility and 29 for the Mini Mill. The facility operates between 250-300 days per year based on market demand. The facility manufactures ductile iron pipe for use in water and wastewater systems. Operations include scrap iron and coke handling and charging, melting, casting, annealing, cement lining, coating, packaging and shipping. Ancillary operations include maintenance, machining, and waste management.

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.

0011:

Parameter	Monthly Avg Loading	Daily Max Loading	Daily Min Concentration	Monthly Avg Concentration	Daily Max Concentration	Sample Frequency	Sample Type	Basis*
Oxygen, Dissolved (DO)	-	-	5.0 mg/l	-	-	Once/2 Weeks	Grab	WQBEL
pH	-	-	7.0 S.U.	-	8.5 S.U.	Daily	Grab	WQBEL/ EGL
Solids, Total Suspended	2503 lbs/year	-	-	5.99 mg/l	15.2 mg/l	Once/2 Weeks	Grab	EGL
Oil & Grease	1250 lbs/year	-	-	4.0 mg/l	12.0 mg/l	Once/2 Weeks	Grab	EGL
Nitrogen, Ammonia Total (As N)	-	-	-	6.0 mg/l	9.0 mg/l	Once/2 Weeks	Grab	WQBEL
Copper, Total (As Cu)	16.26 lbs/year	-	-	0.064 mg/l	0.116 mg/l	Once/2 Weeks	Grab	EGL
Lead, Total (As Pb)	43.04 lbs/year	-	-	0.156 mg/l	0.316 mg/l	Once/2 Weeks	Grab	EGL
Zinc, Total (As Zn)	76.08 lbs/year	-	-	0.224 mg/l	0.587 mg/l	Once/2 Weeks	Grab	EGL
Flow, In Conduit or Thru Treatment Plant	REPORT MGD	REPORT MGD	-	-	-	Daily	Totalizer	BPJ
Phenolic Compounds, Total	15.76 lbs/year	-	-	0.038 mg/l	0.108 mg/l	Once/2 Weeks	Grab	EGL
BOD, Carbonaceous 05 Day, 20C	-	-	-	25.0 mg/l	37.5 mg/l	Once/2 Weeks	Grab	WQBEL

001S:

Parameter	Monthly Avg Loading	Daily Max Loading	Daily Min Concentration	Monthly Avg Concentration	Daily Max Concentration	Sample Frequency	Sample Type	Basis*
Mercury Total Recoverable	-	-	-	-	REPORT ug/l	Semi-Annually	Grab	BPJ

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

002Y – 017Y:

Parameter	Monthly Avg Loading	Daily Max Loading	Daily Min Concentration	Monthly Avg Concentration	Daily Max Concentration	Sample Frequency	Sample Type	Basis*
pH	-	-	REPORT S.U.	-	REPORT S.U.	Annually	Grab	BPJ

Solids, Total Suspended	-	-	-	-	REPORT mg/l	Annually	Grab	BPJ
Oil & Grease	-	-	-	-	15.0 mg/l	Annually	Grab	BPJ
Nitrogen, Total (As N)	-	-	-	-	REPORT mg/l	Annually	Grab	BPJ
Carbon, Tot Organic (TOC)	-	-	-	-	REPORT mg/l	Annually	Grab	BPJ
Cyanide, Total (As CN)	-	-	-	-	REPORT mg/l	Annually	Grab	BPJ
Arsenic, Total Recoverable	-	-	-	-	REPORT mg/l	Annually	Grab	BPJ
Nickel Total Recoverable	-	-	-	-	REPORT mg/l	Annually	Grab	BPJ
Silver Total Recoverable	-	-	-	-	REPORT mg/l	Annually	Grab	BPJ
Zinc Total Recoverable	-	-	-	-	REPORT mg/l	Annually	Grab	BPJ
Aluminum, Total Recoverable	-	-	-	-	REPORT mg/l	Annually	Grab	BPJ
Cadmium, Total Recoverable	-	-	-	-	REPORT mg/l	Annually	Grab	BPJ
Lead, Total Recoverable	-	-	-	-	REPORT mg/l	Annually	Grab	BPJ
Chromium Total Recoverable	-	-	-	-	REPORT mg/l	Annually	Grab	BPJ
Copper Total Recoverable	-	-	-	-	REPORT mg/l	Annually	Grab	BPJ
Flow, In Conduit or Thru Treatment Plant	-	REPORT MGD	-	-	-	Annually	Estimate	BPJ
Mercury Total Recoverable	-	-	-	-	REPORT mg/l	Annually	Grab	BPJ

*Basis for Permit Limitation

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

DSN001:
Process wastewater is discharged through outfall DSN001 during times when the facility cannot effectively recycle and/or reuse the water in its pond system.

Monitoring Frequencies/Sample Types
The monitoring frequencies and sample types of DSN0011 have been changed to once per 2 weeks and grab, respectively, to allow the facility to show compliance with permit limitations and not be required to discharge more than necessary to obtain a composite sample. Parameters that are indicative of instantaneous water quality (D.O., pH, and Flow) will continue to be monitored daily on days when a discharge is occurring.

Best Professional Judgment (BPJ)
The parameters of concern for this facility are based on the parameters of concern from the current permit. These parameters are consistent with similar facilities in the state and have been proven reflective of the operations at this facility. The parameters with specific limits are discussed below:

Flow
Flow monitoring will be continued during this permit issuance. The flow should be reported as totalized daily flow readings.

Mercury, Total Recoverable
Mercury monitoring was previously included due to the receiving stream's inclusion on the 303(d) List of Impaired Waters. The stream is no longer impaired for Mercury; however, based on the activities at the site and analytical results, monitoring for Mercury will be continued in this permit issuance.

Water Quality Based Effluent Limits (WQBEL)
A reasonable potential analysis was performed on the receiving stream. No reasonable potential was shown for the facility to exceed the water quality standards for Limited Warmwater Fishery classified streams. In addition, the Department prepared a waste load allocation for this permit issuance. The reasonable potential analysis and waste load allocation can be seen in Attachments B and C to this rationale, respectively.

pH
The receiving stream is classified as Limited Warmwater Fishery, which relies on the Fish and Wildlife requirement for pH. ADEM Administration 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 the normal or natural pH, nor be less than 6.0, nor greater than 8.5 standard units." 40 CFR 464 – Subpart C specifies that pH be within the range of 7.0 to 10.0 at all times. The most stringent of the upper and lower bounds of these two limitations will be continued in this permit issuance.

Dissolved Oxygen
The waste load allocation assumed a minimum dissolved oxygen level of 5.0 mg/L; therefore, this limitation will be continued in this permit issuance.

Nitrogen, Ammonia Total (As N), Carbonaceous BOD (5-Day)
The waste load allocation determined limitations for Ammonia and CBOD. The results of the model are consistent with the existing waste load allocation; therefore, no changes to the permit limitations are proposed.

Based on Best Professional Judgment, the monthly average was determined by multiplying the daily maximums by a factor of 1.5.

Total Recoverable Copper, Total Recoverable Lead, Total Recoverable Zinc
Based on the facility's historical data, there is no reasonable potential for these parameters to cause a violation of the in-stream water quality standard; therefore, no limitations are necessary for these parameters.

Toxicity Testing Requirements

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

7Q2 of Valley Creek at discharge point = 6.47 CFS (4.18 MGD)
Estimated Maximum Discharge Rate (based on Central Recycle System Blowdown) = 0.25 MGD

$$IWC = \frac{0.25\ MGD}{0.25\ MGD + 4.18\ MGD}\ X\ 100\% = 5.64\%\ [6\%]$$

Federal Effluent Guideline Limitations (EGL)

This facility is regulated under 40 CFR 464 – Subpart C: Ferrous Casting Subcategory. For non-continuous discharges under this subcategory, both concentration-based limitations and maximum annual loadings (determined on a rolling 12-month basis) apply to the discharge. Calculations for these limitations can be seen in Attachment A to this rationale.

Concentration-Based Limitations

In order to determine the permit limitation, concentration-based limitations were first determined for each regulated process (casting cleaning, casting quench, and mold cooling) and for each unregulated process (cement lining, small diameter grinding, and large diameter grinding) using the factors provided in 40 CFR 464.32, 40 CFR 464.33, and Appendix K of the final rule. Next, a loading was determined for each process using each processes total water usage. Finally, these loadings were totaled together and converted to a concentration-basis using the central recycle-system blowdown rate.

The resulting concentration-based limitations are higher than the previous permit due to a change in the methodology to be consistent with the guidance provided in the development document. These concentrations are more stringent than water-quality based effluent limitations and the overall allowable annual loading is decreased for all parameters; therefore, anti-backsliding does not apply.

Maximum Annual Allowable Loadings

The allowable loadings were determined using a reasonable measure of production and the factors provided in 40 CFR 464 – Subpart C. Annual loadings should be reported each month as the sum of the current month's loadings and the previous 11 months (e.g. rolling 12 month total).

Total Suspended Solids, Oil & Grease, Total Copper, Total Lead, Total Zinc

Calculations used to determine limitations for these regulated parameters can be seen in Attachment A to this rationale.

pH

40 CFR 646 – Subpart C specifies that pH should be within the range of 7.0 to 10.0 at all times. This requirement is used in conjunction with water-quality based effluent limits to limit pH at a range of 7.0 to 8.5 S.U.

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

The receiving stream is not listed on the 2018 303(d) List of Impaired Water nor has a TMDL been developed; therefore, no additional monitoring will be included in this permit issuance.

316(b) Cooling Water Intake Structure (CWIS) Information

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

DSN002 – DSN017*:
*Representative monitoring will be continued in this permit issuance. DSN006 is considered representative of DSN008 – DSN013, DSN016, and DSN017. DSN007 is considered representative of DSN014 and DSN015.

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

pH
The receiving stream is classified as Limited Warmwater Fishery, which relies on the Fish and Wildlife requirement for pH. ADEM Administration 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 the normal or natural pH, nor be less than 6.0, nor greater than 8.5 standard units." Monitoring requirements will be continued in this permit issuance since the facility's discharge is not expected to influence the pH of the receiving stream.

Other Parameters
The remaining parameters will continue to be monitored in this permit issuance based on the monitoring requirements of NPDES General Permit ALG120000, which is applicable to the activities performed by the facility.

Pollutant Minimization Plan
A review of available data for DSN002 through DSN017 indicates elevated levels of several pollutants, including metals and Total Suspended Solids. Due to the nature of a stormwater driven discharge event, these elevated levels are not expected to cause an exceedance of any in-stream water quality standards; however, they can be indicative of insufficient runoff controls and inadequate BMPs.

As part of this permit issuance, the permittee will be required to develop a minimization plan, which aims to reduce the levels of pollutants in the discharge. Specific requirements can be found in Part IV of the permit.

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

ATTACHMENT A: EFFLUENT GUIDELINE LIMITATIONS

U.S. Pipe - Bessemer (AL0003271) Permit Limit Summary

	Effluent Guideline (40 CFR 464 Subpart C) & Appendix K					Water Quality Based Limitations			
	Daily Maximum(mg/L)		*Monthly Average*		*Annual Maximum*	*Daily Maximum*		*Monthly Average*	
Pollutant	**Loading (ppd)**	**Conc. (mg/L)**	**Loading (ppd)**	**Conc. (mg/L)**	**Loading (ppy)**	**Loading (ppd)**	**Conc. (mg/L)**	**Loading (ppd)**	**Conc. (mg/L)**
Total Copper	-	0.1159	-	0.0639	16.26	-	0.9002	-	1.1764
Total Lead	-	0.3156	-	0.1558	43.04	-	7.3056	-	0.5254
Total Zinc	-	0.5873	-	0.2237	76.08	-	9.8564	-	18.3376
Oil & Grease	-	11.9853	-	3.9951	1250.15	-	-	-	-
TSS	-	15.1814	-	5.9926	2503.16	-	-	-	-
Total Phenols	-	0.1084	-	0.0378	15.76	-	-		
pH	7 to 10 S.U.					6 to 8.5 S.U.			

	BPJ Limitations				Current Permit Limits				
	Daily Maximum		*Monthly Average*		*Daily Maximum*		*Monthly Average*		*Annual Maximum*
Pollutant	**Loading (ppd)**	**Conc. (mg/L)**	**Loading (ppd)**	**Conc. (mg/L)**	**Loading (ppd)**	**Conc. (mg/L)**	**Loading (ppd)**	**Conc. (mg/L)**	**Loading (ppy)**
Total Copper	-	-	-	-	0.127	0.062	0.070	0.034	20.10
Total Lead	-	-	-	-	0.301	0.147	0.148	0.040	46.44
Total Zinc	-	-	-	-	0.559	0.273	0.212	0.104	80.48
Oil & Grease	-	15.0000	-	-	-	6.421	-	2.140	3097.47
TSS	-	-	-	-	-	8.133	-	3.210	1546.53
Total Phenols	-	-	-	-	-	-	-	-	-
pH	6 to 9.0 S.U.				7 to 8.5 S.U.				

Final Permit Limitations

	Daily Maximum	*Monthly Average*	*Annual Maximum*
Pollutant	**Conc. (mg/L)**	**Conc. (mg/L)**	**Loading (ppy)**
Total Copper	0.116	0.064	16.26
Total Lead	0.316	0.156	43.04
Total Zinc	0.587	0.224	76.08
Oil & Grease	11.985	3.995	1250.15
TSS	15.181	5.993	2503.16
Phenols	0.108	0.038	15.76
pH	7 to 8.5 S.U.		

Proposed Reissuance Limitations Summary

Individual Allowable Concentrations

	Regulated Sources						Unregulated Sources					
	Casting Cleaning (mg/L) 40 CFR 464.33(a)(1)		Casting Quench (mg/L) 40 CFR 464.33(b)(1)		Mold Cooling (mg/L) 40 CFR 464.33(g)(1)		Cement Lining Federal Register (Vol. 50, No 210) p. 45247 - Appendix K - Ferrous Subcategory		Small Diam. Grinding Federal Register (Vol. 50, No 210) p. 45247 - Appendix K - Ferrous Subcategory		Large Diam. Grinding Federal Register (Vol. 50, No 210) p. 45247 - Appendix K - Ferrous Subcategory	
Parameter	*Daily Max*	*Monthly Avg*	*Daily Max*	*Monthly Avg*	*Daily Max*	*Monthly Avg*	*Daily Max*	*Monthly Avg*	*Daily Max*	*Monthly Avg*	*Daily Max*	*Monthly Avg*
Total Copper	0.1022	0.0564	0.0033	0.0018	0.0061	0.0034	0.29	0.16	0.29	0.16	0.29	0.16
Total Lead	0.2784	0.1374	0.0089	0.0044	0.0166	0.0082	0.79	0.39	0.79	0.39	0.79	0.39
Total Zinc	0.5180	0.1973	0.0166	0.0063	0.0310	0.0118	1.47	0.56	1.47	0.56	1.47	0.56
Oil & Grease	10.5712	3.5237	0.3392	0.1131	0.6319	0.2106	30	10	30	10	30	10
Total Suspended Solids	13.3901	5.2856	0.4296	0.1696	0.8004	0.3159	38	15	38	15	38	15
Total Phenols	-	-	-	-	-	-	0.86	0.3	0.86	0.3	0.86	0.3
Process Flows (MGD)	0.036		1.2		2.0		0.0095		0.0035		0.0185	

Allowable Loadings

	Regulated Sources		Unregulated Sources		Total	
Parameter	*Daily Max*	*Monthly Avg*	*Daily Max*	*Monthly Avg*	*Daily Max*	*Monthly Avg*
Total Copper	0.1654	0.0912	0.0761859	0.0420336	0.2416	0.133276403
Total Lead	0.4505	0.2224	0.2075409	0.1024569	0.658052238	0.324861231
Total Zinc	0.8383	0.3193	0.3861837	0.1471176	1.224476949	0.466467409
Oil & Grease	17.1080	5.7027	7.8813	2.6271	24.98932548	8.32977516
Total Suspended Solids	21.6702	8.5540	9.98298	3.94065	31.65314561	12.49466274
Total Phenols	-	-	0.2259306	0.078813	0.2259306	0.078813

Allowable Concentrations*

Parameter	*Daily Max*	*Monthly Avg*
Total Copper	0.116	0.064
Total Lead	0.316	0.156
Total Zinc	0.587	0.224
Oil & Grease	12.0	4.00
Total Suspended Solids	15.2	5.99
Total Phenols	0.108	0.038

*Recycle blowdown rate = 250,000 gpd

Annual Allowable Loadings

Parameter	*lbs/day*
Total Copper	16.26
Total Lead	43.04
Total Zinc	76.08
Oil & Grease	1250
Total Suspended Solids	2503
Total Phenols	15.76

Regulated Waste Streams

40 CFR Part 464 Subpart C - Ferrous Casting Subcategory

*Factors used are the most stringent of 40 CFR 464.32 and 40 CFR 464.33 (facilities which cast primarily ductile iron)

Casting Cleaning Operations - 40 CFR 464.32(a)(BPT) and 464.33(a)(BAT)

Highest Average Daily Production (last 12 months)	2.38	million lbs/day
Casting Cleaning Flow	0.036	million gals/day
Normalized Process Wastewater Flow	15.1261	gallons/1000 lbs metal poured
Ratio (5.33/x)	0.352372222	

Parameter	Effluent Guideline Limitations (EGL) Factors			Calculated Factor (EGL Factors*Ratio) (mg/L)		Max Allowable Annual Loading*
	Daily Maximum (mg/L)	*Monthly Average (mg/L)*	*Annual Average Max (lbs/million lbs)*	*Daily Maximum*	*Monthly Average*	
Total Copper	**0.29**	**0.16**	**0.0029**	**0.1022**	**0.0564**	**2.07**
Total Lead	**0.79**	**0.39**	**0.0067**	**0.2784**	**0.1374**	**4.78**
Total Zinc	**1.47**	**0.56**	**0.0116**	**0.5180**	**0.1973**	**8.28**
Oil and Grease	**30**	**10**	**0.223**	**10.5712**	**3.5237**	**159.22**
TSS	**38**	**15**	**0.446**	**13.3901**	**5.2856**	**318.44**

Casting Quench Operations - 40 CFR 464.32(b)(BPT) and 464.33(b)(BAT)

Highest Average Daily Production (last 12 months)	2.38	million lbs/day
Casting Quench Flow	1.2	million gals/day
Normalized Process Wastewater Flow	504.2017	gallons/1000 lbs metal poured
Ratio (5.7/x)	0.011305	

Parameter	Effluent Guideline Limitations (EGL) Factors			Calculated Factor (EGL Factors*Ratio) (mg/L)		Max Allowable Annual Loading*
	Daily Maximum (mg/L)	*Monthly Average (mg/L)*	*Annual Average Max (lbs/million lbs)*	*Daily Maximum*	*Monthly Average*	*Annual Average (lbs/year)*
Total Copper	**0.29**	**0.16**	**0.0031**	**0.0033**	**0.0018**	**2.21**
Total Lead	**0.79**	**0.39**	**0.0071**	**0.0089**	**0.0044**	**5.07**
Total Zinc	**1.47**	**0.56**	**0.0124**	**0.0166**	**0.0063**	**8.85**
Oil and Grease	**30**	**10**	**0.238**	**0.3392**	**0.1131**	**169.93**
TSS	**38**	**15**	**0.476**	**0.4296**	**0.1696**	**339.86**

Mold Cooling Operations - 40 CFR 464.32(g)(BPT) and 464.33(g)(BAT)

Highest Average Daily Production (last 12 months)	2.38	million lbs/day
Mold Cooling Flow	2	million gals/day
Normalized Process Wastewater Flow (X)	840.34	gallons/1000 lbs metal poured
Ratio (17.7/X)	0.021063	

Parameter	Effluent Guideline Limitations (EGL) Factors			Calculated Factor (EGL Factors*Ratio) (mg/L)		Max Allowable Annual Loading*
	Daily Maximum (mg/L)	*Monthly Average (mg/L)*	*Annual Average Max (lbs/million lbs)*	*Daily Maximum*	*Monthly Average*	*Annual Average (lbs/year)*
Total Copper	**0.29**	**0.16**	**0.0096**	**0.0061**	**0.0034**	**6.85**
Total Lead	**0.79**	**0.39**	**0.0222**	**0.0166**	**0.0082**	**15.85**
Total Zinc	**1.47**	**0.56**	**0.0384**	**0.0310**	**0.0118**	**27.42**
Oil and Grease	**30**	**10**	**0.738**	**0.6319**	**0.2106**	**526.93**
TSS	**38**	**15**	**1.48**	**0.8004**	**0.3159**	**1056.72**

Unregulated Waste Streams (Appendix K) - 40 CFR Part 464[1]

Parameter	Daily Maximum Appendix K Allowance (mg/L)	Monthly Average Appendix K Allowance (mg/L)
Copper	0.29	0.16
Lead	0.79	0.39
Zinc	1.47	0.56
Oil and Grease	30	10
TSS	38	15
Total Phenols	0.86	0.30

Source	Parameter	Flow (MGD)	Daily Maximum Appendix K Allowance (mg/L)	Monthly Average Appendix K Allowance (mg/L)	Annual Average Appendix K Allowance (mg/L)	Annual Average Appendix K Allowance (lbs/year)
Cement Lining	Copper	0.0095	0.29	0.160	0.065	1.5450
	Lead	0.0095	0.79	0.39	0.22	5.2292
	Zinc	0.0095	1.47	0.56	0.4	9.5076
	Oil and Grease	0.0095	30	10	6	118.8450
	TSS	0.0095	38	15	10	237.6900
	Total Phenols	0.0095	0.86	0.3	0.2	4.7538
Small Diameter Grinding	Copper	0.0035	0.29	0.16	0.065	0.5692
	Lead	0.0035	0.79	0.39	0.22	1.9265
	Zinc	0.0035	1.47	0.56	0.4	3.5028
	Oil and Grease	0.0035	30	10	6	43.7850
	TSS	0.0035	38	15	10	87.5700
	Total Phenols	0.0035	0.86	0.3	0.2	1.7514
Largie Diameter Grinding	Copper	0.0185	0.29	0.16	0.065	3.0087
	Lead	0.0185	0.79	0.39	0.22	10.1831
	Zinc	0.0185	1.47	0.56	0.4	18.5148
	Oil and Grease	0.0185	30	10	6	231.4350
	TSS	0.0185	38	15	10	462.8700
	Total Phenols	0.0185	0.86	0.3	0.2	9.2574

ATTACHMENT B: REASONABLE POTENTIAL ANALYSIS

Facility Name: **US Pipe and Foundry**

NPDES No.: **AL003271**

6/13/2017

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

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_d) Max	**Enter** Avg Daily Discharge as reported by Applicant (C_d) Ave	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	15	15	0.210
6	Chromium / Chromium VI**		Metals	0	0	0	0	6.46	6.46	
7	Copper**		Metals	0	0	0	0	8.86	8.86	0.388
8	Lead**		Metals	486	18	0	0	0	0	0.206
9	Mercury**		Metals	0.012	0.012	0	0	0	0	0.302
10	Nickel**		Metals	0	0	0	0	0	0	0.505
11	Selenium		Metals	5	5	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	500	500	0	0	82.2	82.2	0.330
15	Cyanide		Metals	0	0	0	0	14	14	-
16	Total Phenolic Compounds		Metals	0	0	0	0	0	0	-
17	Hardness (As CaCO3)		Metals	0	0	0	0	0	0	-
18	Acrolein		VOC	0	0	0	0	0	0	-
19	**Acrylonitrile***	YES	VOC	0	0	0	0	0	0	-
20	**Aldrin**	YES	VOC	0	0	0	0	0	0	-
21	**Benzene***	YES	VOC	0	0	0	0	0	0	-
22	**Bromoform***	YES	VOC	0	0	0	0	0	0	-
23	**Carbon Tetrachioride***	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	**TributyRine (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-Dichlorobenzidine***	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	-

0.25	Enter Q_d = wastewater discharge flow from facility (MGD)
0.38680725	Q_d = wastewater discharge flow (cfs) (this value is caluclated from the MGD)
0	Enter flow from upstream discharge Qd2 = background stream flow in MGD above point of discharge
0	Qd2 = background stream flow from upstream source (cfs)
2.6	Enter 7Q10, Q_s = background stream flow in cfs above point of discharge
1.95	Enter or estimated, 1Q10, Q_s = background stream flow in cfs above point of discharge (1Q10 estimated at 75% of 7Q10)
121	Enter Mean Annual Flow, Q_s = background stream flow in cfs above point of discharge
6.47	Enter 7Q2. Q_s = background stream flow in cfs above point of discharge (For LWF class streams)
Enter to Lafl	Enter C_s = background in-stream pollutant concentration in µg/l (assuming this is zero "0" unless there is data)
Q_d +Qd2+Q_s	Q_r = resultant in-stream flow, after discharge
Calculated on other	C_r = resultant in-stream pollutant concentration in µg/l in the stream (after complete mixing occurs)
50	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

March 23, 2020

Facility Name: US Pipe and Foundry

NPDES No.: AL0003271

Freshwater LWF classification.					Max Daily Discharge as reported by Applicant (C_{d2max})	Freshwater Acute (µg/l) Q_s = 1Q10					Avg Daily Discharge as reported by Applicant (C_{d2mo})	Freshwater Chronic (µg/l) Q_s = 7Q2				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_c)	Draft Permit Limit (C_{dmax})	20% of Draft Permit Limit	RP?	Background from upstream source (Cd2) Monthly Ave		Water Quality Criteria (C_c)	Draft Permit Limit (C_{dmo})	20% of Draft Permit Limit	RP?	Water Quality Criteria (C_c)	Draft Permit Limit (C_{dmo})	20% of Draft Permit Limit	RP?
1	Antimony			0	0	-	-	-	-	0	0	-	-	-	-	3.73E+02	2.88E+03	5.77E+02	No
2	Arsenic		YES	0	0	592.334	3576.453	715.6905664	No	0	0	261.324	4632.407	926.4813655	No	3.03E-01	9.51E+01	1.90E+01	No
3	Beryllium			0	0	-	-	-	-	0	0	-	-	-	-	-	-	-	-
4	Cadmium			0	0	4.347	26.262	5.252436698	No	0	0	0.644	11.409	2.281811396	No	-	-	-	-
5	Chromium/ Chromium III			0	15	1537.913	9290.948	1858.189596	No	0	15	200.051	3546.237	709.2474494	No	-	-	-	-
6	Chromium/ Chromium VI			0	6.46	16.000	96.660	19.33206578	No	0	6.46	11.000	194.993	38.99868979	No	-	-	-	-
7	Copper			0	8.86	18.026	108.902	21.78044295	No	0	8.86	12.766	226.291	45.25822314	No	-	-	-	-
8	Lead			486	0	146.291	883.783	176.7565117	No	18	0	5.701	101.055	20.21105009	No	-	-	-	-
9	Mercury			0.012	0	2.400	14.499	2.899609867	No	0.012	0	0.012	0.213	0.042544025	No	4.24E-02	3.26E-01	6.55E-02	No
10	Nickel			0	0	515.824	3116.234	623.2468971	No	0	0	57.292	1015.600	203.1199276	No	9.93E+02	7.67E+03	1.53E+03	No
11	Selenium			5	0	20.000	120.825	24.16508222	No	5	0	5.000	88.633	17.72667718	No	2.43E+03	1.88E+04	3.75E+03	No
12	Silver			0	0	0.976	5.899	1.179790729	No	0	0	-	-	-	-	-	-	-	-
13	Thallium			0	0	-	-	-	-	0	0	-	-	-	-	2.74E-01	2.11E+00	4.22E-01	No
14	Zinc			500	82.2	197.369	1192.358	238.4716755	No	500	82.2	186.983	3527.312	705.4624676	No	1.49E+04	1.15E+05	2.30E+04	No
15	Cyanide			0	14	22.000	132.908	26.58159044	No	0	14	5.200	92.179	18.43574426	No	9.33E+03	7.21E+04	1.44E+04	No
16	Total Phenolic Compounds			0	0	-	-	-	-	0	0	-	-	-	-	-	-	-	-
17	Hardness (As CaCO3)			0	0	-	-	-	-	0	0	-	-	-	-	-	-	-	-
18	Acrolein			0	0	-	-	-	-	0	0	-	-	-	-	5.43E+00	4.19E+01	8.38E+00	No
19	Acrylonitrile		YES	0	0	-	-	-	-	0	0	-	-	-	-	1.44E-01	4.52E+01	9.04E+00	No
20	Aldrin		YES	0	0	3.000	18.124	3.624762333	No	0	0	-	-	-	-	2.94E-05	9.22E-03	1.84E-03	No
21	Benzene		YES	0	0	-	-	-	-	0	0	-	-	-	-	1.55E+01	4.86E+03	9.71E+02	No
22	Bromoform		YES	0	0	-	-	-	-	0	0	-	-	-	-	7.88E+01	2.47E+04	4.94E+03	No
23	Carbon Tetrachloride		YES	0	0	-	-	-	-	0	0	-	-	-	-	9.57E-01	3.00E+02	6.01E+01	No
24	Chlordane		YES	0	0	2.400	14.499	2.899609867	No	0	0	0.0043	0.076	0.015244942	No	4.73E-04	1.48E-01	2.97E-02	No
25	Clorobenzene			0	0	-	-	-	-	0	0	-	-	-	-	9.06E+02	7.00E+03	1.40E+03	No
26	Chlorodibromo-Methane		YES	0	0	-	-	-	-	0	0	-	-	-	-	7.41E+00	2.32E+03	4.65E+02	No
27	Chloroethane			0	0	-	-	-	-	0	0	-	-	-	-	-	-	-	-
28	2-Chloro-Ethylvinyl Ether			0	0	-	-	-	-	0	0	-	-	-	-	-	-	-	-
29	ChloroForm		YES	0	0	-	-	-	-	0	0	-	-	-	-	1.02E+02	3.20E+04	6.40E+03	No
30	4,4' - DDD		YES	0	0	-	-	-	-	0	0	-	-	-	-	1.81E-04	5.69E-02	1.14E-02	No
31	4,4' - DDE		YES	0	0	-	-	-	-	0	0	-	-	-	-	1.28E-04	4.02E-02	8.04E-03	No
32	4,4' - DDT		YES	0	0	1.100	6.645	1.329079522	No	0	0	0.001	0.018	0.003545335	No	1.28E-04	4.02E-02	8.04E-03	No
33	Dichlorobromo-Methane		YES	0	0	-	-	-	-	0	0	-	-	-	-	1.00E+01	3.15E+03	6.30E+02	No
34	1, 1-Dichloroethane			0	0	-	-	-	-	0	0	-	-	-	-	-	-	-	-
35	1, 2-Dichloroethane		YES	0	0	-	-	-	-	0	0	-	-	-	-	2.14E+01	6.71E+03	1.34E+03	No
36	Trans-1, 2-Dichloro-Ethylene			0	0	-	-	-	-	0	0	-	-	-	-	5.91E+03	4.56E+04	9.12E+03	No
37	1, 1-Dichloroethylene		YES	0	0	-	-	-	-	0	0	-	-	-	-	4.17E+03	1.31E+06	2.62E+05	No
38	1, 2-Dichloropropane			0	0	-	-	-	-	0	0	-	-	-	-	8.48E+00	6.56E+01	1.31E+01	No
39	1, 3-Dichloro-Propylene			0	0	-	-	-	-	0	0	-	-	-	-	1.23E+01	9.48E+01	1.90E+01	No
40	Dieldrin		YES	0	0	0.240	1.450	0.289980867	No	0	0	0.056	0.993	0.198538784	No	3.12E-05	9.80E-03	1.96E-03	No
41	Ethylbenzene			0	0	-	-	-	-	0	0	-	-	-	-	1.24E+03	9.61E+03	1.92E+03	No
42	Methyl Bromide			0	0	-	-	-	-	0	0	-	-	-	-	8.71E+02	6.73E+03	1.35E+03	No
43	Methyl Chloride			0	0	-	-	-	-	0	0	-	-	-	-	-	-	-	-
44	Methylene Chloride		YES	0	0	-	-	-	-	0	0	-	-	-	-	3.46E+02	1.08E+05	2.17E+04	No
45	1, 1, 2, 2-Tetrachloro-Ethane		YES	0	0	-	-	-	-	0	0	-	-	-	-	2.33E+00	7.32E+02	1.46E+02	No
46	Tetrachloro-Ethylene		YES	0	0	-	-	-	-	0	0	-	-	-	-	1.92E+00	6.02E+02	1.20E+02	No
47	Toluene			0	0	-	-	-	-	0	0	-	-	-	-	8.72E+03	6.74E+04	1.35E+04	No
48	Toxaphene		YES	0	0	0.730	4.410	0.882025501	No	0	0	0.0002	0.004	0.000709067	No	1.62E-04	5.08E-02	1.02E-02	No
49	Tributyltin (TBT)		YES	0	0	0.460	2.779	0.555796891	No	0	0	0.072	1.276	0.255264151	No	-	-	-	-
50	1, 1, 1-Trichloroethane			0	0	-	-	-	-	0	0	-	-	-	-	-	-	-	-
51	1, 1, 2-Trichloroethane		YES	0	0	-	-	-	-	0	0	-	-	-	-	9.10E+00	2.85E+03	5.71E+02	No
52	Trichlorethylene		YES	0	0	-	-	-	-	0	0	-	-	-	-	1.75E+01	5.48E+03	1.10E+03	No
53	Vinyl Chloride		YES	0	0	-	-	-	-	0	0	-	-	-	-	1.42E+00	4.47E+02	8.94E+01	No
54	P-Chloro-M-Cresol			0	0	-	-	-	-	0	0	-	-	-	-	-	-	-	-
55	2-Chlorophenol			0	0	-	-	-	-	0	0	-	-	-	-	8.71E+01	6.73E+02	1.34E+02	No
56	2, 4-Dichlorophenol			0	0	-	-	-	-	0	0	-	-	-	-	1.72E+02	1.33E+03	2.66E+02	No
57	2, 4-Dimethylphenol			0	0	-	-	-	-	0	0	-	-	-	-	4.98E+02	3.84E+03	7.68E+02	No
58	4, 6-Dinitro-O-Cresol			0	0	-	-	-	-	0	0	-	-	-	-	-	-	-	-
59	2, 4-Dinitrophenol			0	0	-	-	-	-	0	0	-	-	-	-	3.11E+03	2.40E+04	4.80E+03	No
60	4,6-Dinitro-2-methylphenol		YES	0	0	-	-	-	-	0	0	-	-	-	-	1.65E+02	5.19E+04	1.04E+04	No
61	Dioxin (2,3,7,8-TCDD)		YES	0	0	-	-	-	-	0	0	-	-	-	-	2.67E-06	8.37E-06	1.67E-06	No
62	2-Nitrophenol			0	0	-	-	-	-	0	0	-	-	-	-	-	-	-	-
63	4-Nitrophenol			0	0	-	-	-	-	0	0	-	-	-	-	-	-	-	-
64	Pentachlorophenol		YES	0	0	8.723	52.700	10.53998831	No	0	0	8.693	118.637	23.72745408	No	1.77E+00	5.55E+02	1.11E+02	No
65	Phenol			0	0	-	-	-	-	0	0	-	-	-	-	5.00E+05	3.86E+06	7.72E+05	No
66	2, 4, 6-Trichlorophenol		YES	0	0	-	-	-	-	0	0	-	-	-	-	1.41E+00	4.44E+02	8.88E+01	No
67	Acenaphthene			0	0	-	-	-	-	0	0	-	-	-	-	5.79E+02	4.47E+03	8.93E+02	No
68	Acenaphthylene			0	0	-	-	-	-	0	0	-	-	-	-	-	-	-	-
69	Anthracene			0	0	-	-	-	-	0	0	-	-	-	-	2.33E+04	1.80E+05	3.60E+04	No
70	Benzidine			0	0	-	-	-	-	0	0	-	-	-	-	1.16E-04	8.95E-04	1.79E-04	No
71	Benzo(A)Anthracene		YES	0	0	-	-	-	-	0	0	-	-	-	-	1.07E-02	3.34E+00	6.69E-01	No
72	Benzo(A)Pyrene		YES	0	0	-	-	-	-	0	0	-	-	-	-	1.07E-02	3.34E+00	6.69E-01	No
73	Benzo(b)fluoranthene			0	0	-	-	-	-	0	0	-	-	-	-	1.07E-02	8.23E-02	1.65E-02	No
74	Benzo(GHI)Perylene			0	0	-	-	-	-	0	0	-	-	-	-	-	-	-	-
75	Benzo(K)Fluoranthene			0	0	-	-	-	-	0	0	-	-	-	-	1.07E-02	8.23E-02	1.65E-02	No
76	Bis (2-Chloroethoxy) Methane			0	0	-	-	-	-	0	0	-	-	-	-	-	-	-	-
77	Bis (2-Chloroethyl)-Ether		YES	0	0	-	-	-	-	0	0	-	-	-	-	3.07E-01	9.65E+01	1.93E+01	No
78	Bis (2-Chloroiso-Propyl) Ether			0	0	-	-	-	-	0	0	-	-	-	-	3.78E+04	2.92E+05	5.84E+04	No
79	Bis (2-Ethylhexyl) Phthalate		YES	0	0	-	-	-	-	0	0	-	-	-	-	1.28E+00	4.02E+02	8.05E+01	No
80	4-Bromophenyl Phenyl Ether			0	0	-	-	-	-	0	0	-	-	-	-	-	-	-	-
81	Butyl Benzyl Phthalate			0	0	-	-	-	-	0	0	-	-	-	-	1.13E+03	8.70E+03	1.74E+03	No
82	2-Chloronaphthalene			0	0	-	-	-	-	0	0	-	-	-	-	9.24E+02	7.14E+03	1.43E+03	No
83	4-Chlorophenyl Phenyl Ether			0	0	-	-	-	-	0	0	-	-	-	-	-	-	-	-
84	Chrysene		YES	0	0	-	-	-	-	0	0	-	-	-	-	1.07E-02	3.34E+00	6.69E-01	No
85	Di-N-Butyl Phthalate			0	0	-	-	-	-	0	0	-	-	-	-	2.62E+03	2.02E+04	4.05E+03	No
86	Di-N-Octyl Phthalate			0	0	-	-	-	-	0	0	-	-	-	-	-	-	-	-
87	Dibenzo(A,H)Anthracene		YES	0	0	-	-	-	-	0	0	-	-	-	-	1.07E-02	3.34E+00	6.69E-01	No
88	1, 2-Dichlorobenzene			0	0	-	-	-	-	0	0	-	-	-	-	7.55E+02	5.83E+03	1.17E+03	No
89	1, 3-Dichlorobenzene			0	0	-	-	-	-	0	0	-	-	-	-	5.62E+02	4.34E+03	8.68E+02	No
90	1, 4-Dichlorobenzene			0	0	-	-	-	-	0	0	-	-	-	-	1.12E+02	8.68E+02	1.74E+02	No
91	3, 3-Dichlorobenzidine		YES	0	0	-	-	-	-	0	0	-	-	-	-	1.66E-02	5.22E+00	1.04E+00	No
92	Diethyl Phthalate			0	0	-	-	-	-	0	0	-	-	-	-	2.56E+04	1.97E+05	3.95E+04	No
93	Dimethyl Phthalate			0	0	-	-	-	-	0	0	-	-	-	-	6.48E+05	5.00E+06	1.00E+06	No
94	2, 4-Dinitrotoluene		YES	0	0	-	-	-	-	0	0	-	-	-	-	1.98E+00	6.22E+02	1.24E+02	No
95	2, 6-Dinitrotoluene			0	0	-	-	-	-	0	0	-	-	-	-	-	-	-	-
96	1,2-Diphenylhydrazine			0	0	-	-	-	-	0	0	-	-	-	-	1.17E-01	9.04E-01	1.81E-01	No
97	Endosulfan (alpha)		YES	0	0	0.22	1.329	0.265815904	No	0	0	0.056	0.993	0.198538784	No	5.19E+01	1.63E+04	3.25E+03	No
98	Endosulfan (beta)		YES	0	0	0.22	1.329	0.265815904	No	0	0	0.056	0.993	0.198538784	No	5.19E+01	1.63E+04	3.25E+03	No
99	Endosulfan sulfate		YES	0	0	-	-	-	-	0	0	-	-	-	-	5.19E+01	1.63E+04	3.25E+03	No
100	Endrin		YES	0	0	0.086	0.520	0.103909854	No	0	0	0.036	0.636	0.127632076	No	3.53E-02	1.11E+01	2.21E+00	No
101	Endrin Aldeyhde		YES	0	0	-	-	-	-	0	0	-	-	-	-	1.76E-01	5.53E+01	1.11E+01	No
102	Fluoranthene			0	0	-	-	-	-	0	0	-	-	-	-	8.12E+01	6.27E+02	1.25E+02	No
103	Fluorene			0	0	-	-	-	-	0	0	-	-	-	-	3.11E+03	2.40E+04	4.80E+03	No
104	Heptochlor		YES	0	0	0.52	3.141	0.628292138	No	0	0	0.004	0.067	0.013472275	No	4.63E-05	1.45E-02	2.91E-03	No
105	Heptachlor Epoxide		YES	0	0	0.52	3.141	0.628292138	No	0	0	0.004	0.067	0.013472275	No	2.29E-05	7.18E-03	1.44E-03	No
106	Hexachlorobenzene		YES	0	0	-	-	-	-	0	0	-	-	-	-	1.66E-04	5.27E-02	1.05E-02	No
107	Hexachlorobutadiene		YES	0	0	-	-	-	-	0	0	-	-	-	-	1.08E+01	3.38E+03	6.75E+02	No
108	Hexachlorocyclohexan (alpha)		YES	0	0	-	-	-	-	0	0	-	-	-	-	2.85E-03	8.94E-01	1.79E-01	No
109	Hexachlorocyclohexan (beta)		YES	0	0	-	-	-	-	0	0	-	-	-	-	9.97E-03	3.13E+00	6.26E-01	No
110	Hexachlorocyclohexan (gamma)		YES	0	0	0.95	5.739	1.147641406	No	0	0	-	-	-	-	1.08E+00	3.38E+02	6.76E+01	No
111	HexachlorocycloPentadiene			0	0	-	-	-	-	0	0	-	-	-	-	6.45E+02	4.98E+03	9.96E+02	No
112	Hexachloroethane			0	0	-	-	-	-	0	0	-	-	-	-	1.92E+00	1.48E+01	2.96E+00	No
113	Indeno(1, 2, 3-CK)Pyrene		YES	0	0	-	-	-	-	0	0	-	-	-	-	1.07E-02	3.34E+00	6.69E-01	No
114	Isophorone			0	0	-	-	-	-	0	0	-	-	-	-	5.61E+02	4.33E+03	8.66E+02	No
115	Naphthalene			0	0	-	-	-	-	0	0	-	-	-	-	-	-	-	-
116	Nitrobenzene			0	0	-	-	-	-	0	0	-	-	-	-	4.04E+02	3.12E+03	6.23E+02	No
117	N-Nitrosodi-N-Propylamine		YES	0	0	-	-	-	-	0	0	-	-	-	-	2.95E-01	9.26E+01	1.85E+01	No
118	N-Nitrosodimethylamine		YES	0	0	-	-	-	-	0	0	-	-	-	-	1.76E+00	5.52E+02	1.10E+02	No
119	N-Nitrosodiphenylamine		YES	0	0	-	-	-	-	0	0	-	-	-	-	3.50E+00	1.10E+03	2.20E+02	No
120	PCB-1016		YES	0	0	-	-	-	-	0	0	0.014	0.248	0.049634696	No	3.74E-05	1.17E-02	2.35E-03	No
121	PCB-1221		YES	0	0	-	-	-	-	0	0	0.014	0.248	0.049634696	No	3.74E-05	1.17E-02	2.35E-03	No
122	PCB-1232		YES	0	0	-	-	-	-	0	0	0.014	0.248	0.049634696	No	3.74E-05	1.17E-02	2.35E-03	No
123	PCB-1242		YES	0	0	-	-	-	-	0	0	0.014	0.248	0.049634696	No	3.74E-05	1.17E-02	2.35E-03	No
124	PCB-1248		YES	0	0	-	-	-	-	0	0	0.014	0.248	0.049634696	No	3.74E-05	1.17E-02	2.35E-03	No
125	PCB-1254		YES	0	0	-	-	-	-	0	0	0.014	0.248	0.049634696	No	3.74E-05	1.17E-02	2.35E-03	No
126	PCB-1260		YES	0	0	-	-	-	-	0	0	0.014	0.248	0.049634696	No	3.74E-05	1.17E-02	2.35E-03	No
127	Phenanthrene			0	0	-	-	-	-	0	0	-	-	-	-	-	-	-	-
128	Pyrene			0	0	-	-	-	-	0	0	-	-	-	-	2.33E+03	1.80E+04	3.60E+03	No
129	1, 2, 4-Trichlorobenzene			0	0	-	-	-	-	0	0	-	-	-	-	4.09E+01	3.16E+02	6.32E+01	No

ATTACHMENT C: WASTE LOAD ALLOCATION

Waste Load Allocation Summary

REQUEST INFORMATION

Request Number: 3642

From:	Alex Chavers	**In Branch/Section**	Industrial		
Date Submitted	8/16/2019	**Date Required**	9/15/2019	**FUND Code**	605
Date Permit application received by NPDES program	1/26/2018				
Receiving Waterbody	Valley Creek				
Previous Stream Name					
Facility Name	US Pipe and Foundry Co LLC - Bessemer	(Name of Discharger-WQ will use to file)			
		Previous Discharger Name			
River Basin	Black Warrior	**Outfall Latitude**	33.422101	(decimal degrees)	
***County**	Jefferson	**Outfall Longitude**	-86.976879	(decimal degrees)	
Permit Number	**AL0003271**	**Permit Type**	Permit Reissuance		
		Permit Status	Active		
		Type of Discharger	INDUSTRIAL		

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

If yes, impacting dischargers names.	**Impacting dischargers permit numbers.**
US Steel-Fairfield	AL0003646
Jeff. Co. Valley Creek WWTP	AL0023655
Hueytown High School	AL0080276
Concord Prep Plan	AL0003620
Oak Grove Mine	AL0026875
Donaldson Correctional Facility	AL0045560

Existing Discharge Design Flow	0.25	MGD
Proposed Discharge Design Flow	0.25	MGD

Note: The flow rates given should be those requested for modeling.

Comments included ☑ Yes ☐ No

Information Verified By JBS

Year File Was Created 2007

Response ID Number 1720

Lat/Long Method GPS

12 Digit HUC Code	031601120101		
Use Classification	LWF		
Site Visit Completed?	☑ Yes ☐ No	**Date of Site Visit**	10/28/2019
Waterbody Impaired?	☐ Yes ☑ No	**Date of WLA Response**	12/13/2019
Antidegradation	☐ Yes ☑ No	**Approved TMDL?**	☐ Yes ☑ No
Waterbody Tier Level	Tier I		
Use Support Category	2A	**Approval Date of TMDL**	

Waste Load Allocation Information

Modeled Reach Length	44.99	Miles	**Date of Allocation**	12/11/2019	
Name of Model Used	SWQM		**Allocation Type**	Annual	
Model Completed by	Jonathan Straiton		**Type of Model Used**	Calibrated / Verified	
Allocation Developed by	Water Quality Branch				

Waste Load Allocation Summary

Annual Effluent Limits		
Qw	0.25	MGD
CBOD5	25	mg/L
NH3-N	6	mg/L
TKN		
D.O.	5	mg/L

Conventional Parameters				Other Parameters			
Qw	MGD	Qw	MGD	Qw	MGD	Qw	MGD
Season		Season		Season		Season	
From		From		From		From	
Through		Through		Through		Through	
CBOD5		CBOD5		TP		TP	
NH3-N		NH3-N		TN		TN	
TKN		TKN		TSS		TSS	
D.O.		D.O.					

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

Water Quality Characteristics Immediately Upstream of Discharge

Parameter	Summer		Winter	
CBODu	2.5742	mg/l		mg/l
NH3-N	0.1837	mg/l		mg/l
Temperature	30	°C		°C
pH	7	su		su

Hydrology at Discharge Location

Drainage Area Qualifier				Method Used to Calculate
Exact	Drainage Area	52.6	sq mi	
	Stream 7Q10	2.6	cfs	Bingham Equation
	Stream 1Q10	1.95	cfs	75%of 7Q10
	Stream 7Q2	6.48	cfs	Bingham Equation
	Annual Average	120.98	cfs	ADEM Estimate w/USACE Map

Comments and/or Notations: US Pipe and Foundry has requested to move their outfall to a new location. The model has been updated to reflect this change.

LANCE R. LEFLEUR
DIRECTOR

ADEM

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

December 9, 2019

MEMORANDUM

TO: Alex Chavers, Industrial/Municipal Branch

FROM: Jonathan Straiton, Water Quality Branch

RE: Waste Load Allocation for US Pipe and Foundry Co LLC for permit reissuance

An updated annual model was completed for the US Pipe and Foundry facility on December 9, 2019 for the purpose of permit reissuance. The facility has requested to move their outfall directly to Valley Creek. The modeled flow rate for US Pipe and Foundry was 0.25 MGD year-round.

The model predicts that the following effluent limits will maintain the required dissolved oxygen concentrations throughout all use classifications in Valley Creek.

Parameter	Annual Limits
$CBOD_5$	25 mg/L
NH_3-N	6 mg/L
Minimum D.O.	5 mg/L

Valley Creek (Jefferson County, AL) at the point of discharge for US Pipe and Foundry has a use classification of Limited Warmwater Fishery (LWF) and is a Tier I water.

The $7Q_{10}$ and $7Q_2$ flow rates at the outfall were found to be 2.6 cfs and 6.48 cfs, respectively. Ammonia-nitrogen limits are water-quality based.

JBS: jbs

Facility:	US Pipe and Foundry Co LLC
Permit:	*#AL0003271*
Receiving Waterbody:	Valley Creek
County:	Jefferson
Date Completed:	December 9, 2019
Performed by:	Jonathan Straiton, *Water Quality*

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)

WLA Rationale for US Pipe and Foundry to Valley Creek

December 9, 2019

Receiving Waterbody: Valley Creek-Black Warrior River Basin
County: Jefferson
Date Completed: 12/9/2019
Performed by: JBS-Water Quality

Table of Contents

TABLE OF FIGURES

US Pipe and Foundry Co LLC WLA Rationale

I. INTRODUCTION

On August 16, 2019 an annual waste load allocation (WLA) request was submitted to the Water Quality Branch by Alex Chavers of the NPDES Industrial Section. US Pipe and Foundry Co LLC has proposed to relocate their process wastewater discharge to downstream from their current discharge, directly onto Valley Creek. US Pipe and Foundry was previously discharging to an unnamed tributary to Valley Creek. The annual model consists of 22 segments that span through Jefferson County, Alabama (west of Birmingham, AL). Valley Creek at the point of discharge for US Pipe and Foundry is classified as Limited Warmwater Fishery (LWF). The model starts at the Opossum Creek-Little Creek confluence and terminates 44.99 miles downstream at the Valley Creek-Black Warrior River confluence point.

II. GEOGRAPHICAL INFORMATION

The proposed outfall will be located on Valley Creek in Jefferson County, Alabama with latitude and longitude coordinates of 33.422101° and -86.976879°, respectively. The new outfall will be 0.2 miles downstream from the current outfall. The effluent will travel approximately 30 feet on the company owned property before it reaches Valley Creek. There is approximately 5 feet of elevation change from the discharge to Valley Creek, providing further aeration.

III. FLOW ESTIMATES

The outfall drainage area was delineated with a resulting area of 52.6 square miles. The Bingham equation was used for determining statistical flow data throughout the entire model reach. The Bingham equation uses drainage area, mean annual precipitation, and the stream flow recession index to calculate $7Q_{10}$ and $7Q_2$ statistics. The Valley Creek watershed is contained entirely within the same recession index (65 days/log cycle), but there is some overlap in precipitation indices (57" and 59"). This overlap has been accounted for and can be seen in the flow summary in the Appendix. 7Q10 and 7Q2 values at the discharge location were found to be 2.6 cfs and 6.48 cfs, respectively.

The annual average flow was calculated by using a map created by the U.S. Geological Survey and Army Corps of Engineers (1984). The outfall drainage (52.6 mi^2) was multiplied by the 2.3 cfs/mi^2 contour line to give an annual average of 120.98 ft^3/s (cfs). This map can be seen in the Appendix.

IV. AMMONIA-NITROGEN TOXICITY

Chronic toxicity to aquatic life was considered in the model and the ammonia-nitrogen limit was determined to be water-quality based rather than toxicity based.

V. MODEL INPUTS-CALCULATIONS AND SOURCES

This section contains explanations and reasoning for model inputs, calculations, reach diagram, and general comments concerning the report. A verified/calibrated model was completed for the Opossum Creek-Valley Creek region in 1992. Several of the parameters and inputs from that model will be used as inputs for this model.

A. Model Inputs:

- Effluent conditions were iterated in order to maintain sufficient D.O. levels and reach background conditions. The model reach begins in an Agricultural and Industrial (A&I) Water Supply use classification, which requires a minimum dissolved oxygen concentration of 3.0 mg/L. The modeled reach also includes Limited Warmwater Fishery (LWF), Fish & Wildlife (F&W), Swimming (S) and Public Water Supply (PWS) segments of Valley Creek. The model parameters were adjusted to satisfy the D.O. criteria for each use classification.
- Reaction rates from the 1992 waste load allocation study were used for segments 1-17. Default model predicted values were used for segments 18-22.
- Velocities were input manually for segments 1-17; default model predicted values were used for segments 18-22. The velocities for segments 1-17 used in the model were based off a time of travel study done by USGS and the GSA in 1977. The study did not involve segments 18-22. The velocities input into the model were based off of equations developed from the study, which can be seen in the table below. "Q" is the volumetric flow moving through the reach. The average "Q" of each segment was input into the formula below to give the average velocity of each segment seen in the model.

Segments	Equation
1 - 5	Velocity = 0.13 + (0.01)(Q)
6 - 13	Velocity = 0.11 + (0.01)(Q)
14 - 17	Velocity = 0.17 + (0.0034)(Q)

- Tributary flow statistics for Little Creek, Lick Creek, Raccoon Branch, and Big Branch seen on the schematic differ from those in the "Tributaries" section of the model. There are dischargers located on each of these streams. Natural flow values were used for the schematic, whereas the end of model parameter values for the above mentioned creeks were used in the model.

- A dissolved oxygen value of 6.0 mg/L was used for the headwaters; 5 mg/L was used for incremental inflow and tributaries containing no discharges. Modeled parameter values were used as inputs into this model for tributaries that have dischargers (seen as "+Q_w" in schematic). Headwater and background conditions were based off of the results of the 1992 waste load allocation study.

B. Reach Diagram Sources
   - Segments were based on topography, tributaries, and point sources.
   - Drainage areas were found using the USGS Stream Stats online platform to delineate.
   - Elevations were based on topographic maps and interpolated for points of interest between contour lines.

Site Visit Summary

I. SITE VISIT OVERVIEW:

A site visit was conducted on October 28, 2019 by Jonathan Straiton of ADEM. The proposed outfall location was located with the assistance of Scott Aler, Gene Lawrence, and Scott Roberts (contractor) representing the US Pipe and Foundry Co LLC facility. Pictures were taken of the proposed discharge location along with regions upstream and downstream of it. US Pipe and Foundry was previously permitted to discharge 0.55 MGD, but now has requested to discharge 0.25 MGD.

II. SITE VISIT OBSERVATIONS

Site Visit Information

Project:	US Pipe and Foundry Co LLC WLA
Facility Name:	US Pipe and Foundry Co LLC
Permit #:	AL000327
Facility Address:	2023 Saint Louis Avenue Bessemer, Alabama 35020
Contact:	Scott Aler (Associate Vice President)
Plant Operator:	Lawrence Gene (Environmental Utilities Supervisor)
Contact Phone:	(205)-254-7654
Basin:	Black Warrior
County:	Jefferson
Receiving Stream:	Valley Creek
Existing Flow (MGD):	0.25 MGD

Facility: US Pipe and Foundry Co LLC
Permit #: AL0003271

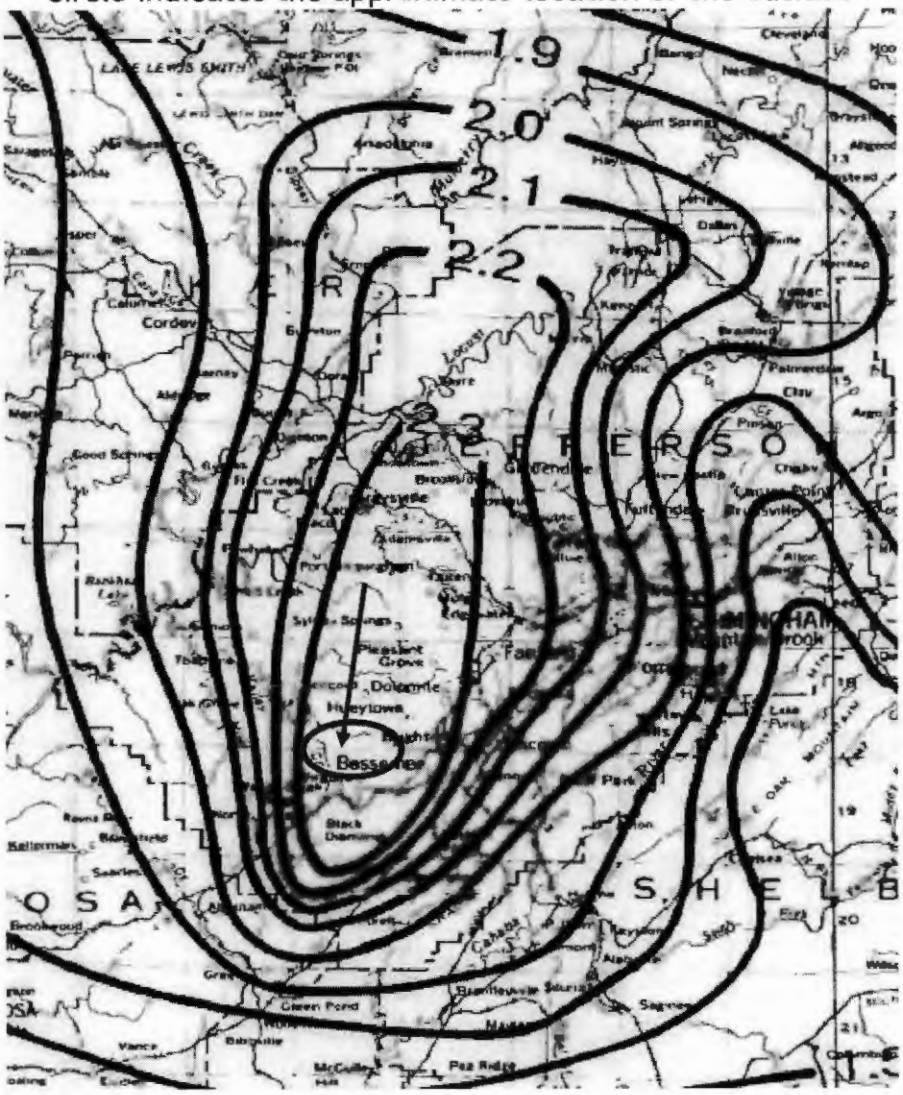
Site Visit Field Form

Date of Visit:	10/28/2019
Time of Visit:	10:00 AM ☒ PM ☐
Weather Summary:	Sunny, 55°F
Flow Stage:	Flood ☐ Above Normal ☐ Normal ☒ Low ☐ Dry ☐
Velocity:	Swift (>3ft/s) ☐ Moderate (1.5-3ft/s) ☒ Slow (<1.5ft/s) ☐
Wadeable:	Yes ☒ No ☐ Unknown ☐
Recent Rain Event:	Yes ☐ No ☒ Unknown ☐
Surface Oils:	Yes ☐ No ☒ _____
Depth (Approximate):	2-3 feet
Width (Approximate):	30-50 feet
Substrate:	Silt/Rock
Upstream Conditions:	Mildy braided, but mostly free flowing
Downstream Conditions:	Minimal obstacles, mostly free flowing
Significant Odors:	None
Land Use:	Developed
Biological Indicators:	None observed
Canopy:	Light to moderate
Observed GPS Coordinates:	Latitude: 33.422101 (Proposed outfall coordinates) Longitude: -86.976879
Other / Notes:	Met with Scott Aler, Gene Lawrence, and Scott Roberts (contractor) at the US Pipe and Foundry Co LLC facility. The proposed outfall is still in the construction phase.

Receiving Waterbody: Valley Creek-Black Warrior River Basin
County: Jefferson
Date Completed: 12/9/2019
Performed by: JBS-Water Quality

Appendices

Figure 1. USGS map (partial view) for annual average flow calculations. The arrow and circle indicates the approximate location of the outfall.



I. SITE VISIT PHOTOGRAPHS (10/28/2019)

Figure 2: Proposed discharge location for US Pipe and Foundry.

Figure 3: View from bank at outfall location looking towards Valley Creek.

Figure 4: Valley Creek at discharge location, looking upstream.

Figure 5: Valley Creek at discharge location, looking downstream.

Receiving Waterbody: Valley Creek-Black Warrior River Basin
County: Jefferson
Date Completed: 12/9/2019
Performed by: JBS-Water Quality

Figure 6: 0.75 miles upstream of outfall on Valley Creek at 18th Avenue road crossing, looking upstream.

Figure 7: 0.75 miles upstream of outfall on Valley Creek at 18th Avenue road crossing, looking downstream.

Receiving Waterbody: Valley Creek-Black Warrior River Basin
County: Jefferson
Date Completed: 12/9/2019
Performed by: JBS-Water Quality

Figure 8: 0.4 miles downstream of outfall on Valley Creek at 19th Street North road crossing, looking upstream. USGS 02461500 is located here.

Figure 9: 0.4 miles downstream of outfall on Valley Creek at 19th Street North road crossing, looking downstream.

Receiving Waterbody: Valley Creek-Black Warrior River Basin
County: Jefferson
Date Completed: 12/9/2019
Performed by: JBS-Water Quality

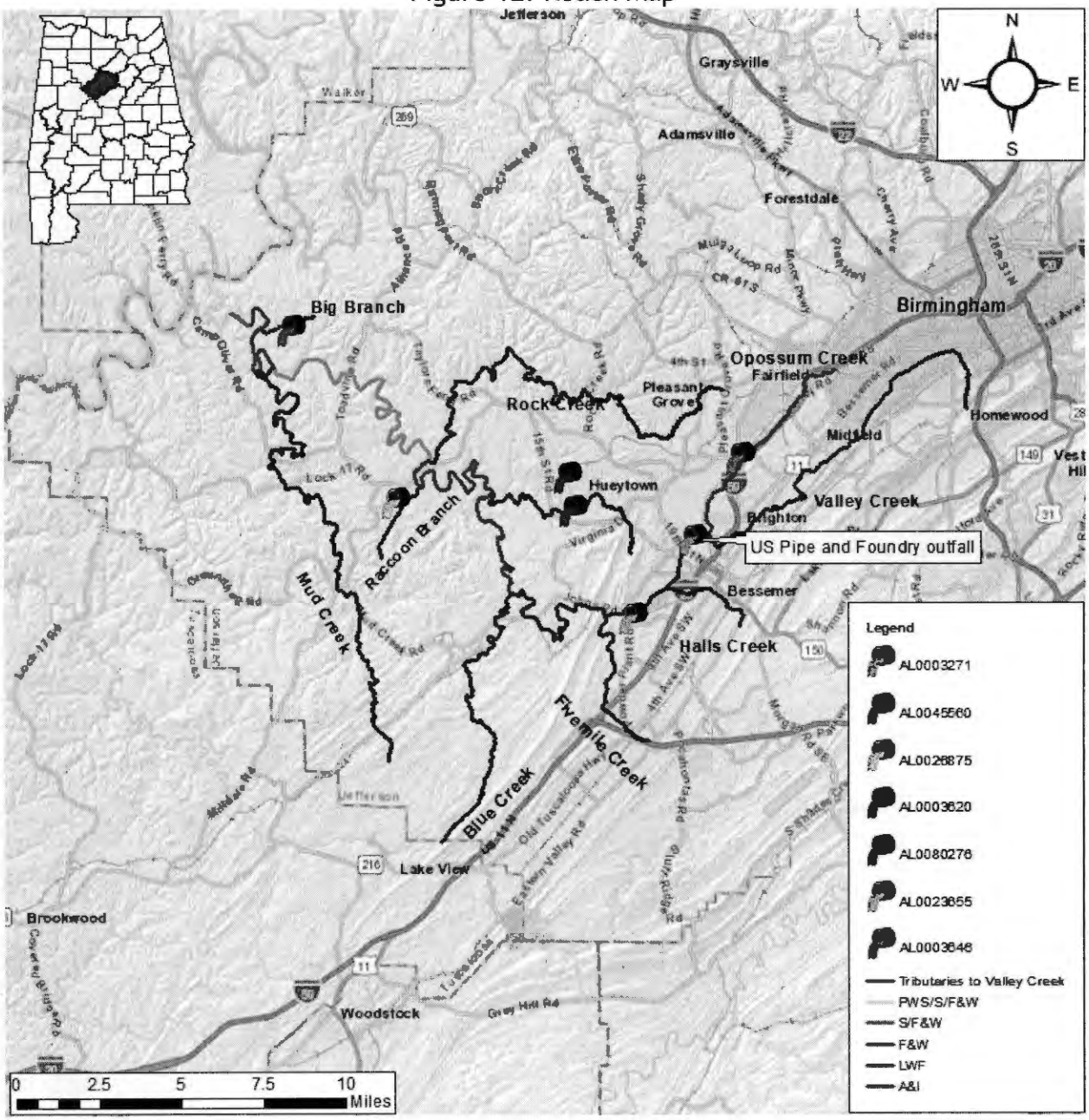
Figure 10: 0.8 miles downstream of outfall on Valley Creek at 15 Street North road crossing, looking upstream.

Figure 11: 0.8 miles downstream of outfall on Valley Creek at 15 Street North road crossing, looking downstream.

Receiving Waterbody: Valley Creek-Black Warrior River Basin
County: Jefferson
Date Completed: 12/9/2019
Performed by: JBS-Water Quality

II. AREA MAPS

Figure 12: Reach Map

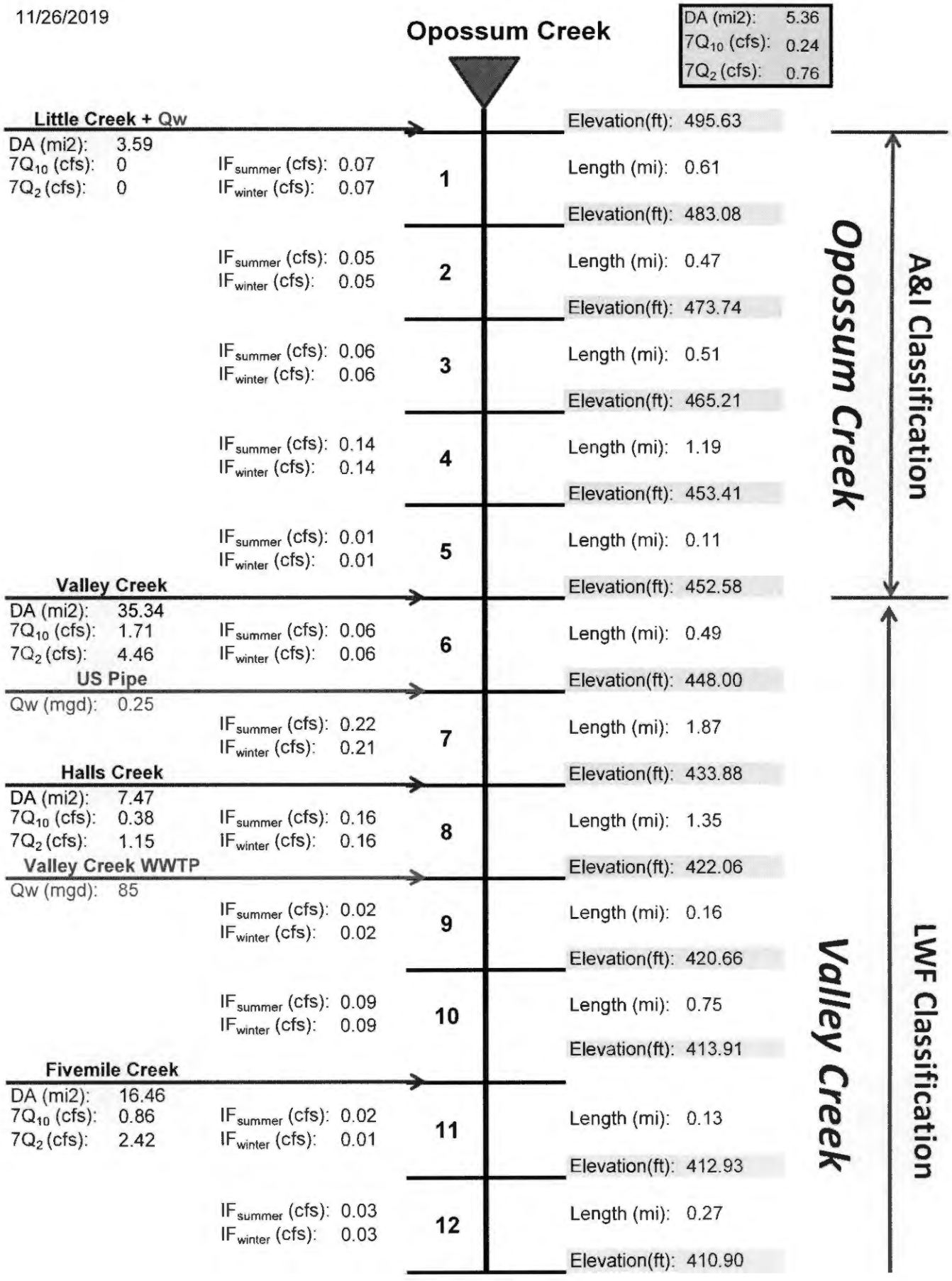


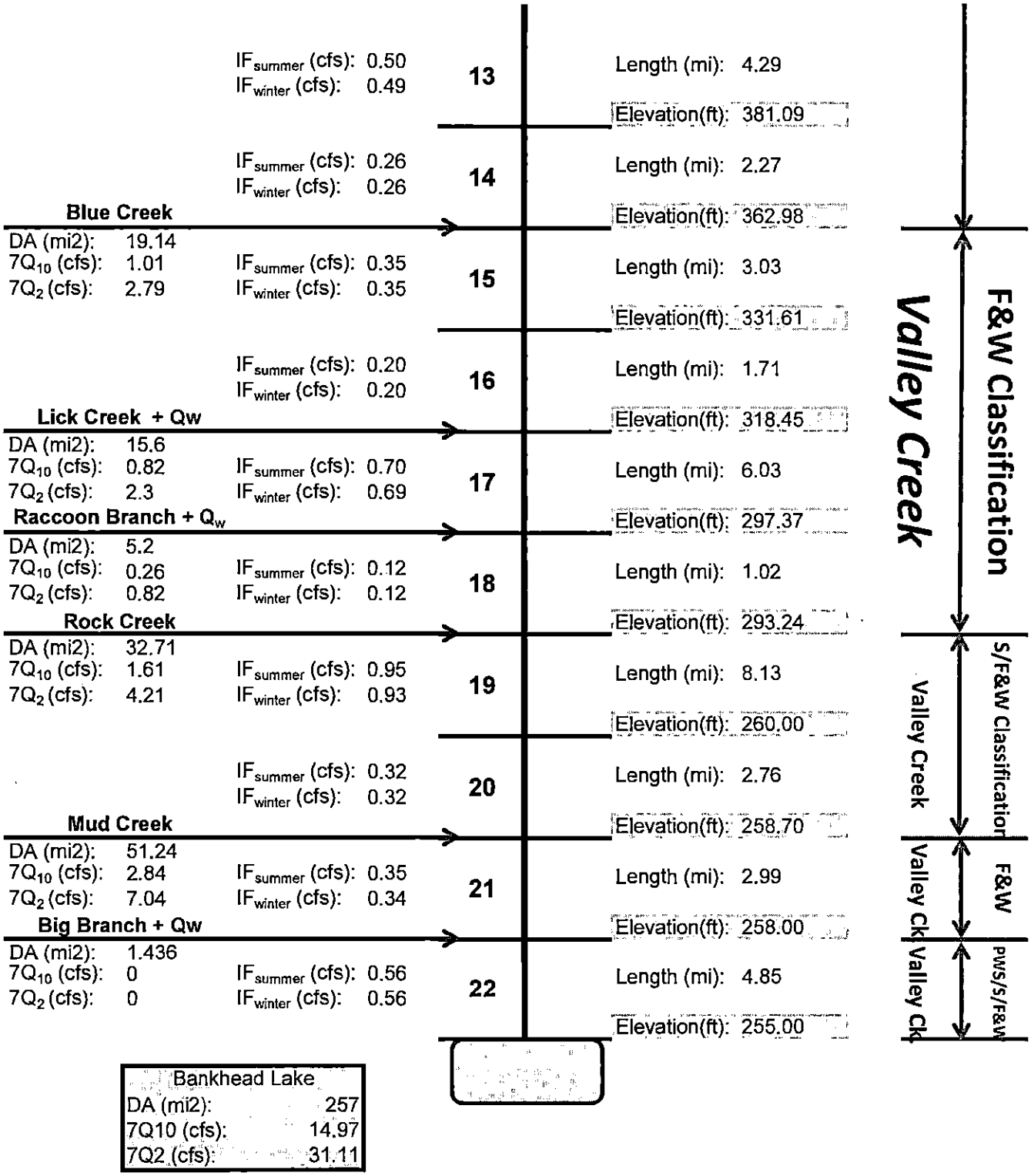
Receiving Waterbody: Valley Creek-Black Warrior River Basin
County: Jefferson
Date Completed: 12/9/2019
Performed by: JBS-Water Quality

III. SWQM FULL PRINTOUTS

The following pages contain a schematic of Opossum Creek and Valley Creek, spreadsheet model with inputs and outputs, and a flow summary of the model beginning, tributaries, and model end location.

11/26/2019


Opossum Creek
DA (mi2): 5.36
7Q10 (cfs): 0.24
7Q2 (cfs): 0.76
Little Creek + Qw
DA (mi2): 3.59
7Q10 (cfs): 0
7Q2 (cfs): 0
IFsummer (cfs): 0.07
IFwinter (cfs): 0.07
1
Elevation(ft): 495.63
Length (mi): 0.61
Elevation(ft): 483.08
IFsummer (cfs): 0.05
IFwinter (cfs): 0.05
2
Length (mi): 0.47
Elevation(ft): 473.74
IFsummer (cfs): 0.06
IFwinter (cfs): 0.06
3
Length (mi): 0.51
Elevation(ft): 465.21
IFsummer (cfs): 0.14
IFwinter (cfs): 0.14
4
Length (mi): 1.19
Elevation(ft): 453.41
IFsummer (cfs): 0.01
IFwinter (cfs): 0.01
5
Length (mi): 0.11
Elevation(ft): 452.58
Valley Creek
DA (mi2): 35.34
7Q10 (cfs): 1.71
7Q2 (cfs): 4.46
IFsummer (cfs): 0.06
IFwinter (cfs): 0.06
6
Length (mi): 0.49
Elevation(ft): 448.00
US Pipe
Qw (mgd): 0.25
IFsummer (cfs): 0.22
IFwinter (cfs): 0.21
7
Length (mi): 1.87
Elevation(ft): 433.88
Halls Creek
DA (mi2): 7.47
7Q10 (cfs): 0.38
7Q2 (cfs): 1.15
IFsummer (cfs): 0.16
IFwinter (cfs): 0.16
8
Length (mi): 1.35
Elevation(ft): 422.06
Valley Creek WWTP
Qw (mgd): 85
IFsummer (cfs): 0.02
IFwinter (cfs): 0.02
9
Length (mi): 0.16
Elevation(ft): 420.66
IFsummer (cfs): 0.09
IFwinter (cfs): 0.09
10
Length (mi): 0.75
Elevation(ft): 413.91
Fivemile Creek
DA (mi2): 16.46
7Q10 (cfs): 0.86
7Q2 (cfs): 2.42
IFsummer (cfs): 0.02
IFwinter (cfs): 0.01
11
Length (mi): 0.13
Elevation(ft): 412.93
IFsummer (cfs): 0.03
IFwinter (cfs): 0.03
12
Length (mi): 0.27
Elevation(ft): 410.90
Opossum Creek
A&I Classification
Valley Creek
LWF Classification


Valley Creek
F&W Classification
S/F&W Classification
F&W
PWS/S/F&W
Valley Creek
Valley ck
Valley ck
13
Length (mi): 4.29
Elevation(ft): 381.09
IF summer (cfs): 0.50
IF winter (cfs): 0.49
14
Length (mi): 2.27
Elevation(ft): 362.98
IF summer (cfs): 0.26
IF winter (cfs): 0.26
Blue Creek
DA (mi2): 19.14
7Q10 (cfs): 1.01
7Q2 (cfs): 2.79
15
Length (mi): 3.03
Elevation(ft): 331.61
IF summer (cfs): 0.35
IF winter (cfs): 0.35
16
Length (mi): 1.71
Elevation(ft): 318.45
IF summer (cfs): 0.20
IF winter (cfs): 0.20
Lick Creek + Qw
DA (mi2): 15.6
7Q10 (cfs): 0.82
7Q2 (cfs): 2.3
17
Length (mi): 6.03
Elevation(ft): 297.37
IF summer (cfs): 0.70
IF winter (cfs): 0.69
Raccoon Branch + Qw
DA (mi2): 5.2
7Q10 (cfs): 0.26
7Q2 (cfs): 0.82
18
Length (mi): 1.02
Elevation(ft): 293.24
IF summer (cfs): 0.12
IF winter (cfs): 0.12
Rock Creek
DA (mi2): 32.71
7Q10 (cfs): 1.61
7Q2 (cfs): 4.21
19
Length (mi): 8.13
Elevation(ft): 260.00
IF summer (cfs): 0.95
IF winter (cfs): 0.93
20
Length (mi): 2.76
Elevation(ft): 258.70
IF summer (cfs): 0.32
IF winter (cfs): 0.32
Mud Creek
DA (mi2): 51.24
7Q10 (cfs): 2.84
7Q2 (cfs): 7.04
21
Length (mi): 2.99
Elevation(ft): 258.00
IF summer (cfs): 0.35
IF winter (cfs): 0.34
Big Branch + Qw
DA (mi2): 1.436
7Q10 (cfs): 0
7Q2 (cfs): 0
22
Length (mi): 4.85
Elevation(ft): 255.00
IF summer (cfs): 0.56
IF winter (cfs): 0.56
Bankhead Lake
DA (mi2): 257
7Q10 (cfs): 14.97
7Q2 (cfs): 31.11

Contents

Figures

Appendixes

1.0 Introduction

The United States Pipe and Foundry Company, LLC, Alabama Works, Ductile Iron Pipe Foundry (U.S. Pipe), is herein submitting its National Pollutant Discharge Elimination System (NPDES) Permit renewal application. U.S. Pipe's NPDES permit, AL0003271, expires on 6/30/2013.

U.S. Pipe is located in Bessemer, Alabama, in Jefferson County and employs approximately 600 people. The Alabama Works is one contiguous site which includes the original Bessemer Foundry and the adjacent Mini Mill. The Bessemer Foundry has been in operation at this site for over 100 years. Pipe Casting and Finishing operations were expanded in 2009 on an adjacent site referred to as the Mini Mill. The Alabama Works is presently authorized to produce up to 357,500 tons per year via Title V Air Permit, issued by the Jefferson County Department of Health.

The Alabama Works encompasses approximately 184 acres, 155 acres at the Bessemer Foundry and 29 acres at the Mini Mill. The US Pipe Alabama works operates between 250 and 300 days per year, depending on market demand.

U.S. Pipe produces ductile iron pipe for use in water and wastewater systems. Pipe production requires water for a variety of reasons, primarily for cooling hot surfaces and for cleaning. The resulting process water is collected and stored in an onsite pond system and is recycled back to the foundry for reuse. The pond system consists of a spray pond and four (4) settling ponds. An additional "Fish Pond" is also onsite and is planned to be used as an additional settling pond from where wastewater will be discharged.

This renewal application summarizes the process and stormwater discharge locations, drainage basins, outfall sampling strategy, and sampling results.

2.0 Description of Outfalls

Process Water Outfall
U.S. Pipe has one (1) process water outfall (DSN001) identified in the current NPDES Permit ALR000054163. U.S. Pipe requests that DSN001 be retained as the permitted outfall to discharge treated effluent to Valley Creek. The discharge would be released from the "Fish Pond" to the receiving stream at a maximum rate of 250,000 gallons per day on an as needed basis in order to maintain the water balance between the Alabama Works and the onsite pond system.

Storm Water Outfalls
U.S. Pipe has sixteen (16) storm water outfalls (DSN002-DSN017) identified in the current NPDES Permit AL0003271. U.S. Pipe would like to retain these outfalls.

DSN006 is a storm water outfall primarily associated with finished pipe storage areas and shares a drainage area with the following outfalls: DSN009, DSN010, DSN011, DSN012, DSN013, and DSN016. DSN006 was also determined to be representative of DSN017 which is located at the Mini Mill. We request that DSN006 remain as the representative outfall for the above-listed outfalls.

DSN007 is a stormwater outfall primarily associated with the metal recycling storage area and shares a drainage are with outfalls DSN014 and DSN015. We request that DSN007 remain as the representative outfall for the above-listed outfalls.

Analytical Results
Samples were collected for the process wastewater outfall DSN001 on multiple dates from October thru December 2017. The basic characteristic of process water at U.S. Pipe has not changed since our last permit application (submitted December 2012).

Stormwater information has been updated with data obtained from the past 3 annual stormwater sampling events (2015, 2016, 2017) required by the permit. Storm water samples were collected for DSN002, DSN004, DSN005, DSN006, and DSN007.

Analytical methods for all parameters were consistent with 40 *Code of Federal Regulations* (CFR) Part 136. The analytical results of the sampling are presented on the respective EPA Permit Application Forms in Appendixes C, and D-EPA Forms 2C, and 2F, respectively.

3.0 Permit Limitations

U.S. Pipe is not requesting any changes to the limits in its current NPDES Permit ALR000054163. This section is unchanged from our last permit application (submitted December 2012).

This section discusses the calculations used to derive the current permit limits based on effluent guidelines, water quality standards, and other reasonable potential.

Effluent Guidelines

U.S. Pipe is subject to the Effluent Guidelines and Standards for the Metal Molding and Casting Point source category 40 CFR 464, Subpart C Ferrous Casting Subcategory. Under these guidelines, regulated processes include:

- o Casting Cleaning
- o Grinding Scrubber Operations
- o Melting Furnace Scrubber Operations
- o Slag Quench
- o Casting Quench
- o Dust Collection Scrubber Operations
- o Investment Casting
- o Mold Cooling Operations
- o Wet Sand Reclamation

NPDES limits are based on pollutant allowances calculated for regulated waste streams listed in the regulations. The U.S. Pipe-Bessemer Plant can receive pollutant allowances for Casting Cleaning, Casting Quench, Mold Cooling and Slag Quench operations. Therefore, calculations were performed using the Effluent Guidelines for these categories to determine the allocation under 40 CFR 464 using Best Practicable Technology (BPT) and Best Available Technology (BAT). Limits were calculated using the daily production (estimated at 2.1 million pounds) and daily process water usage (estimated at 400,000 gallons). A non-continuous discharge is defined as "a plant which does not discharge pollutants during specific periods of time for reasons other than treatment plant upset, such periods being at least 24 hours in duration" (40 CFR 464.02(f)). This applies to U.S. Pipe's proposed operation. As a result, the effluent guideline limitations are developed on a concentration basis using a normalized process wastewater flow rate in gallons per pounds of metal poured. For non-continuous dischargers, annual average mass limitations and maximum day and maximum for monthly average concentration (mg/1) limitations shall apply (40 CFR 464.32). The regulated parameters are Copper, Lead, Zinc, Oil and Grease, Total Suspended Solids (TSS), and pH. The Metal Molding and Casting Effluent Guidelines (40 CFR 464) were published in the Federal Register on October 30, 1985. Appendix K to the preamble lists the treatment effectiveness concentrations for "lime and settle" treatment for industries subject to 40 CFR 464. Since some unregulated streams from metal casting operations also contain pollutants similar to the regulated streams, ADEM has designated pollutant allowance for these wastewater streams based on Appendix K concentrations. U.S. Pipe currently has three unregulated streams per Appendix K. The pipe run grinding stream discharges approximately 3,500 gpd, the large diameter grinding stream discharges approximately 18,500 gallons per day and the cement lining stream discharges 9,500 gallons per day. This allocation is applied to the annual average mass allocation calculated per 40 CFR 464.

Water Quality

U.S. Pipe proposes to discharge its treated process wastewater to Valley Creek via a pipeline on an as needed basis if it is unable to maintain the water balance between the Alabama Works and its onsite recycle pond system. Valley Creek is classified as a Limited Warmwater Fishery (LWF) stream in the Use Classification in ADEM 335-6-11-.02. Water quality based limits were determined for U.S. Pipe using a spreadsheet based on water quality criteria for metals found in ADEM 335-6-10.07 Toxic Pollutant Criteria Applicable to State Waters. For metals, calculations that use the flow and the hardness of the receiving stream were used to determine the water quality criteria. The spreadsheet variables included estimates of the daily discharge from the U.S. Pipe plant. The annual 7-day low flow with a 10-year reoccurrence interval (7A10) was assumed to be 27.0 cfs, and the annual 1-day low flow with a 10-year reoccurrence interval (1Q10) was assumed to be 75% of the 7Q10 or 20.25 cfs. The flow values were obtained from *USGS Water Resources Data, Alabama Water Year 2002.* The in-stream hardness for Valley Creek was assumed to be 100 mg/L and TSS was assumed to be 5 mg/l in accordance with general ADEM practice. These assumptions are included in the application of the partitioning coefficient under the current ADEM metals calculation requirements.

Chavers, Alexander

From: Scot Aler <saler@USPIPE.com>
Sent: Tuesday, June 12, 2018 4:19 PM
To: Chavers, Alexander
Subject: RE: NPDES Draft Permit

Hi Alex,

I got stumped trying to figure out how to calculate casting water use. With help from a process control guy I can get instantaneous gpm readings as casting machine sprays come on and off, I haven't calculated hourly or daily yet. I'll get back on it and will just have to make some engineering assumptions and document them

Scot

From: Chavers, Alexander [mailto:adchavers@adem.alabama.gov]
Sent: Tuesday, June 12, 2018 8:29 AM
To: Scot Aler
Subject: RE: NPDES Draft Permit

Scot,

I just wanted to check in and see if any progress had been made in getting the flow numbers that we discussed for modifying the permitting approach.

Please give me a call or shoot me an email just letting me know where we stand.

Alexander Chavers
334-271-7851
Industrial Section
Alabama Department of Environmental Management

From: Scot Aler <saler@USPIPE.com>
Sent: Thursday, April 5, 2018 9:38 AM
To: Chavers, Alexander <adchavers@adem.alabama.gov>
Subject: RE: NPDES Draft Permit

Alex,

Great, I've been meaning to call you to see how things were progressing. I'll take a look at this information and get back with you to schedule a time to discuss.

Thanks,

Scot Aler

From: Chavers, Alexander [mailto:adchavers@adem.alabama.gov]
Sent: Thursday, April 05, 2018 9:34 AM
To: Andrew Wendt

Cc: Scot Aler
Subject: NPDES Draft Permit

Andrew,

I apologize for this wall of text, but I wanted you to have something in writing for when we discuss this.

I have been working through the draft permit and have come across something during the review of the permit limit calculations that I think we need to discuss. I'll try to summarize below and maybe we can set up a call to talk about where to go from here.

The previous permit took the following approach:

- Regulated Sources
  - Calculate the concentration-based factor for daily max and monthly average using the concentrations in 40 CFR 464.32 and the appropriate ratio (5.33/x, 21.8/x, etc..). Note that this ratio is based on the estimated 250,000 gpd at the discharge, not the actual water used for each process.
  - Use an estimated flow of 250,000 GPD to determine a loading for the allowable loadings (daily max, monthly average, annual max)
  - Sum the different sources (casting cleaning, casting quench, mold cooling, slag quench) for a total allowable loading from regulated sources.
- Unregulated Sources
  - Use the values in Appendix K and the individual flows of the 3 unregulated sources (Cement lining, small diameter grinding, large diameter grinding) to determine allowable loadings for daily max and monthly average.
- Total Allocation
  - Sum up the allowable loadings
  - Use the estimated flow of 250,000 gpd to determine concentrations for daily max and monthly average
- Final Limitations
  - Mass loadings for annual max are applied directly to the permit on a 12-month rolling basis
  - Concentrations are compared to water quality and more stringent of the 2 is applied.
  - Additionally, mass loadings were included for Total Recoverable Copper, TR Zinc, and TR Lead

After review of the regulations, it appears that the approach may not be as intended in the guidelines and we may need to modify our approach. The following would be my approach for the new permit:

- Regulated Sources
  - **Determine actual water usage** for each of the 4 processes that are regulated sources. Recalculate the concentration-based factors using this flow for daily max and monthly average
  - Annual max will be calculated using these specific flows instead of the estimated 250,000 gpd.
- Unregulated Sources
  - Simply use the concentration-based factors in Appendix K, instead of converting to a loading
- Total Allocation
  - Determine an overall concentration from all sources by flow-weighting each of the different sources.
  - Sum up annual max loadings
- Final Limitations
  - These limitations will be applied as a mass-based loading for annual max and a concentration-based limitations for Total Copper, Total Lead, Total Zinc, Oil & Grease, and TSS daily maximum and monthly average. This will meet the requirements of the federal effluent guidelines.
  - The Total Recoverables (Copper, Lead, and Zinc) will be re-evaluated using a water-quality based approach and carried forward as necessary.

Alexander Chavers
334-271-7851
Industrial Section
Alabama Department of Environmental Management

Highland Technical Services, Inc.

December 5, 2018

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

Attention: Mr. Scott Ramsey, Chief
Industrial Section
Water Division

RE: U.S. Pipe & Foundry Company, LLC
NPDES Permit No.: AL0003271
Bessemer, Jefferson County, Alabama

Dear Mr. Ramsey:

On behalf of U.S. Pipe & Foundry Company, LLC, **Highland Technical Services, Inc. (HTSI)** is submitting the enclosed Supplemental NPDES Permit Renewal Application information for the above-referenced facility.

Highland Technical Services, Inc. appreciates your consideration in this matter. If you have questions concerning this submittal or require any additional information, please contact our office at (205) 985-4874.

Sincerely,
HIGHLAND TECHNICAL SERVICES, INC.

William W. Cooch, P.G.
Principal Geologist

attachments

Highland Technical Services, Inc.

NATIONAL POLLUTANT DISCHARGE ELIMINATION SYSTEM (NPDES) PERMIT RENEWAL APPLICATION SUPPLEMENTAL INFORMATION

UNITED STATES PIPE AND FOUNDRY COMPANY, LLC
ALABAMA WORKS, DUCTILE IRON PIPE FOUNDRY
BESSEMER, JEFFERSON COUNTY, ALABAMA
PERMIT NO.: AL0003271
HTSI PROJECT NO.: 18-211916.04

Prepared for:

U.S. PIPE & FOUNDRY CO., LLC
2023 ST. LOUIS AVENUE
BESSEMER, ALABAMA 35020

NOVEMBER 16, 2018

Prepared by:

HIGHLAND TECHNICAL SERVICES, INC.
528 MINERAL TRACE
BIRMINGHAM, ALABAMA 35244
PHONE: (205) 985-4874 FAX: (205) 987-6080

William W. Cooch, P.G.
Principal Geologist

OWNER 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.

Scot Aler

Scot Aler, AVP - Environmental Services
U.S. Pipe and Foundry Company, LLC

12/5/18
Date

INTRODUCTION

The United States Pipe and Foundry Company, LLC, Alabama Works, Ductile Iron Pipe Foundry (U.S. Pipe), is located in Bessemer, Alabama, in Jefferson County and employs approximately 600 people. The Alabama Works is a contiguous site which includes the original Bessemer Foundry and the adjacent Mini Mill. The Bessemer Foundry has been in operation at this site for over 100 years. The Pipe Casting and Finishing operations were expanded in 2009 on an adjacent site referred to as the Mini Mill. The Alabama Works is presently authorized to produce up to 357,000 tons per year as established in its Major Source Operating (Title V) Air Permit, issued by the Jefferson County Department of Health.

FACILITY DESCRIPTION

U.S. Pipe produces ductile iron pipe for use in water and wastewater systems. Pipe production requires water for a variety of reasons, primarily for cooling hot surfaces and for cleaning. The resulting process water is collected and stored in an onsite pond system and is recycled back to the foundry for reuse. The pond system consists of a spray pond and four (4) settling ponds. An additional pond, known as the "Fish Pond" is also onsite and is be used as a final additional settling/polishing pond from where treated effluent is discharged to Valley Creek subject to the requirements of the National Pollutant Discharge Elimination Permit System (NPDES) Permit AL0003271.

The Alabama Works encompasses approximately 184 acres -- 155 acres at the Bessemer Foundry and 29 acres at the Mini Mill. The U.S. Pipe Alabama Works operates approximately 300 days per year, depending on market demand.

WASTEWATER SOURCES & DICHARGE SYSTEM

This supplement to the renewal application summarizes the applicability of the federal Effluent Guidelines for the Metal Molding and Casting Point Source Category, Subpart C – Ferrous Casting Subcategory, as found in 40 CFR 464.32 for process wastewater discharges from the U.S. Pipe facility. Specifically, the subject processes at U.S. Pipe consist of Casting Cleaning, Casting Quench, and Mold Cooling. Additionally, the U.S. Pipe discharge flow includes effluent flows from process sources unregulated by the specific effluent guidelines. These sources are the Small Diameter Pipe Grinding, Large Diameter Pipe Grinding and Cement Lining operations.

The proposed NPDES limits are based on pollutant allowances calculated for the above-mentioned regulated waste streams listed in the federal regulations. The calculations included in the supplement were performed using the Effluent Guidelines for these categories to determine the allocation under 40 CFR 464 using Best Practicable Technology (BPT) and Best Available Technology (BAT). Limits were calculated using the daily production determined from the limitations imposed by the facility Air Permit and average daily discharge flow (i.e. recycle blowdown) of 250,000 gallons.

Since U.S. Pipe recycles water from its pond system for use in its production process, it is operated as a non-continuous discharger. Under the federal effluent guidelines, this term is defined as "a plant which does not discharge pollutants during specific periods of time for reasons other than treatment plant upset, such periods being at least 24 hours in duration" (40 CFR 464.02(f)). This description applies to U.S. Pipe's Bessemer operations.

FEDERAL EFFLUENT GUIDELINE APPLICABILITY

As a result, the effluent guideline limitations are developed on a concentration basis using a normalized process wastewater flow rate in gallons per pounds of metal poured. For non-continuous dischargers, annual average mass limitations and maximum day and maximum for monthly average concentration (mg/l) limitations shall apply (40 CFR 464.32). The regulated parameters are Copper, Lead, Zinc, Oil and Grease, Total Suspended Solids (TSS), and pH.

The Metal Molding and Casting Effluent Guidelines (40 CFR 464) were published in the Federal Register on October 30, 1985. Appendix K to the preamble of these regulations lists the treatment effectiveness concentrations for "lime and settle" treatment for industries subject to 40 CFR 464. As mentioned previously, since some unregulated streams from metal casting operations also contain pollutants similar to the regulated streams, designated pollutant allowance for these wastewater streams are based on Appendix K concentrations. As stated before, U.S. Pipe has three unregulated streams subject to Appendix K. The pipe run grinding stream discharges approximately 3,500 gpd, the large diameter grinding stream discharges approximately 18,500 gallons per day and the cement lining stream discharges 9,500 gallons per day. This allocation is applied to the annual average mass allocation calculated per 40 CFR 464.

EFFLUENT LIMITATION CALCULATIONS AND RECOMMENDATIONS

U.S. Pipe discharges its treated process wastewater to Valley Creek via overland flow through a wooded area of its property. Construction of a standpipe or other effluent structure from the Fish Pond is needed to better control the discharge from the pond system and to more accurately monitor the effluent flow to the receiving stream. The effluent from the standpipe could be routed via a pipeline to an open flume for flow monitoring and sampling prior to its discharge to Valley Creek. Alternatively, a sampling port could be constructed in the pipeline to allow for the required composite sampling of the effluent to occur prior to discharge.

The subsequent calculations contained in this report are intended to address the effluent limitations determined from the applicable effluent guidelines. Water quality-based limitations and the imposition of effluent toxicity requirements are not addressed specifically herein, however it is firmly believed that the above-mentioned discharge structure and effluent pipeline should enable U.S. Pipe to exercise better control of its effluent discharge from the Fish Pond, thus increasing its ability to consistently achieve compliance with these permit requirements. The following calculations were performed in accordance with the applicable sections of 40 CFR 464.32, and were based on process wastewater flows and production values obtained from U.S. Pipe. The newly calculated aggregate effluent limits shown in the following table are shown in comparison to the existing effluent limitations in NPDES Permit AL0003271 for DSN0011:

U.S. Pipe - Bessemer
NPDES Permit AL0003271

Assumptions:
357,000 tons/yr of metal poured (per 2013 NPDES Permit Rationale)
300 days/yr of operation (per 2013 NPDES Permit Rationale)
250,000 gallons/day recycle blowdown

Process: Casting Cleaning **40 CFR 464.32(a)** x= 15.12605 gal/1000 lbs metal poured
Flow: 36,000 gpd

Parameter	Daily Max (mg/L)*		Monthly Max Avg. (mg/L)*		Annual Avg. (lbs/yr)**	
Copper (Cu)	0.29	0.103	0.16	0.057	0.0029	2.07
Lead (Pb)	0.79	0.279	0.39	0.138	0.0098	7.00
Zinc (Zn)	1.47	0.520	0.56	0.198	0.0179	12.78
Oil & Grease (O&G)	30	10.611	10	3.537	0.223	159.22
Total Suspended Solids (TSS)	38	13.440	15	5.305	0.446	318.44

* Concentrations must be multiplied by the ratio of (5.35/x) where x is the actual normalized process wastewater flow (in gallons per 1,000 pounds of metal poured)
** In pounds per million pounds of metal poured

Process: Casting Quench **40 CFR 464.32(b)** x= 504.2017 gal/1000 lbs metal poured
Flow: 1,200,000 gpd

Parameter	Daily Max (mg/L)*		Monthly Max Avg. (mg/L)*		Annual Avg. (lbs/yr)**	
Copper (Cu)	0.29	0.003	0.16	0.002	0.0031	2.21
Lead (Pb)	0.79	0.009	0.39	0.004	0.0105	7.50
Zinc (Zn)	1.47	0.017	0.56	0.006	0.019	13.57
Oil & Grease (O&G)	30	0.339	10	0.113	0.238	169.93
Total Suspended Solids (TSS)	38	0.430	15	0.170	0.476	339.86

* Concentrations must be multiplied by the ratio of (5.7/x) where x is the actual normalized process wastewater flow (in gallons per 1,000 pounds of metal poured)
** In pounds per million pounds of metal poured

Process: Mold Cooling **40 CFR 464.32(g)** x= 840.3361 gal/1000 lbs metal poured
Flow: 2,000,000 gpd

Parameter	Daily Max (mg/L)*		Monthly Max Avg. (mg/L)*		Annual Avg. (lbs/yr)**	
Copper (Cu)	0.29	0.006	0.16	0.003	0.0096	6.85
Lead (Pb)	0.79	0.017	0.39	0.008	0.0325	23.21
Zinc (Zn)	1.47	0.031	0.56	0.012	0.0591	42.20
Oil & Grease (O&G)	30	0.632	10	0.211	0.738	526.93
Total Suspended Solids (TSS)	38	0.800	15	0.316	1.48	1056.72

* Concentrations must be multiplied by the ratio of (17.7/x) where x is the actual normalized process wastewater flow (in gallons per 1,000 pounds of metal poured)
** In pounds per million pounds of metal poured

Process: Non-subject sources **40 CFR 464 Appendix K**
Flow: 31,500 gpd

Parameter	Daily Max (mg/L)	(lbs/day)	Monthly Max Avg. (mg/L)	(lbs/day)	Annual Avg. (mg/L)	(lbs/year)
Copper (Cu)	0.29	0.076	0.16	0.042	0.065	5.123
Lead (Pb)	0.79	0.208	0.39	0.102	0.22	17.339
Zinc (Zn)	1.47	0.386	0.56	0.147	0.4	31.525
Oil & Grease (O&G)	30	7.881	10	2.627	5	394.065
Total Suspended Solids (TSS)	38	9.983	15	3.941	10	788.130
Total Phenols	0.86	0.226	0.3	0.079	0.2	15.763

Aggreagate Effluent Limits: Daily Max and Monthly Average Concentration Limits is calculated from the sum of the individual calculated mass loadings divided by the normal, recycle blowdown discharged from the Fish Pond (DSN0011)

Parameter	Current Permit Limit (mg/L)	New Daily Max (mg/L)	Current Permit Limit (mg/L)	New Monthly Max Avg. (mg/L)	Current Permit Limit (lbs/yr)	New Annual Average (lbs/year)
Copper (Cu), Total	0.0621	0.090	0.0342	0.050	20.1	16.261
Lead (Pb), Total	0.1467	0.246	0.04	0.121	46.44	55.038
Zinc (Zn), Total	0.2725	0.457	0.1035	0.174	80.48	100.069
Oil & Grease (O&G)	6.42	9.335	2.14	3.112	1546.53	1,250.151
Total Suspended Solids (TSS)	8.13	11.824	3.12	4.667	3097.47	2,503.158
Total Phenols	--	0.108	--	0.038	--	15.763

A Forterra Company

2023 St. Louis Ave
Bessemer, Alabama 35020

December 28, 2017
Certified Mail #: 7015-0640-0004-9436-4407

Alexander Chavers
Water Division, Industrial Section
Alabama Department of Environmental Management
PO Box 301463
Montgomery, Alabama 36130-1463

Subject: Renewal Application, NPDES Permit ALR000054163
US Pipe – Alabama Works, Bessemer Alabama Foundry Site

Dear Mr. Chavers,

Please find attached, three (3) copies of the NPDES Permit ALR00054163 Renewal Application for The United States Pipe and Foundry Company, LLC, Alabama Works, located in Bessemer, Alabama.

If you have any questions, require additional information or require any application forms to be updated or resubmitted, please contact me at your earliest convenience.

Sincerely,

Andrew Wendt
Environmental Engineer
2023 St Louis Ave, Bessemer, AL 35023
205-254-7678

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

JAN 26 2018
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: United States Pipe and Foundry Company, LLC
   a. Operator Name: United States Pipe and Foundry Company, LLC
   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 3 2 7 1 (not applicable if initial permit application)
3. SID Permit Number (if applicable): IU ___ ___ - ___ ___ - ___ ___ ___ ___ ___
4. NPDES General Permit Number (if applicable): ALG ___ ___ ___ ___ ___ ___
5. Facility Physical Location: (**Attach a map with location marked; street, route no. or other specific identifier**)
   Street: 2023 St Louis Avenue
   City: Bessemer County: Jefferson State: Alabama Zip: 35020
   Facility Location (Front Gate): Latitude: _____ Longitude: _____
6. Facility Mailing Address: 2023 St Louis Avenue
   City: Bessemer County: Jefferson State: Alabama Zip: 35020
7. Responsible Official (as described on the last page of this application):
   Name and Title: Scot Aler - AVP, Environmental Services
   Address: 2023 St Louis Avenue
   City: Bessemer State: Alabama Zip: 35020
   Phone Number: 205-254-7654 Email Address: saler@uspipe.com
8. Designated Facility Contact:
   Name and Title: Andrew Wendt - Environmental Engineer
   Phone Number: 205-254-7678 Email Address: awendt@uspipe.com

9. Designated Discharge Monitoring Report (DMR) Contact:

Name and Title: Andrew Wendt - Environmental Engineer

Phone Number: 205-254-7678 Email Address: awendt@uspipe.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: Two Chase Corporate Drive, Suite 200

City: Birmingham County: Jefferson State: Alabama Zip: 35244

b) Parent Corporation of Applicant:

Name: USP Holdings Inc.

Address: 511 E. John Carpenter Freeway, Suite 600

City: Irving State: Texas Zip: 75062

c) Subsidiary Corporation(s) of Applicant:

Name: None

Address:

City: State: Zip:

d) Corporate Officers:

Name: Jeffrey K. Bradley, William Kerfin, Charles R. Brown, Lori M. Browne

Address: 511 E. John Carpenter Freeway, Suite 600

City: Irving State: Texas Zip: 75062

Name:

Address:

City: State: Zip:

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

Name: CSC Lawyers Incorporating Service, INc.

Address: 150 S Perry Street

City: Montgomery State: Alabama Zip: 36104

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

Name: 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: _____

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
Individual Stormwater & Wastewater NPDES	AL0003271	US Pipe, Bessemer
Title V Air Permit	4-07-0340-02	US Pipe, Bessemer
Industrial Landfill	37-33	US Pipe, Bessemer

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

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. 3321 - Ductile Iron Foundry

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):

The United States Pipe and Foundry Company, LLC, Bessemer Foundry manufactures ductile iron pipe for use in water and wastewater systems

Operations include scrap iron and coke handling and chargine, melting, casting, annealing, cement lining, coating, packaging and shipping

Ancillary operations include maintenance, machining, and waste management

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)

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)
Mold Cooling	40 CFR 464	C - Ferrous Casting	Batch
Casting Quench	40 CFR 464	C - Ferrous Casting	Batch

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)
Mold Cooling	100,000 gpd (estimated)	100,000 gpd (estimated)	Batch
Casting Quench	100,000 gpd (estimated)	100,000 gpd (estimated)	Batch
	Zero actual discharge	Zero actual discharge	Zero actual discharge

*** 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: 1 per day

b. Average discharge per batch: 200,000 (GPD)

c. Time of batch discharges Varies, only as needed (days of week) at Varies, only as needed (hours of day)

d. Flow rate: 139 gallons/minute

e. Percent of total discharge: 80%

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)
Cooling Tower Blowdown	25,000 gpd (estimated)	25,000 gpd (estimated)	Batch
Misc. Maintenance & Utilites	25,000 gpd (estimated)	25,000 gpd (estimated)	Batch
	Zero actual discharge	Zero actual discharge	Zero actual discharge

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

a. Number of batch discharges: Varies per day

b. Average discharge per batch: 50,000 (GPD)

c. Time of batch discharges Varies, only as needed (days of week) at Varies, only as needed (hours of day)

d. Flow rate: 35 gallons/minute

e. Percent of total discharge: 20%

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
N/A		

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:

US Pipe understands that automatic sampling equipment will be required prior to discharging through DSN001. However, the exact equipment and location have not been determined.

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 attached Table 187.C.5	

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

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

SECTION D – WATER SUPPLY

Water Sources (check as many as are applicable):

☐ Private Well ☐ Surface Water

☒ Municipal Water Utility (Specify City): ☐ Other (Specify): _____

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

City: 0 - 0.5 MGD* Well: _____ MGD* Well Depth: _____ Ft. Latitude: _____ Longitude: _____

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

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

Name of Surface Water Source: Inland Lake

*** MGD – Million Gallons per Day**

Cooling Water Intake Structure Information

Complete 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 b) Location of Provider: Springville, AL

   c) Latitude: N33,50',16" Longitude: W86,32',57"

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? 50 %

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? 1936
(Please provide dates for all major construction/installation of intake components including screens)

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

9. What is the average intake volume? 50
(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)? 50 MGD

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

12. What is the mesh size of the screen on your intake? 3"

13. What is the intake screen flow-through area? 4x4

14. What is the through-screen design intake flow velocity? 4 ft/sec

15. What is the through-screen actual velocity (in ft/sec)? 4 ft/sec

16. What is the mechanism for cleaning the screen? (e.g., does it rotate for cleaning) Manual 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.
Depth - #1@40' #2@60' #3@80' #4@100'

SECTION E – WASTE STORAGE AND DISPOSAL INFORMATION

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

Description of Waste	Description of Storage Location

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

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

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

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?	☐	☐

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

Trade Name	Chemical Composition
See attached Table 187.C.5	

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

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

SECTION D – WATER SUPPLY

Water Sources (check as many as are applicable):

☐ Private Well ☐ Surface Water

☒ Municipal Water Utility (Specify City): ☐ Other (Specify): _____

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

City: 0 - 0.5 MGD* Well: _____ MGD* Well Depth: _____ Ft. Latitude: _____ Longitude: _____

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

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

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

*** 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 b) Location of Provider: Breman, AL

   c) Latitude: N33,55',55" Longitude: W87,6',2"

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? 50 %

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? 1961
(Please provide dates for all major construction/installation of intake components including screens)

8. What is the maximum intake volume? 74 MGD
(maximum pumping capacity in gallons per day)

9. What is the average intake volume? 42 MGD
(average intake pump rate in gallons per day average in any 30-day period)

10. What is the actual intake flow (AIF) as defined in 40 CFR §125.92(a)? 42 MGD

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

12. What is the mesh size of the screen on your intake? 0.5"

13. What is the intake screen flow-through area? 4x8

14. What is the through-screen design intake flow velocity? 5.8 ft/sec

15. What is the through-screen actual velocity (in ft/sec)? 5.8 ft/sec

16. What is the mechanism for cleaning the screen? (e.g., does it rotate for cleaning) Manual 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.
Depth - 10'

SECTION E – WASTE STORAGE AND DISPOSAL INFORMATION

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

Description of Waste	Description of Storage Location

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

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

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

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?	☐	☐

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

Trade Name	Chemical Composition
See attached Table 187.C.5	

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

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

SECTION D – WATER SUPPLY

Water Sources (check as many as are applicable):

☐ Private Well ☐ Surface Water

☒ Municipal Water Utility (Specify City): ☐ Other (Specify): _____

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

City: 0 - 0.5 MGD* Well: _____ MGD* Well Depth: _____ Ft. Latitude: _____ Longitude: _____

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

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

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

*** 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 b) Location of Provider: Quinton, AL

   c) Latitude: N33,40',11" Longitude: W87,7',18"

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? 50 %

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? 1989
(Please provide dates for all major construction/installation of intake components including screens)

8. What is the maximum intake volume? 85
(maximum pumping capacity in gallons per day)

9. What is the average intake volume? 50
(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)? 50 MGD

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

12. What is the mesh size of the screen on your intake? 0.5"

13. What is the intake screen flow-through area? 8x2

14. What is the through-screen design intake flow velocity? 4.5 ft/sec

15. What is the through-screen actual velocity (in ft/sec)? 4.5 ft/sec

16. What is the mechanism for cleaning the screen? (e.g., does it rotate for cleaning) Manual 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.
Depth - 14'

SECTION E – WASTE STORAGE AND DISPOSAL INFORMATION

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

Description of Waste	Description of Storage Location

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

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

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

SECTION 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?	☐	☐

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
See Figure 4 Bessemer Petroleum & Chemical Storage	
See Figure 5 Mini Mill Petroleum & Chemical Storage	

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*
Pond Sediment	50,000 lbs/month	Off-site Landfill

***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	Valley 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: Scot Aler Date Signed: 12/22/17

Name and Title: Scot Aler - AVP, Environmental Services

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

Mailing Address: 2023 St Louis Avenue

City: Bessemer State: Alabama Zip: 35020

Phone Number: 205-254-7654 Email Address: saler@uspipe.com

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.

Please print or type in the unshaded areas only.

Form Approved. OMB No. 2040-0086.

FORM 1 GENERAL

EPA

U.S. ENVIRONMENTAL PROTECTION AGENCY
GENERAL INFORMATION
Consolidated Permits Program
(Read the "General Instructions" before starting.)

I. EPA I.D. NUMBER

S		T/A	C
F	ALR000054163		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	SPECIFIC QUESTIONS	Mark "X" YES	NO	FORM ATTACHED
A. Is this facility a **publicly owned treatment works** which results in a **discharge** to **waters of the U.S.**? (FORM 2A)		X		B. Does or will this facility *(either existing or proposed)* include a **concentrated animal feeding operation** or **aquatic animal production facility** which results in a **discharge** to waters of the U.S.? (FORM 2B)		X	
	16	17	18		19	20	21
C. Is this a facility which currently results in **discharges** to **waters of the U.S.** other than those described in A or B above? (FORM 2C)	X		X	D. Is this a proposed facility *(other than those described in A or B above)* which will result in a **discharge** to **waters of the U.S.**? (FORM 2D)		X	
	22	23	24		25	26	27
E. Does or will this facility treat, store, or dispose of **hazardous wastes**? (FORM 3)		X		F. Do you or will you inject at this facility industrial or municipal effluent below the lowermost stratum containing, within one quarter mile of the well bore, underground sources of drinking water? (FORM 4)		X	
	28	29	30		31	32	33
G. Do you or will you inject at this facility any produced water or other fluids which are brought to the surface in connection with conventional oil or natural gas production, inject fluids used for enhanced recovery of oil or natural gas, or inject fluids for storage of liquid hydrocarbons? (FORM 4)		X		H. Do you or will you inject at this facility fluids for special processes such as mining of sulfur by the Frasch process, solution mining of minerals, in situ combustion of fossil fuel, or recovery of geothermal energy? (FORM 4)		X	
	34	35	36		37	38	39
I. Is this facility a proposed **stationary source** which is one of the 28 industrial categories listed in the instructions and which will potentially emit 100 tons per year of any air pollutant regulated under the Clean Air Act and may affect or be located in an attainment area? (FORM 5)		X		J. Is this facility a proposed **stationary source** which is NOT one of the 28 industrial categories listed in the instructions and which will potentially emit 250 tons per year of any air pollutant regulated under the Clean Air Act and may affect or be located in an **attainment area**? (FORM 5)		X	
	40	41	42		43	44	45

III. NAME OF FACILITY

c 1 SKIP: United States Pipe and Foundry Company, LLC.

15 | 16 – 29 | 30 — 69

IV. FACILITY CONTACT

A. NAME & TITLE *(last, first, & title)*	B. PHONE *(area code & no.)*
c 2 Scot Aler - AVP, Environmental Services	(205) 254-7654
15 | 16 — 45	46 — 48 | 49 — 51 | 52 — 55

V. FACILTY MAILING ADDRESS

A. STREET OR P.O. BOX

c 3 2023 St. Louis Avenue

15 | 16 — 45

B. CITY OR TOWN	C. STATE	D. ZIP CODE
c 4 Bessemer	AL	35020
15 | 16 — 40	41 — 42	47 — 51

VI. FACILITY LOCATION

A. STREET, ROUTE NO. OR OTHER SPECIFIC IDENTIFIER

c 5 2023 St. Louis Avenue

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 Bessemer	AL	35020	01
15 | 16 — 40	41 — 42	47 — 51	52 — 54

EPA Form 3510-1 (8-90)

CONTINUE ON REVERSE

CONTINUED FROM THE FRONT

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

A. FIRST	B. SECOND
3321 *(specify)*	*(specify)*
C. THIRD	**D. FOURTH**
(specify)	*(specify)*

VIII. OPERATOR INFORMATION

A. NAME	B. Is the name listed in Item VIII-A also the owner?
United States Pipe and Foundry Company, LLC.	☑ 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)*

M *(specify)*

D. PHONE *(area code & no.)*: A (205) 254-7654

E. STREET OR P.O. BOX: 2023 St. Louis Avenue

F. CITY OR TOWN	G. STATE	H. ZIP CODE	IX. INDIAN LAND
Bessemer	AL	35020	Is the facility located on Indian lands? ☐ YES ☑ NO

X. EXISTING ENVIRONMENTAL PERMITS

A. NPDES *(Discharges to Surface Water)*	D. PSD *(Air Emissions from Proposed Sources)*
9 N AL0003271	9 P
B. UIC *(Underground Injection of Fluids)*	**E. OTHER** *(specify)*
9 U	9 4-07-0340-02 *(specify)* Title V Air Permit
C. RCRA *(Hazardous Wastes)*	**E. OTHER** *(specify)*
9 R	9 37-33 *(specify)* Off-site Industrial Landfill 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)*

The United States Pipe and Foundry Company, LLC, Bessemer Foundry manufactures ductile iron pipe for use in water and wastewater systems.

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
Scot Aler - AVP, Environmental Services	Scot Aler	12/22/17

COMMENTS FOR OFFICIAL USE ONLY

C

Please print or type in the unshaded areas only.

EPA I.D. NUMBER (*copy from Item 1 of Form 1*): ALR000054163

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

FORM **2C** NPDES

EPA

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.	
001	33.00	25.00	22.00	86.00	58.00	24.00	Valley 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	
001	Ductile Iron Pipe Production	250,000 gpd	All water is recycled through a Pond System (Ponds 1,2,3,4)		
	Melting		Polymer is added prior to Pond 3 to aid settling of solids.		
	Cupola Cooling Tower Blowdown		CO2 pH adjustment at Pond 3		
	Casting		Evaporation in Combustion Chamber and in contact with Hot Pipe Molds		
	Pipe and Mold Cooling				
	Casting Cooling Tower Blowdown				
	Cement Lining/Finishing				
	Annealing Oven/Pipe Cooling				
	Hydromatic Pressure Testing				
	Misc. Maintenance/Utilities				
	Washdown Hoses				
	Bearing Cooling				
	Pump Priming				
	Boiler Blowdown				

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

CONTINUED FROM THE FRONT

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

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

1. OUTFALL NUMBER (*list*)	2. OPERATION(s) CONTRIBUTING FLOW (*list*)	3. FREQUENCY a. DAYS PER WEEK (*specify average*)	3. FREQUENCY b. MONTHS PER YEAR (*specify average*)	4. FLOW a. FLOW RATE (*in mgd*) 1. LONG TERM AVERAGE	4. FLOW a. FLOW RATE (*in mgd*) 2. MAXIMUM DAILY	4. FLOW B. TOTAL VOLUME (*specify with units*) 1. LONG TERM AVERAGE	4. FLOW B. TOTAL VOLUME (*specify with units*) 2. MAXIMUM DAILY	4. FLOW C. DURATION (*in days*)
001	Ductile Iron Pipe Production	6	12	0	0.25	0	250,000 gallons	

III. PRODUCTION

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

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

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

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

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

1. AVERAGE DAILY PRODUCTION a. QUANTITY PER DAY	1. AVERAGE DAILY PRODUCTION b. UNITS OF MEASURE	1. AVERAGE DAILY PRODUCTION c. OPERATION, PRODUCT, MATERIAL, ETC. (*specify*)	2. AFFECTED OUTFALLS (*list outfall numbers*)
2,400,000	pounds per day	Molten Iron poured	001

IV. IMPROVEMENTS

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

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

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

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

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

EPA I.D. NUMBER (*copy from Item 1 of Form 1*)
ALR000054163

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
Xylenes	Minor component of the Mineral Spirits used to thin pipe coating		

VI. POTENTIAL DISCHARGES NOT COVERED BY ANALYSIS

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

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

CONTINUED FROM THE FRONT

VII. BIOLOGICAL TOXICITY TESTING DATA

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

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

VIII. CONTRACT ANALYSIS INFORMATION

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

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

A. NAME	B. ADDRESS	C. TELEPHONE (*area code & no.*)	D. POLLUTANTS ANALYZED (*list*)
Enersolv	2220 Beltline Road SW, Decatur, AL 35602	(256) 350-0686	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.*)
Scot Aler - AVP, Environmental Services	(205) 254-7654
C. SIGNATURE Scot Aler	**D. DATE SIGNED** 12/22/17

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*)
ALR000054163

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

OUTFALL NO.
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							3. UNITS (*specify if blank*)		4. INTAKE (*optional*)		
	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	
a. Biochemical Oxygen Demand (*BOD*)	7.8	16.27	N/A	N/A	N/A	N/A	1	mg/L	ppd			
b. Chemical Oxygen Demand (*COD*)	36	75.06	N/A	N/A	N/A	N/A	1	mg/L	ppd			
c. Total Organic Carbon (*TOC*)	9.86	20.56	N/A	N/A	N/A	N/A	1	mg/L	ppd			
d. Total Suspended Solids (*TSS*)	5	10.43	N/A	N/A	N/A	N/A	1	mg/L	ppd			
e. Ammonia (*as N*)	< 0.20	< 0.417	N/A	N/A	N/A	N/A	1	mg/L	ppd			
f. Flow	VALUE 0.250		VALUE N/A		VALUE N/A		1	mgd		VALUE		
g. Temperature (*winter*)	VALUE Ambient		VALUE Ambient		VALUE N/A		1	°C		VALUE		
h. Temperature (*summer*)	VALUE Ambient		VALUE Ambient		VALUE N/A		1	°C		VALUE		
i. pH	MINIMUM	MAXIMUM	MINIMUM	MAXIMUM			1	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"		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. 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	
a. Bromide (24959-67-9)	X		< 1	< 2.1					1	mg/L	ppd			
b. Chlorine, Total Residual	X		< 0.20	< 0.42					1	mg/L	ppd			
c. Color	X		10	N/A					1	Pt-co				
d. Fecal Coliform		X	N/A	N/A					1					
e. Fluoride (16984-48-8)		X	< 0.20	< 0.42					1	mg/L	ppd			
f. Nitrate-Nitrite (*as N*)	X		0.096	0.20					1	mg/L	ppd			

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		0.894	1.86					1	mg/L				
h. Oil and Grease	X		< 5.0	< 10.43					1	mg/L				
i. Phosphorus (as P), Total (7723-14-0)	X		< 0.05	< 0.104					1	mg/L				
j. Radioactivity														
(1) Alpha, Total	X		0.878						1	pCi/L				
(2) Beta, Total	X		10.4						1	pCi/L				
(3) Radium, Total	X		11.278						1	pCi/L				
(4) Radium 226, Total	X		0.702						1	pCi/L				
k. Sulfate (*as SO_4*) (14808-79-8)	X		87	181.40					1	mg/L				
l. Sulfide (*as S*)	X		< 1.0	< 2.1					1	mg/L				
m. Sulfite (*as SO_3*) (14265-45-3)	X		< 2.0	< 4.2					1	mg/L				
n. Surfactants	X		0.4	0.834					1	mg/L				
o. Aluminum, Total (7429-90-5)	X		534	1.113					1	µg/L				
p. Barium, Total (7440-39-3)	X		144	0.300					1	µg/L				
q. Boron, Total (7440-42-8)	X		0.407	0.849					1	mg/L				
r. Cobalt, Total (7440-48-4)	X		< 5.0	< 10.43					1	mg/L				
s. Iron, Total (7439-89-6)	X		593	1.236					1	µg/L				
t. Magnesium, Total (7439-95-4)	X		928	1.935					1	µg/L				
u. Molybdenum, Total (7439-98-7)	X		13.8	0.0029					1	µg/L				
v. Manganese, Total (7439-96-5)	X		19	0.040					1	µg/L				
w. Tin, Total (7440-31-5)	X		< 5.0	< 10.43					1	mg/L				
x. Titanium, Total (7440-32-6)	X		< 0.05	<0.01					1	mg/L				

EPA I.D. NUMBER (*copy from Item 1 of Form 1*)	OUTFALL NUMBER
ALR000054163	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	< 0.005	<.0001					1	µg/L	ppd			
2M. Arsenic, Total (7440-38-2)	X		X	< 0.005	<.0001					1	µg/L	ppd			
3M. Beryllium, Total (7440-41-7)	X		X	< 0.001	<.0001					1	µg/L	ppd			
4M. Cadmium, Total (7440-43-9)	X		X	<0.007	<.0001					1	µg/L	ppd			
5M. Chromium, Total (7440-47-3)	X	X		15	0.0313					1	µg/L	ppd			
6M. Copper, Total (7440-50-8)	X	X		6.46	0.0135					1	µg/L	ppd			
7M. Lead, Total (7439-92-1)	X	X		8.86	0.0185					1	µg/L	ppd			
8M. Mercury, Total (7439-97-6)	X		X	< 0.0002	<.0001					1	µg/L	ppd			
9M. Nickel, Total (7440-02-0)	X		X	< 0.005	<.0001					1	µg/L	ppd			
10M. Selenium, Total (7782-49-2)	X		X	< 0.005	<.0001					1	µg/L	ppd			
11M. Silver, Total (7440-22-4)	X		X	< 0.001	<.0001					1	µg/L	ppd			
12M. Thallium, Total (7440-28-0)	X		X	< 0.001	<.0001					1	µg/L	ppd			
13M. Zinc, Total (7440-66-6)	X	X		82.2	0.171					1	µg/L	ppd			
14M. Cyanide, Total (57-12-5)	X		X	0.014	0.029					1	mg/L	ppd			
15M. Phenols, Total	X		X	< 0.05	<0.104					1	mg/L	ppd			
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. Acrolein (107-02-8)	X		X	< 50	<0.104					1	µg/L	ppd			
2V. Acrylonitrile (107-13-1)	X		X	< 50	<0.104					1	µg/L	ppd			
3V. Benzene (71-43-2)	X		X	< 2.0	<0.004					1	µg/L	ppd			
4V. Bis (*Chloromethyl*) Ether (542-88-1)	X		X	N/A	N/A					1	µg/L	ppd			
5V. Bromoform (75-25-2)	X		X	< 10	<0.021					1	µg/L	ppd			
6V. Carbon Tetrachloride (56-23-5)	X		X	< 2.0	<0.004					1	µg/L	ppd			
7V. Chlorobenzene (108-90-7)	X		X	< 10	<0.021					1	µg/L	ppd			
8V. Chlorodibromomethane (124-48-1)	X		X	< 10	<0.021					1	µg/L	ppd			
9V. Chloroethane (75-00-3)	X		X	< 5	<0.010					1	µg/L	ppd			
10V. 2-Chloroethylvinyl Ether (110-75-8)	X		X	< 10	<0.021					1	µg/L	ppd			
11V. Chloroform (67-66-3)	X		X	< 2	<0.004					1	µg/L	ppd			
12V. Dichlorobromomethane (75-27-4)	X		X	< 10	<0.021					1	µg/L	ppd			
13V. Dichlorodifluoromethane (75-71-8)	X		X	< 10	<0.021					1	µg/L	ppd			
14V. 1,1-Dichloroethane (75-34-3)	X		X	< 2	<0.004					1	µg/L	ppd			
15V. 1,2-Dichloroethane (107-06-2)	X		X	< 2	<0.004					1	µg/L	ppd			
16V. 1,1-Dichloroethylene (75-35-4)	X		X	< 2	<0.004					1	µg/L	ppd			
17V. 1,2-Dichloropropane (78-87-5)	X		X	< 2	<0.004					1	µg/L	ppd			
18V. 1,3-Dichloropropylene (542-75-6)	X		X	N/A	N/A					1	µg/L	ppd			
19V. Ethylbenzene (100-41-4)	X		X	< 2	<0.004					1	µg/L	ppd			
20V. Methyl Bromide (74-83-9)	X		X	< 10	<0.021					1	µg/L	ppd			
21V. Methyl Chloride (74-87-3)	X		X	< 10	<0.021					1	µg/L	ppd			

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	< 10	<0.021					1	µg/L	ppd			
23V. 1,1,2,2-Tetrachloroethane (79-34-5)	X		X	< 2	<0.004					1	µg/L	ppd			
24V. Tetrachloro-ethylene (127-18-4)	X		X	< 2	<0.004					1	µg/L	ppd			
25V. Toluene (108-88-3)	X		X	< 2	<0.004					1	µg/L	ppd			
26V. 1,2-Trans-Dichloroethylene (156-60-5)	X		X	< 2	<0.004					1	µg/L	ppd			
27V. 1,1,1-Trichloro-ethane (71-55-6)	X		X	< 2	<0.004					1	µg/L	ppd			
28V. 1,1,2-Trichloro-ethane (79-00-5)	X		X	< 2	<0.004					1	µg/L	ppd			
29V Trichloro-ethylene (79-01-6)	X		X	< 2	<0.004					1	µg/L	ppd			
30V. Trichloro-fluoromethane (75-69-4)	X		X	< 5	<0.010					1	µg/L	ppd			
31V. Vinyl Chloride (75-01-4)	X		X	< 10	<0.021					1	µg/L	ppd			
GC/MS FRACTION – ACID COMPOUNDS															
1A. 2-Chlorophenol (95-57-8)	X		X	< 10	<0.021					1	µg/L	ppd			
2A. 2,4-Dichloro-phenol (120-83-2)	X		X	< 10	<0.021					1	µg/L	ppd			
3A. 2,4-Dimethyl-phenol (105-67-9)	X		X	< 10	<0.021					1	µg/L	ppd			
4A. 4,6-Dinitro-O-Cresol (534-52-1)	X		X	< 25	<0.052					1	µg/L	ppd			
5A. 2,4-Dinitro-phenol (51-28-5)	X		X	< 25	<0.052					1	µg/L	ppd			
6A. 2-Nitrophenol (88-75-5)	X		X	< 10	<0.021					1	µg/L	ppd			
7A. 4-Nitrophenol (100-02-7)	X		X	< 25	<0.052					1	µg/L	ppd			
8A. P-Chloro-M-Cresol (59-50-7)	X		X	< 10	<0.021					1	µg/L	ppd			
9A. Pentachloro-phenol (87-86-5)	X		X	< 25	<0.052					1	µg/L	ppd			
10A. Phenol (108-95-2)	X		X	< 10	<0.021					1	µg/L	ppd			
11A. 2,4,6-Trichloro-phenol (88-05-2)	X		X	< 10	<0.021					1	µg/L	ppd			

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															
1B. Acenaphthene (83-32-9)	X		X	< 10	<0.021					1	µg/L	ppd			
2B. Acenaphtylene (208-96-8)	X		X	< 10	<0.021					1	µg/L	ppd			
3B. Anthracene (120-12-7)	X		X	< 50	<0.104					1	µg/L	ppd			
4B. Benzidine (92-87-5)	X		X	< 80	<0.167					1	µg/L	ppd			
5B. Benzo (*a*) Anthracene (56-55-3)	X		X	< 10	<0.021					1	µg/L	ppd			
6B. Benzo (*a*) Pyrene (50-32-8)	X		X	< 10	<0.021					1	µg/L	ppd			
7B. 3,4-Benzo-fluoranthene (205-99-2)	X		X	< 10	<0.021					1	µg/L	ppd			
8B. Benzo (*ghi*) Perylene (191-24-2)	X		X	< 10	<0.021					1	µg/L	ppd			
9B. Benzo (*k*) Fluoranthene (207-08-9)	X		X	< 10	<0.021					1	µg/L	ppd			
10B. Bis (*2-Chloro-ethoxy*) Methane (111-91-1)	X		X	< 10	<0.021					1	µg/L	ppd			
11B. Bis (*2-Chloro-ethyl*) Ether (111-44-4)	X		X	< 10	<0.021					1	µg/L	ppd			
12B. Bis (*2-Chloroisopropyl*) Ether (102-80-1)	X		X	< 10	<0.021					1	µg/L	ppd			
13B. Bis (*2-Ethyl-hexyl*) Phthalate (117-81-7)	X		X	< 10	<0.021					1	µg/L	ppd			
14B. 4-Bromophenyl Phenyl Ether (101-55-3)	X		X	< 10	<0.021					1	µg/L	ppd			
15B. Butyl Benzyl Phthalate (85-68-7)	X		X	< 10	<0.021					1	µg/L	ppd			
16B. 2-Chloro-naphthalene (91-58-7)	X		X	< 10	<0.021					1	µg/L	ppd			
17B. 4-Chloro-phenyl Phenyl Ether (7005-72-3)	X		X	< 10	<0.021					1	µg/L	ppd			
18B. Chrysene (218-01-9)	X		X	< 10	<0.021					1	µg/L	ppd			
19B. Dibenzo (*a,h*) Anthracene (53-70-3)	X		X	< 10	<0.021					1	µg/L	ppd			
20B. 1,2-Dichloro-benzene (95-50-1)	X		X	< 10	<0.021					1	µg/L	ppd			
21B. 1,3-Di-chloro-benzene (541-73-1)	X		X	< 10	<0.021					1	µg/L	ppd			

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	< 10	<0.021					1	µg/L	ppd			
23B. 3,3-Dichlorobenzidine (91-94-1)	X		X	< 10	<0.021					1	µg/L	ppd			
24B. Diethyl Phthalate (84-66-2)	X		X	< 10	<0.021					1	µg/L	ppd			
25B. Dimethyl Phthalate (131-11-3)	X		X	< 10	<0.021					1	µg/L	ppd			
26B. Di-N-Butyl Phthalate (84-74-2)	X		X	< 10	<0.021					1	µg/L	ppd			
27B. 2,4-Dinitrotoluene (121-14-2)	X		X	< 10	<0.021					1	µg/L	ppd			
28B. 2,6-Dinitrotoluene (606-20-2)	X		X	< 10	<0.021					1	µg/L	ppd			
29B. Di-N-Octyl Phthalate (117-84-0)	X		X	< 10	<0.021					1	µg/L	ppd			
30B. 1,2-Diphenylhydrazine (*as Azobenzene*) (122-66-7)			X	< 10	<0.021					1	µg/L	ppd			
31B. Fluoranthene (206-44-0)	X		X	< 10	<0.021					1	µg/L	ppd			
32B. Fluorene (86-73-7)	X		X	< 10	<0.021					1	µg/L	ppd			
33B. Hexachlorobenzene (118-74-1)	X		X	< 10	<0.021					1	µg/L	ppd			
34B. Hexachlorobutadiene (87-68-3)	X		X	< 10	<0.021					1	µg/L	ppd			
35B. Hexachlorocyclopentadiene (77-47-4)	X		X	< 10	<0.021					1	µg/L	ppd			
36B Hexachloroethane (67-72-1)	X		X	< 10	<0.021					1	µg/L	ppd			
37B. Indeno (*1,2,3-cd*) Pyrene (193-39-5)	X		X	< 10	<0.021					1	µg/L	ppd			
38B. Isophorone (78-59-1)	X		X	< 10	<0.021					1	µg/L	ppd			
39B. Naphthalene (91-20-3)	X		X	< 10	<0.021					1	µg/L	ppd			
40B. Nitrobenzene (98-95-3)	X		X	< 10	<0.021					1	µg/L	ppd			
41B. N-Nitrosodimethylamine (62-75-9)	X		X	< 10	<0.021					1	µg/L	ppd			
42B. N-Nitrosodi-N-Propylamine (621-64-7)	X		X	< 10	<0.021					1	µg/L	ppd			

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-Nitro-sodiphenylamine (86-30-6)	X		X	< 10	<0.021					1	µg/L	ppd			
44B. Phenanthrene (85-01-8)	X		X	< 10	<0.021					1	µg/L	ppd			
45B. Pyrene (129-00-0)	X		X	< 10	<0.021					1	µg/L	ppd			
46B. 1,2,4-Tri-chlorobenzene (120-82-1)	X		X	< 10	<0.021					1	µg/L	ppd			
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												

EPA I.D. NUMBER (*copy from Item 1 of Form 1*)	OUTFALL NUMBER
ALR000054163	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												

Please print or type in the unshaded areas only.

EPA ID Number (*copy from Item 1 of Form 1*)
ALR000054163

Form Approved. OMB No. 2040-0086
Approval expires 5-31-92

FORM 2F NPDES

U.S. Environmental Protection Agency
Washington, DC 20460

Application for Permit to Discharge Storm Water Discharges Associated with Industrial Activity

Paperwork Reduction Act Notice

Public reporting burden for this application is estimated to average 28.6 hours per application, including time for reviewing instructions, searching existing data sources, gathering and maintaining the data needed, and completing and reviewing the collection of information. Send comments regarding the burden estimate, any other aspect of this collection of information, or suggestions for improving this form, including suggestions which may increase or reduce this burden to: Chief, Information Policy Branch, PM-223, U.S. Environmental Protection Agency, 1200 Pennsylvania Avenue, NW, Washington, DC 20460, or Director, Office of Information and Regulatory Affairs, Office of Management and Budget, Washington, DC 20503.

I. Outfall Location

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

A. Outfall Number (*list*)	B. Latitude			C. Longitude			D. Receiving Water (*name*)
DSN002	33.00	24.00	54.00	86.00	58.00	30.00	Unnamed Tributary to Valley Creek
DSN003	33.00	24.00	55.00	86.00	58.00	32.00	Unnamed Tributary to Valley Creek
DSN004	33.00	25.00	1.00	86.00	58.00	9.00	Unnamed Tributary to Valley Creek
DSN005	33.00	25.00	13.00	86.00	58.00	8.00	Unnamed Tributary to Valley Creek
DSN006	33.00	25.00	20.00	86.00	58.00	15.00	Valley Creek
DSN007	33.00	25.00	20.00	86.00	58.00	17.00	Valley Creek
DSN008	33.00	25.00	20.00	86.00	58.00	15.00	Valley Creek
DSN009	33.00	25.00	20.00	86.00	58.00	13.00	Valley Creek
DSN010	33.00	25.00	20.00	86.00	58.00	12.00	Valley Creek
		Continued on next page					

II. Improvements

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

1. Identification of Conditions, Agreements, Etc.	2. Affected Outfalls		3. Brief Description of Project	4. Final Compliance Date	
	number	source of discharge		a. req.	b. proj.
None					

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

III. Site Drainage Map

Attach a site map showing topography (or indicating the outline of drainage areas served by the outfalls(s) covered in the application if a topographic map is unavailable) depicting the facility including: each of its intake and discharge structures; the drainage area of each storm water outfall; paved areas and buildings within the drainage area of each storm water outfall, each known past or present areas used for outdoor storage of disposal of significant materials, each existing structural control measure to reduce pollutants in storm water runoff, materials loading and access areas, areas where pesticides, herbicides, soil conditioners and fertilizers are applied; each of its hazardous waste treatment, storage or disposal units (including each area not required to have a RCRA permit which is used for accumulating hazardous waste under 40 CFR 262.34); each well where fluids from the facility are injected underground; springs, and other surface water bodies which received storm water discharges from the facility.

Please print or type in the unshaded areas only.

EPA ID Number (*copy from Item 1 of Form 1*)
ALR000054163

Form Approved. OMB No. 2040-0086
Approval expires 5-31-92

FORM 2F NPDES

U.S. Environmental Protection Agency
Washington, DC 20460

Application for Permit to Discharge Storm Water Discharges Associated with Industrial Activity

Paperwork Reduction Act Notice

Public reporting burden for this application is estimated to average 28.6 hours per application, including time for reviewing instructions, searching existing data sources, gathering and maintaining the data needed, and completing and reviewing the collection of information. Send comments regarding the burden estimate, any other aspect of this collection of information, or suggestions for improving this form, including suggestions which may increase or reduce this burden to: Chief, Information Policy Branch, PM-223, U.S. Environmental Protection Agency, 1200 Pennsylvania Avenue, NW, Washington, DC 20460, or Director, Office of Information and Regulatory Affairs, Office of Management and Budget, Washington, DC 20503.

I. Outfall Location

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

A. Outfall Number (*list*)	B. Latitude			C. Longitude			D. Receiving Water (*name*)
DSN011	33.00	24.00	54.00	86.00	58.00	30.00	Unnamed Tributary to Valley Creek
DSN012	33.00	24.00	55.00	86.00	58.00	32.00	Unnamed Tributary to Valley Creek
DSN013	33.00	25.00	1.00	86.00	58.00	9.00	Unnamed Tributary to Valley Creek
DSN014	33.00	25.00	13.00	86.00	58.00	8.00	Unnamed Tributary to Valley Creek
DSN015	33.00	25.00	20.00	86.00	58.00	15.00	Valley Creek
DSN016	33.00	25.00	20.00	86.00	58.00	17.00	Unnamed Tributary to Valley Creek
DSN017	33.00	24.00	59.00	86.00	58.00	8.00	Unnamed Tributary to Valley Creek

II. Improvements

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

1. Identification of Conditions, Agreements, Etc.	2. Affected Outfalls		3. Brief Description of Project	4. Final Compliance Date	
	number	source of discharge		a. req.	b. proj.
None					

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

III. Site Drainage Map

Attach a site map showing topography (or indicating the outline of drainage areas served by the outfalls(s) covered in the application if a topographic map is unavailable) depicting the facility including: each of its intake and discharge structures; the drainage area of each storm water outfall; paved areas and buildings within the drainage area of each storm water outfall, each known past or present areas used for outdoor storage of disposal of significant materials, each existing structural control measure to reduce pollutants in storm water runoff, materials loading and access areas, areas where pesticides, herbicides, soil conditioners and fertilizers are applied; each of its hazardous waste treatment, storage or disposal units (including each area not required to have a RCRA permit which is used for accumulating hazardous waste under 40 CFR 262.34); each well where fluids from the facility are injected underground; springs, and other surface water bodies which received storm water discharges from the facility.

Continued from the Front

IV. Narrative Description of Pollutant Sources

A. For each outfall, provide an estimate of the area (include units) of impervious surfaces (including paved areas and building roofs) drained to the outfall, and an estimate of the total surface area drained by the outfall.

Outfall Number	Area of Impervious Surface *(provide units)*	Total Area Drained *(provide units)*	Outfall Number	Area of Impervious Surface *(provide units)*	Total Area Drained *(provide units)*
002	22.2 acres	26.2 acres	(006,		
003	26.4 acres	31.0 acres	008-13,		
004	1.5 acres	2.0 acres	016)	19.5 acres	22.9 acres
005	10.4 acres	12.0 acres	(007,01		
017	10.0 acres	20.0 acres	4,015)	4.1 acres	8.0 acres

B. Provide a narrative description of significant materials that are currently or in the past three years have been treated, stored or disposed in a manner to allow exposure to storm water; method of treatment, storage, or disposal; past and present materials management practices employed to minimize contact by these materials with storm water runoff; materials loading and access areas, and the location, manner, and frequency in which pesticides, herbicides, soil conditioners, and fertilizers are applied.

The United States Pipe and Foundry Company, LLC, Bessemer Foundry has prepared and implemented a combined Spill Prevention, Control and Countermeasures (SPCC) / Stormwater Pollution Preventeion Plan (SWPP). This plan indenteifis potential sources that may affect the quality of stormwater discharges associated with industrial activities at the site.

See Figures 4 & 5, Bessemer Foundry and Mini Mill Stormwater Drainage / Petroleum & Chemical Storage Maps

C. For each outfall, provide the location and a description of existing structural and nonstructural control measures to reduce pollutants in storm water runoff; and a description of the treatment the storm water receives, including the schedule and type of maintenance for control and treatment measures and the ultimate disposal of any solid or fluid wastes other than by discharge.

Outfall Number	Treatment	List Codes from Table 2F-1
SWPP applies to all Outfalls listed above	The united States Pipe and Foundry Company, LLC>, Bessemer Foundry has prepared and impleemnted a combined Spill Prevention, Control and Countermeasures (SPCC) / Stormwater Pollution Prevention Plan (SWPP) See Appendix E, SPCC/SWPP for description of stormwater control measures	4-A

V. Nonstormwater Discharges

A. I certify under penalty of law hat the outfall(s) covered by this application have been tested or evaluated for the presence of nonstormwater discharges, and that all nonstormwater discharged from these outfall(s) are identified in either an accompanying Form 2C or From 2E application for the outfall.

Name and Official Title *(type or print)*	Signature	Date Signed
Scot Aler - AVP, Env. Servies	Scot Aler	12/22/17

B. Provide a description of the method used, the date of any testing, and the onsite drainage points that were directly observed during a test.

Each stormwater outfall was visually inspected by Scot Aler, US Pipe AVP Environmental Services. No evidence of non-stormwater discharges was observed

VI. Significant Leaks or Spills

Provide existing information regarding the history of significant leaks or spills of toxic or hazardous pollutants at the facility in the last three years, including the approximate date and location of the spill or leak, and the type and amount of material released.

October 17-24, 2017 - US Pipe's Water Recycle Pond 4 overflowed on Oct 17, 2017 releasing approximately 200,000 gallons of process water onto a plant road and into a stormwater drainage ditch which lead to an unnamed tributary of Valley Creek. On October 24, 2017 US Pipe purposefully released approximately 800,000 gallons of water from our "Fish Pond" to make room for an high water issue that we were experiencing at the time going back to the original overflow on 10/17/17. Testing was conducted on the water from Pond 4 as well as the water from the Fish Pond. Corrective actions included updates to the PLC and level indicators at the ponds as well as updates to the High Water Alarm System and the selected employees of which are notified.

May 9, 2016 - US Pipe's Water Recycle Pond 4 overflowed releasing approximately 10,000 gallons of process water onto a plant road and into a stormwater drainage ditch which lead to an unnamed tributary of Valley Creek. Samples of release water were taken. Corrective actions included updates to the Pond Managmeent Computer Control System. The data logger was redesigned for enhanced stability and redundancy. Also, key maintenance personnel were trained on the Pond Management Ssytem and Overflow Protection Components.

Continued from Page 2

EPA ID Number *(copy from Item 1 of Form 1)*
ALR000054163

VII. Discharge Information

A, B, C, & D: See instructions before proceeding. Complete one set of tables for each outfall. Annotate the outfall number in the space provided. Table VII-A, VII-B, VII-C are included on separate sheets numbers VII-1 and VII-2.

E. Potential discharges not covered by analysis – is any toxic pollutant listed in table 2F-2, 2F-3, or 2F-4, a substance or a component of a substance which you currently use or manufacture as an intermediate or final product or byproduct?

☐ Yes (*list all such pollutants below*) ☑ No (*go to Section IX*)

VIII. Biological Toxicity Testing Data

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

☐ Yes (*list all such pollutants below*) ☑ No (*go to Section IX*)

IX. Contract Analysis Information

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

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

A. Name	B. Address	C. Area Code & Phone No.	D. Pollutants Analyzed
Enersolv	2220 Beltline Rd SW, Decatur, AL 35601	(256) 350-0846	ALL

X. Certification

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

A. Name & Official Title (*Type Or Print*)	B. Area Code and Phone No.
Scot Aler - AVP, Environmental Services	(205) 254-7654
C. Signature Scot Aler	D. Date Signed 12/22/17

EPA ID Number (*copy from Item 1 of Form 1*)
ALR000054163

Form Approved. OMB No. 2040-0086
Approval expires 5-31-92

VII. Discharge information *(Continued from page 3 of Form 2F)*

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.

Pollutant and CAS Number *(if available)*	Maximum Values *(include units)*		Average Values *(include units)*		Number of Storm Events Sampled	DSN 002 Sources of Pollutants
	Grab Sample Taken During First 20 Minutes	Flow-Weighted Composite	Grab Sample Taken During First 20 Minutes	Flow-Weighted Composite		
Oil and Grease	3.8 mg/L	N/A	1.82 mg/L		3.00	
Biological Oxygen Demand (BOD5)	N/A		N/A		0.00	
Chemical Oxygen Demand (COD)	N/A		N/A		0.00	
Total Suspended Solids (TSS)	365 mg/L		147 mg/L		3.00	
Total Nitrogen	0.75 mg/L		0.516 mg/L		3.00	
Total Phosphorus	N/A		N/A		0.00	
pH	Minimum	Maximum 9.98	Minimum	Maximum 9.49	3.00	

Part B – List each pollutant that is limited in an effluent guideline which the facility is subject to or any pollutant listed in the facility's NPDES permit for its process wastewater (if the facility is operating under an existing NPDES permit). Complete one table for each outfall. See the instructions for additional details and requirements.

Pollutant and CAS Number *(if available)*	Maximum Values *(include units)*		Average Values *(include units)*		Number of Storm Events Sampled	Sources of Pollutants
	Grab Sample Taken During First 20 Minutes	Flow-Weighted Composite	Grab Sample Taken During First 20 Minutes	Flow-Weighted Composite		
TOC	6.22		5.43		3.00	
Total Cyanide	0.006		0.00286		3.00	
TR Arsenic	0.00899		0.003		3.00	
TR Nickel	0.0132		0.0044		3.00	
TR Silver	ND		ND		3.00	
TR Zinc	2.31		1.03		3.00	
TR Aluminum	7.45		3.25		3.00	
TR Cadmium	0.00469		0.00184		3.00	
TR Lead	0.0856		0.04267		3.00	
TR Chromium	0.0335		0.0156		3.00	
TR Copper	0.0647		0.0312		3.00	
TR Mercury	ND		ND		3.00	
TTO	0.008204		0.004496		3.00	

EPA ID Number (*copy from Item 1 of Form 1*)
ALR00054163 -- DSN004

Form Approved. OMB No. 2040-0086
Approval expires 5-31-92

VII. Discharge Information *(Continued from page 3 of Form 2F)*

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.

Pollutant and CAS Number *(if available)*	Maximum Values *(include units)*		Average Values *(include units)*		Number of Storm Events Sampled	DSN004 Sources of Pollutants
	Grab Sample Taken During First 20 Minutes	Flow-Weighted Composite	Grab Sample Taken During First 20 Minutes	Flow-Weighted Composite		
Oil and Grease	5.68 mg/L	N/A	4.315 mg/L		2.00	
Biological Oxygen Demand (BOD5)	N/A				2.00	
Chemical Oxygen Demand (COD)	N/A					
Total Suspended Solids (TSS)	992 mg/L		602 mg/L		2.00	
Total Nitrogen	1.32 mg/L		0.999 mg/L		2.00	
Total Phosphorus	N/A		N/A			
pH	Minimum	Maximum 9.20	Minimum	Maximum 8.57	2.00	

Part B – List each pollutant that is limited in an effluent guideline which the facility is subject to or any pollutant listed in the facility's NPDES permit for its process wastewater (if the facility is operating under an existing NPDES permit). Complete one table for each outfall. See the instructions for additional details and requirements.

Pollutant and CAS Number *(if available)*	Maximum Values *(include units)*		Average Values *(include units)*		Number of Storm Events Sampled	Sources of Pollutants
	Grab Sample Taken During First 20 Minutes	Flow-Weighted Composite	Grab Sample Taken During First 20 Minutes	Flow-Weighted Composite		
TR Copper	0.0984 mg/L		0.0711 mg/L		2.00	
TR Zinc	3.66 mg/L		2.26 mg/L		2.00	
TR Lead	0.175 mg/L		0.107 mg/L		2.00	
TOC	16.0 mg/L		12.03 mg/L		2.00	
TR Cyanide	0.004 mg/L		<0.004 mg/L		2.00	
TR Arsenic	0.0233 mg/L		0.0169 mg/L		2.00	
TR Nickel	0.0318 mg/L		0.021 mg/L		2.00	
TR Silver	< 0.01 mg/L		< 0.01 mg/L		2.00	
TR Aluminum	14.9 mg/L		10.29 mg/L		2.00	
TR Cadmium	0.00583 mg/L		0.0035 mg/L		2.00	
TR Chromium	0.0738 mg/L		0.0486 mg/L		2.00	
TR Mercury	0.00245 mg/L		<0.002 mg/L		2.00	
TTO	0.004624 mg/L		.00337 mg/L		2.00	

EPA ID Number (*copy from Item 1 of Form 1*)
ALR000054163

Form Approved. OMB No. 2040-0086
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VII. Discharge Information *(Continued from page 3 of Form 2F)*

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.

Pollutant and CAS Number *(if available)*	Maximum Values *(include units)*		Average Values *(include units)*		Number of Storm Events Sampled	DSN005 Sources of Pollutants
	Grab Sample Taken During First 20 Minutes	Flow-Weighted Composite	Grab Sample Taken During First 20 Minutes	Flow-Weighted Composite		
Oil and Grease	5.22 mg/L	N/A	3.4 mg/L		2.00	
Biological Oxygen Demand (BOD5)	N/A		N/A		2.00	
Chemical Oxygen Demand (COD)	N/A		N/A		2.00	
Total Suspended Solids (TSS)	93 mg/L		64.1 mg/L		2.00	
Total Nitrogen	0.942 mg/L		0.932 mg/L		2.00	
Total Phosphorus	N/A		N/A		0.00	
pH	Minimum	Maximum 7.64	Minimum	Maximum 7.02	2.00	

Part B – List each pollutant that is limited in an effluent guideline which the facility is subject to or any pollutant listed in the facility's NPDES permit for its process wastewater (if the facility is operating under an existing NPDES permit). Complete one table for each outfall. See the instructions for additional details and requirements.

Pollutant and CAS Number *(if available)*	Maximum Values *(include units)*		Average Values *(include units)*		Number of Storm Events Sampled	Sources of Pollutants
	Grab Sample Taken During First 20 Minutes	Flow-Weighted Composite	Grab Sample Taken During First 20 Minutes	Flow-Weighted Composite		
TOC	15.7		12.85		2.00	
Total Cyanide	0.00300		0.00150		2.00	
TR Arsenic	0.00703		0.003515		2.00	
TR Nickel	.00671		.00336		2.00	
TR Silver	ND		ND		2.00	
TR Zinc	0.496		0.303		2.00	
TR Aluminum	1.93		1.121		2.00	
TR Cadmium	0.00915		.00458		2.00	
TR Lead	0.0246		0.0123		2.00	
TR Chromium	0.0136		0.00975		2.00	
TR Copper	0.0232		0.0116		2.00	
TR Mercury	ND		ND		2.00	
TTO	0.001487		0.001487		2.00	

VII. Discharge Information *(Continued from page 3 of Form 2F)*

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.

Pollutant and CAS Number *(if available)*	Maximum Values *(include units)*		Average Values *(include units)*		Number of Storm Events Sampled	DSN 006 Sources of Pollutants
	Grab Sample Taken During First 20 Minutes	Flow-Weighted Composite	Grab Sample Taken During First 20 Minutes	Flow-Weighted Composite		
Oil and Grease	10.7 mg/L	N/A	5.35 mg/L		2.00	
Biological Oxygen Demand (BOD5)	N/A		N/A		0.00	
Chemical Oxygen Demand (COD)	N/A		N/A		0.00	
Total Suspended Solids (TSS)	891 mg/L		480		2.00	
Total Nitrogen	2.20 mg/L		1.51 mg/L		2.00	
Total Phosphorus	N/A		N/A		0.00	
pH	Minimum	Maximum 10.60	Minimum	Maximum 9.15	2.00	

Part B – List each pollutant that is limited in an effluent guideline which the facility is subject to or any pollutant listed in the facility's NPDES permit for its process wastewater (if the facility is operating under an existing NPDES permit). Complete one table for each outfall. See the instructions for additional details and requirements.

Pollutant and CAS Number *(if available)*	Maximum Values *(include units)*		Average Values *(include units)*		Number of Storm Events Sampled	Sources of Pollutants
	Grab Sample Taken During First 20 Minutes	Flow-Weighted Composite	Grab Sample Taken During First 20 Minutes	Flow-Weighted Composite		
TOC	17.9		14.05		2.00	
Total Cyanide	0.00700		0.00441		2.00	
TR Arsenic	0.0218		0.0109		2.00	
TR Nickel	0.0293		0.0147		2.00	
TR Silver	0.00277		0.00139		2.00	
TR Zinc	7.41		4.31		2.00	
TR Aluminum	17.9		9.97		2.00	
TR Cadmium	0.0185		0.0105		2.00	
TR Lead	0.308		0.176		2.00	
TR Chromium	0.108		0.0582		2.00	
TR Copper	0.172		0.0961		2.00	
TR Mercury	0.0000662		0.0000331		2.00	
TTO	0.034661		0.017658		2.00	

EPA ID Number (*copy from Item 1 of Form 1*)
ALR000054163 DSN007

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VII. Discharge Information *(Continued from page 3 of Form 2F)*

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.

Pollutant and CAS Number *(if available)*	Maximum Values *(include units)*		Average Values *(include units)*		Number of Storm Events Sampled	DSN 007 Sources of Pollutants
	Grab Sample Taken During First 20 Minutes	Flow-Weighted Composite	Grab Sample Taken During First 20 Minutes	Flow-Weighted Composite		
Oil and Grease	2.95 mg/L	N/A	2.95 mg/L		1.00	
Biological Oxygen Demand (BOD5)	N/A		N/A		0.00	
Chemical Oxygen Demand (COD)	N/A		N/A		0.00	
Total Suspended Solids (TSS)	207 mg/L		207 mg/L		1.00	
Total Nitrogen	0.952 mg/L		0.952 mg/L		1.00	
Total Phosphorus	N/A		N/A		0.00	
pH	Minimum	Maximum 10.12	Minimum	Maximum 10.12	1.00	

Part B – List each pollutant that is limited in an effluent guideline which the facility is subject to or any pollutant listed in the facility's NPDES permit for its process wastewater (if the facility is operating under an existing NPDES permit). Complete one table for each outfall. See the instructions for additional details and requirements.

Pollutant and CAS Number *(if available)*	Maximum Values *(include units)*		Average Values *(include units)*		Number of Storm Events Sampled	Sources of Pollutants
	Grab Sample Taken During First 20 Minutes	Flow-Weighted Composite	Grab Sample Taken During First 20 Minutes	Flow-Weighted Composite		
TOC	10.8		10.8		1.00	
Total Cyanide	ND		ND		1.00	
TR Arsenic	0.00682		0.00682		1.00	
TR Nickel	0.00763		0.00763		1.00	
TR Silver	ND		ND		1.00	
TR Zinc	2.72		2.72		1.00	
TR Aluminum	2.15		2.15		1.00	
TR Cadmium	0.00728		0.00728		1.00	
TR Lead	0.118		0.118		1.00	
TR Chromium	0.0198		0.0198		1.00	
TR Copper	0.446		0.446		1.00	
TR Mercury	ND		ND		1.00	
TTO	0.00414		0.00414		1.00	

Continued from the Front

Part C - List each pollutant shown in Table 2F-2, 2F-3, and 2F-4 that you know or have reason to believe is present. See the instructions for additional details and requirements. Complete one table for each outfall.

Pollutant and CAS Number *(if available)*	Maximum Values *(include units)*		Average Values *(include units)*		Number of Storm Events Sampled	Sources of Pollutants
	Grab Sample Taken During First 20 Minutes	Flow-Weighted Composite	Grab Sample Taken During First 20 Minutes	Flow-Weighted Composite		

Part D – Provide data for the storm event(s) which resulted in the maximum values for the flow weighted composite sample.

1. Date of Storm Event	2. Duration of Storm Event *(in minutes)*	3. Total rainfall during storm event *(in inches)*	4. Number of hours between beginning of storm measured and end of previous measurable rain event	5. Maximum flow rate during rain event *(gallons/minute or specify units)*	6. Total flow from rain event *(gallons or specify units)*

7. Provide a description of the method of flow measurement or estimate.

ENVIRONMENTAL ENGINEERS, INC.
11578 US Highway 411, Branchville, Alabama 35120
Civil, Environmental, and Geological Consultants

SPILL PREVENTION CONTROL AND COUNTERMEASURES (SPCC) PLAN / STORM WATER POLLUTION PREVENTION (SWPP) PLAN

U.S. Pipe and Foundry Company - Bessemer Pipe Plant
2023 St. Louis Avenue
Bessemer, Jefferson County, Alabama
Environmental Engineers, Inc. Project No. USP03S0601

Prepared for:
United States Pipe and Foundry Company
Bessemer, Alabama

January 8, 2007

Prepared by:

ENVIRONMENTAL ENGINEERS, INC.

Updated: December 2017 by Andrew Wendt

Anne B. Gilbert, P.E.
Principal Engineer

Henry A. Fisher, P.E.
Principal Engineer

Phone: (205) 629-3868 • Fax: (877) 847-3060

TABLE OF CONTENTS

FIGURES

Site Plan (*See 2013 NPDES Permit Renewal Application Figures 4 & 5*)

APPENDICES

Stormwater Secondary Containment Discharge Form
SPCC Visual Inspection Form
BMP Inspection Log
BMP Committee Meeting Forms

1.0 INTRODUCTION

The purpose of the Spill Prevention, Control, and Countermeasure (SPCC) Plan portion of this document is to establish procedures and methods to prevent the discharge of oil into or upon waters of the state from the U.S. Pipe and Foundry Bessemer Pipe Plant in Bessemer, Alabama. SPCC Plans are required for petroleum product storage facilities having aboveground storage of more than an aggregate of 1,320 gallons in containers having a 55-gallon capacity or larger. The SPCC Plan portion of this document was prepared in accordance with guidelines provided in the United States Code of Federal Regulations (CFR) 40 CFR 112 – Oil Pollution Prevention.

According to 40 CFR 112.5, if there is a change in design, construction, operation or maintenance that could affect the facility's potential for the discharge of oil into waters of the state, the Plan should be amended immediately. In addition, review and evaluation of this Plan should occur every five years from the date of the Plan, and a Professional Engineer must certify such review for it to be acceptable.

The Storm Water Pollution Prevention (SWPP) Plan portion of this document was developed to provide guidance in implementing structural and non-structural best management practices (BMPs) for reduction of sediment and pollutant migration via rainwater runoff from activities at the U.S. Pipe and Foundry Bessemer Plant facility located in Bessemer, Alabama. Preparation of a SWPP Plan is required by National Pollutant Discharge Elimination System (NPDES) Permit AL0003271 that applies to the site.

2.0 FACILITY INFORMATION

2.1 FACILITY INFORMATION

The U.S. Pipe and Foundry Company's Bessemer Plant facility is located at 2023 St. Louis Avenue in Bessemer, Jefferson County, Alabama. The facility is located in the northeast ¼ of Section 5, Township 19 South, Range 4 West (Figure 1).

This facility has been used for manufacture of varying sizes of cast iron pipe from approximately 1891 to present. The surrounding properties consist of residential, commercial, and industrial facilities.

2.2 SITE DESCRIPTION

The site consists of approximately 150 acres of level to gently sloping land and contains numerous structures used in the production of ductile iron pipe The northern portion of the site contains a Staging Area for storage of non-hazardous waste streams until disposed of at an offsite landfill, one detention/settling pond, a stocked pond, and finished products. The southern portion of the site contains all production buildings, three detention/settling ponds. Asphalt-paved roads and dirt or gravel roads are located throughout the site (Figure 2).

The portions of the site that contain scrap iron used in the production process are located immediately north and west of the main production building. One area is immediately south of Pond #1, and the other area is immediately east of the St. Louis Avenue building.

2.3 PLANT MANAGEMENT ENDORSEMENT

This SPCC/SWPP Plan has been prepared under the direction of U.S. Pipe and Foundry Company personnel, and U.S. Pipe and Foundry Company will ensure that the items listed in this document are implemented fully.

Signature:_____ Date:_____

Bob Zeeb, V.P. Operations

3.0 SPILL PREVENTION, CONTROL, AND COUNTERMEASURES

3.1 EMERGENCY NOTIFICATION

3.1.1 Responsible Official

All releases that occur at this facility are to be reported to Mr. Scot Aler, plant Environmental Engineer, or his designees immediately upon discovery, or as soon as practicable following release containment. Mr. Aler may be contacted by telephone at the Bessemer Plant (205) 254-7654 or on his cellular phone at (205) 329-1547. If Mr. Aler is unavailable, the release should be reported to Plant Management.

3.1.2 United States Environmental Protection Agency

If a release of greater than 25 gallons from one event, or a cumulative total of 42 gallons occurs during two events during any 12-month period, a report regarding the spilled material must be forwarded to the U.S. Environmental Protection Agency Regional Administrator. Alabama is located in Region IV, and any notification should be forwarded to the EPA Region IV office in Atlanta, Georgia. The current EPA Region 4 Regional Administrator is Mr. J. I. Palmer, Jr. The EPA Region 4 office may be reached by telephone at (404) 562-9900 or (800) 241-1754.

3.1.3 Alabama Department of Environmental Management

If a release occurs consisting of 25 gallons or greater of petroleum product, the Alabama Department of Environmental Management (ADEM) should be notified within 24 hours of release occurrence. The telephone number for the ADEM Birmingham Field Office is (205) 942-6168. If a release occurs at any time other than normal business hours (9 A.M. to 5 P.M. Monday through Friday), the ADEM Montgomery Office should be

contacted at (334) 271-4378. The ADEM Montgomery Office may be contacted during normal business hours at (334) 271-7700.

When contacting the ADEM regarding a release, the following information should be available for ADEM personnel:

1. Name of person reporting the spill and a telephone number where they can be reached
2. Company name and location
3. Exact location of the facility and the spill
4. Type of material spilled, estimated quantity, source of spill, and cause of spill
5. Nearest downstream water body that could receive material from the spill if the spill occurs outside a secondary containment, or the spill containment system fails

3.1.4 City of Bessemer Fire Department

The City of Bessemer Fire Department may be reached by dialing 911. This number may also be used for medical emergencies.

Emergency response telephone numbers are also clearly posted in all departmental offices of the facility.

3.2 OIL BULK STORAGE

This section describes the oil spill history, the location of bulk storage, and spill prevention control strategies implemented at the U.S. Pipe Bessemer facility. The areas listed in the following sections are described using U.S. Pipe and Foundry Company designations and/or nomenclature.

3.2.1 Previous Release History

No reportable spills have been noted at this facility within twelve months of preparation of this Plan.

3.2.2 Bull Pen

The Bull Pen (forklift parking) area is located on the western side of the Mechanic Shop and east of the Technical Services Building. The Bull Pen is located outside. The three steel ASTs are located within a covered common concrete secondary containment having a volume of 2,890 gallons. These ASTs contain motor oil (T-1; 1,000 gallons), hydraulic oil (T-2; 1,000 gallons), and used oil (T-3; 250 gallons). Any stormwater that may accumulate in this containment is allowed to evaporate over time since accumulation will be minimal due to being protected by a roof and being located adjacent to another structure which protects the containment from stormwater exposure on two sides. The secondary containment provides greater than 110 percent containment capacity for the three ASTs.

A double-walled steel AST (T-4; 1,000 gallons) is also in this area and is used to store gasoline. The outer wall of this AST provides containment in the event of a release. Therefore, it is not necessary to locate this tank within a secondary containment structure.

A small shed is located in the Bull Pen area for the purpose of storing 55-gallon drums of new motor oil (D-1) until it is collected by a recycler. The shed has a concrete floor with a concrete lip that provides secondary containment capacity of 750 gallons for the drums. Therefore, up to twelve 55-gallon drums may be stored in this shed while maintaining 110 percent capacity of the aggregate volume of the containment.

3.2.4 Cement Lining

Cement Lining is located northeast of Curing and the Supply House. Two large vertical steel ASTs contain O.D. Paint (T-6; 15,000 gallons) and I.D. Paint (T-7; 15,000 gallons) on the southwest side of Cement Lining. Two horizontal, steel ASTs used for the storage of mineral spirits (T-22; 2,000 gallons and T-22A; 2,000 gallons) are located adjacent to the vertical ASTs. Tanks T-6 and T-7 are located within one secondary containment having a volume of 15,400 gallons, and tanks T-22 and T-22A are located in another secondary containment having a volume of 4,800 gallons. The secondary containment structure for tanks T-22 and T-22A shares a common wall with the containment for tanks T-6 and T-7. In addition, a horizontal steel AST (T-8; 1,000 gallons) used to store hydraulic oil is located in this area in its own secondary containment having a volume of 1,400 gallons. The hydraulic oil AST is protected from rainwater by a roof so that only small amounts of rainwater will accumulate in this secondary containment. These small amounts of rainwater will be allowed to evaporate over time.

3.2.6 Core Room

The Small Diameter Core Room is located north of Cement Lining. One steel double-walled AST (T-12; 500 gallons) is located outside the southwest wall of this building. This AST is used to store hydraulic oil, is located on stilts, and is not located within a secondary containment due to its double-walled construction.

3.2.7 Power House

The Power House is located west of the Core Room. Three steel ASTs are located within one concrete secondary containment structure having a capacity of 13,772 gallons outside the east wall of this building. One AST contains hydraulic oil (T-13; 8,000 gallons), and the other two ASTs contain soluble oil (T-14; 8,000 gallons and T-15; 12,000 gallons).

A steel skid-mounted AST (T-21; 550 gallons) used to store No. 2 diesel fuel is located outside and based immediately north of the Power House. No secondary containment structure is needed around this AST since it is mounted on skids for the purpose of relocating it in the facility as needed. However, this AST should be included in routine inspections with the other in-service ASTs for evidence of releases, failing equipment, etc.

3.2.8 Pond #2

Pond #2 is a settling pond located northwest of the Power House. A double-walled steel AST (T-16; 15,000 gallons) used to store No. 2 diesel fuel is located in this area. No secondary containment structure is required for this AST since it is of double-wall construction, and the outer wall provides secondary containment.

3.2.9 LARGE DIAMETER PRODUCTION

Large Diameter Production is located north of the Mechanic Shop. Two vertical steel ASTs are located within one concrete secondary containment having a capacity of 1,300 gallons outside the southwestern corner of Large Diameter Production. These ASTs are used to store hydraulic oil (T20; 1,000 gallons and T20A; 1,000 gallons), and no roof is located over this containment. One valve is available to drain any standing rainwater, and the valve remains closed and locked when the containment is not being drained.

3.2.10 Used Oil Shed

The Used Oil Shed (D-2) is located on the southern side of the St. Louis Avenue Building. Used oil is stored in 300-gallon totes on pallets at this location. The floor of the shed is concrete with a berm around it to serve as secondary containment. In addition, new oil is stored in 55-gallon drums in a room on the northern side of this building (D-3). Absorbent booms and pads are also located in the new oil room.

3.2.11 Machine Shop

The Machine Shop is located east of the Mechanic Shop and southwest of the Supply House. Three steel ASTs are located outside the southeast corner of this structure. Two of these ASTs contain mineral spirits (T-23; 575 gallons and T-24; 550 gallons), and the other AST contains asphalt cutback paint (T-25; 575 gallons). All three of these ASTs are skid-mounted tanks located in one concrete secondary containment structure having a capacity of 2,000 gallons. This containment is exposed to rainwater accumulation; therefore, periodic draining of this containment is necessary. The secondary containment structure containing these ASTs provides 110 percent capacity of the aggregate volume of the ASTs.

3.2.12 #3 Pipe Run

One steel vertical AST is located west of the #3 Pipe Run that is used to store hydraulic oil (T-26; 3,400 gallons). This AST is located within a concrete secondary containment having a capacity of 4,800 gallons. This containment is exposed to rainwater accumulation; therefore, periodic draining of this containment is necessary. The secondary containment structure containing this AST provides 110 percent capacity of the aggregate volume of the ASTs.

3.2.13 Transformers

Several transformers that contain 55 gallons or more of oil are located throughout the facility. These transformers locations and oil-storing capacities are listed in the table below.

Transformer Locations and Oil Capacities			
Transformer Location	**Oil Capacity (gallons)**	**Transformer Location**	**Oil Capacity (gallons)**
Substation A	710	Mold Shed North Bank – North	74
Substation B	770	Mold Shed North Bank – Middle	74
Substation C	910	Mold Shed North Bank – South	74
Substation D	935	Mold Shed South Bank	645
Polyline North	656	#4 Pipe Run	226
Polyline Middle	65	Baghouse	210
Polyline South	100	Large Diameter	154
Pumphouse East	65	#3 Pipe Run	191
Pumphouse Middle	65	Holding Furnace	150
Pumphouse West	65	Water Tower East	65
Cement Lining West	300	Water Tower Middle	65
Cement Lining Middle	300	Water Tower West	65
Cement Lining East	300	Weld Building South	354
Reliance South	110	Machine Shop Rect. Room - N	730
Reliance Middle	110	Machine Shop Rect. Room - N	285
Reliance North	110		

These transformers should be inspected each time secondary containments are drained, at a minimum, in an effort to determine if there have been any leaks, etc. from a transformer.

3.3 SPILL PREVENTION AND RESPONSE MEASURES

Sorbent pads and materials are located in every major department in the facility in 55-gallon drum spill kits. Replenish materials for the spill kits are maintained in the store room.

In the event of a release of product from an AST or transformer, the source of the leak should be determined and the leak should be controlled immediately to minimize the amount of product released to the environment. Examples of controlling the leak may include uprighting an overturned container, plugging a leaking hole, or closing a valve. If the leak is from a transformer, then the electrical power supply should be turned off to the transformer prior to attempting repair of the leak. A temporary berm should be constructed across the flow path using sorbent material. The product that accumulates behind the berm should be collected and removed as soon

as possible. All electrical power in the immediate vicinity of the release should be disconnected in an effort to prevent ignition of the spilled material.

If a release occurs, the Environmental Engineer or his/her designee should be notified immediately as well as your supervisor and any personnel working in the vicinity of the release. Isolate the area of the release to minimize injuries/illnesses to other facility personnel. This may include verbal warnings, roping off the area, or other methods. Have personnel not involved in the spill cleanup process to stay away from the area to minimize fume inhalation and increase distance from the spill in the event of a fire.

3.4 DRAINAGE OF DIKED AREAS

Several AST locations are in areas exposed for stormwater accumulation. Water that accumulates in these containment structures should be removed periodically. U.S. Pipe will only discharge uncontaminated stormwater from the secondary containment areas . An oil absorbent boom or oil absorbent pads should be used to skim any free product (floating gasoline, diesel fuel, or oil) or sheen noted on the surface of the water prior to discharge of the water. The water should only be discharged by personnel trained and knowledgeable in proper procedures to be taken. U.S. Pipe personnel authorized to discharge stormwater from secondary containment structures should visually inspect the containment, tank, piping, etc. for signs of deterioration that could result in a release if not corrected each time stormwater is discharged. A reproducible form for these visual inspections is included as Appendix B.

3.5 DOCUMENTATION REQUIREMENTS

3.5.1 Monitoring Records

U.S. Pipe must maintain monitoring records of stormwater discharges from secondary containments. These records should be kept in the form of a log at the back of this SPCC Plan and should include, at a minimum: the date and time of the discharges; the estimated volume of each discharge, and; the initials of the person making the visual inspection and authorizing the discharge. The discharge must have no sheen, and there must be no discharge of visible oil, floating solids, or visible foam other than trace amounts. These records should be maintained a minimum of three years. A form that can be copied and used for recording this information is included as Appendix A.

3.5.2 Integrity Testing

According to 40 CFR 112.8(c)(6), integrity testing is a necessary component of any good prevention plan and is essential for all aboveground containers to help prevent discharges. Integrity testing will show whether corrosion has reached a point where repairs or replacement of the container is needed. Integrity testing is any means to measure the strength (structural soundness) of the container shell, bottom, and/or floor to contain oil and may include leak testing to determine whether the container will discharge oil. It includes, but is not limited to, testing foundations and supports of containers and includes both the inside and outside of the container.

In addition, 40 CFR 112.8(c)(6) states that integrity testing should be conducted on a regular schedule according to industry standards. Industry standards that may assist an owner or operator with integrity testing include: (1) API Standard 653, "Tank Inspection, Repair, Alteration, and Reconstruction"; (2) API Recommended Practice 575, "Inspection of Atmospheric and Low-Pressure Tanks', and; (3) Steel Tank Institute Standard SP001-00, "Standard for Inspection of In-Service Shop Fabricated Aboveground Tanks for Storage of Combustible and Flammable Liquids."

Documentation showing integrity testing has been performed should be maintained with this SPCC/SWPP Plan until the time that integrity testing is again conducted.

3.6 SECURITY

Security guards are located at the main entrance to the facility 24 hours a day, 7 days a week. A chain link fence with barbed wire also encloses the facility. All oil storage areas are within secure locations, secondary containments exposed to rainwater have drain valves that are securely locked in the closed position when not being drained, and the Environmental Engineer or a designee maintains the key to the drain valve locks.

Most outdoor secondary containment structures have sufficient lighting to allow for discovery of leaks, spills, or acts of vandalism. Additional lighting is scheduled to be installed as soon as possible in areas where current lighting is not sufficient.

3.7 PERSONNEL TRAINING

Mr. Scot Aler or his designees will conduct annual spill prevention briefings to assure adequate understanding of the SPCC Plan for this facility. These briefings will highlight and describe any known spill events and how they were handled, malfunctioning system components and schedule for repair or replacement, and recently developed precautionary measures. All briefings are documented and made part of this SPCC Plan, and the SPCC Plan will be maintained by the Environmental Engineer.

All facility employees should be instructed in spill response techniques in the event of a release, as well as new precautionary measures. U.S. Pipe is responsible for determining how frequently employees will be refreshed in SPCC techniques and latest developments in precautionary measures that can be implemented.

3.8 RESPONSIBLE OFFICIAL

Mr. Scot Aler, Director, Environmental Services for U.S. Pipe, is responsible for implementation of this SPCC Plan. In addition, Mr. Aler will be responsible for ensuring that any future modifications to the existing conditions at this facility are reflected in the SPCC Plan.

Signature:_____ Date:_____

Mr. Scot Aler, Dir. Environmental Services

3.9 ENGINEER CERTIFICATION

I hereby certify that I have examined the facility and, being familiar with the provisions of 40 CFR Part 112 and this Plan, attest that this Plan has been prepared in accordance with good engineering practices and the regulations, and that it is adequate for this facility.

Signature:_____ Date:_____

Ms. Anne B. Gilbert, P.E.

Seal

4.0 STORM WATER POLLUTION PREVENTION

4.1 STRUCTURAL BEST MANAGEMENT PRACTICES

4.1.1 Secondary Containment Structures

Secondary containment structures are required for petroleum product storage facilities with aboveground storage capacity of more than 1,320 gallons for a single container, or an aggregate of 1,320 gallons. Secondary containment structures are located around and beneath all outside ASTs meeting these requirements with the exception of one AST, and each has a capacity of at least 110 percent of the aggregate volume of the ASTs within the containment. A locked drain valve is installed in one wall of each containment to allow drainage of accumulated rainwater. The active ASTs not currently located within secondary containments are of double-walled construction. **Any sheen or floating fuel must be removed using sorbent pads or booms prior to discharge of accumulated rainwater.** Mr. Scot Aler or his designees conduct draining of the AST containments. Records are maintained in Mr. Aler's office documenting the dates water is removed from any AST containment, the amount of water drained from each containment, and whether sorbent booms were used. Reproducible Stormwater Secondary Containment Discharge Forms have been included as Appendix A.

4.1.2 Baghouses

Two baghouses – one ductile baghouse and one cupola baghouse – are located at the facility for the purpose of removing particulates from the air as a result of the production process, and to prevent the particulates from settling on the ground where they may be transported off-site during rain events. Maintenance and monitoring of the cupola baghouse is performed continually during operation to ensure that the baghouse operates as efficiently as possible. When malfunctions occur, care is taken to minimize the amount of material that escapes the baghouse system. The material collected in both baghouses is captured in supersacks and is stored onsite until it is carried off-site for final disposal.

Several small baghouses are located throughout the facility. The material generated in these baghouses is collected in 55-gallon drums and/or dumpster pans. Once a container is full, the container is changed out beneath the baghouse, and the full container is taken to the Staging Area where it is emptied and its contents combined with other solid waste generated.

4.1.3 Cement-Lining Settling Basin

The Cement Lining area of production contains a settling basin on its western side, east of large diameter production. This settling basin allows some of the sediment in the process water from cement lining processes to settle out before being pumped to the onsite settling ponds (Section 3.1.4). The cement lining settling basins are cleaned out daily, and the material collected is transported to the Staging Area located in the northern portion of the site, until it is carried off-site for final disposal.

4.1.4 Settling Ponds

Four settling ponds are located on the site – three in the northern portion of the site and one in the western portion of the site. The eastern end of the #1 settling pond contains two scalping basins where water from the casting basement is discharged. Sediment from the process water settles out in the basins before discharging into the settling ponds. Additional sediment settles out into the #1 settling pond before the water gravity feeds to the #2 settling pond, which then gravity feeds to the #3 settling pond. Water is pumped from the #3 to the #4 settling pond. The #1 and #2 settling ponds are dredged periodically. The scalping basins are cleaned on an as-needed basis to maintain sediment storage capacity. All material collected from these areas is transported to the Staging Area located in the northwest portion of the site, until it is carried off-site for final disposal.

4.1.5 Spray Ponds

A 100,000-gallon spray pond is located immediately north of large diameter production in the south-central portion of the site for cooling water used in the production process. Cooling tower and boiler blowdown water is discharged into the spray pond where it is recycled through the production process. This system receives storm water during rain events.

4.1.6 Storm Drainage System

Storm water runoff from the site is collected by the site storm drainage system and conveyed to the settling ponds or off-site. Portions of the storm drain system are cleaned on an as-needed basis to re-establish the volume capacity of the storm drain system, and the material is transported to the Staging Area located in the northern portion of the site, until it is carried off-site for final disposal.

4.1.7 Staging Area

The Staging Area is a holding area for all solid waste generated at the facility until it is removed to a permitted landfill owned and operated by U.S. Pipe. This area is located east of the closed hazardous waste landfill, near

the northern property boundary. Stormwater runoff from this area flows through a natural buffer prior to entering Valley Creek or into the #3 settling pond.

4.1.8 Scrap Storage

All trucks and rail cars hauling scrap iron to the facility are driven through one of two radiation detection devices. If radiation is detected on a truck or railcar, the truck or railcar is driven through the detection device a second time. If radiation is still detected, the Radiation Safety Officer brings out a hand-held radiation detection device for a thorough inspection of the truck or railcar. If the radiation is due to the scrap itself rather than the truck or railcar or recent medical testing on the truck driver, then the load is rejected, isolated, and the company where the scrap originated is contacted.

The primary pollution of concern for this portion of the facility is iron. Due to the nature of the operations conducted at the facility and the daily use and replenishing of the scrap materials, it is not feasible to cover the scrap to prevent contact with storm water.

4.2 NON-STRUCTURAL BEST MANAGEMENT PRACTICES

4.2.1 Debris and Refuse Disposal

Debris and rubbish generated at the site is removed from the site and disposed of properly as necessary to prevent contact with stormwater runoff. A general cleanup of the site is conducted periodically to ensure that refuse and debris generated at the site is disposed of properly.

4.2.2 Equipment Maintenance

All routine rolling-stock equipment maintenance is conducted in the mechanic shop with the exception of equipment that is too large to fit into the maintenance area. Catch pans are placed under the equipment, and the fluid that accumulates in the catch pans is placed in properly labeled receptacles for storage until removed by a licensed recycler. Any excess oil, grease, or fuel noted during maintenance of equipment will be removed using disposable wipes/towels and will be disposed of properly. No liquids are placed in dumpsters or containers whose contents will be transported to a sanitary landfill.

Preventive maintenance will be conducted as needed on equipment to minimize leaks or spills in areas exposed to rainfall.

If any petroleum products are noted to be leaking from equipment or vehicles at the site, the leak will be contained immediately, the equipment will be repaired, and any stained soil will be removed from the site and disposed of properly. If the leak results in a release of more than 25 gallons of petroleum product, the ADEM Birmingham Field Office (205-942-6168) will be notified within 24 hours of discovery of the release.

Equipment washing is conducted in the wash rack located adjacent to the #2 settling pond in the north-central portion of the site. No washing is conducted on equipment that is leaking fluids. In addition, no chlorinated or non-chlorinated solvents are used in the wash rack.

4.2.3 Fueling

Fueling of equipment and vehicles will be performed adjacent to the ASTs located on the northern portion of the site. Product piping will be inspected carefully prior to fueling activities. Bessemer Pipe Plant personnel and/or Troy Foundry personnel will monitor fueling activities at all times. Following fueling, Bessemer Pipe Plant personnel and/or Troy Foundry personnel will verify that the dispensing equipment is off prior to removal of the nozzle from the equipment fuel tank. The product piping should then be returned to the receptacle inside the secondary containment structure. Any spills noted during fueling activities should be contained immediately by use of sorbent materials, and the spent sorbent materials should be disposed of properly following use.

4.2.4 55-Gallon Drum Storage

All 55-gallon drums stored at the site will be clearly labeled as to content, and all containers containing petroleum products and/or chemicals will be stored inside one of the site structures. All 55-gallon drums will be visually inspected frequently in an effort to determine if any releases have occurred from these containers. Sorbent materials such as oil dry, sorbent pads, and sorbent booms should be maintained in the areas containing the drums. If a leaking drum is discovered, the leaking fluid should be collected using the sorbent materials, and the contents of the drum should be transferred to another properly labeled container. The spent sorbent materials should be disposed of properly following cleanup.

Empty metal drums, i.e. containing less than one inch of free product, are to be taken to the crane runway where they are placed in the cupola for recycling.

Any 55-gallon metal drums containing more than one inch of free product and all plastic 55-gallon drums are placed in a covered, fenced, concrete-bermed area until the Plant Environmental Engineer can inspect for appropriate waste determination.

4.2.5 Used Oil Handling

All used oil generation, storage, and recycling activities at this facility are subject to the Used Oil Management Standards of EPA and corresponding regulations from the Alabama Department of Environmental Management (ADEM). A qualified recycling company is contracted by U.S. Pipe to collect, transport, and recycle used oil generated at the facility.

Used oil generated at the facility is stored in 55-gallon drums labeled "Used Oil," in the 250-gallon "Used Oil" AST located in the mechanic shop, or in 275-gallon and 300-gallon totes beneath a roof at the St. Louis Avenue Building. All oil filters are drained into appropriate containers prior to disposal. An ADEM-approved method of oil filter recycling, puncturing the dome end of the oil filter with a screwdriver then placing in the cupola for recycling, is performed at this facility.

Absorbent materials are kept in all areas where used oil is stored in the event of a spill. Absorbents used for spill cleanups are placed on rail cars and placed in the cupola as production fuel. In the event of a spill, the release will be stopped as quickly as possible, and the spill will be contained for proper cleanup and disposal.

4.2.6 Materials Compatibility

All containers used by U.S. Pipe for storing materials are compatible with the products in the containers. Generally, the containers storing a product were provided by the manufacturer of the product, or were recommended by the supplier. All containers are inspected for cracks, leaks, tears, etc. prior to unloading at the facility. If a container is unacceptably damaged, it will be refused and returned to the manufacturer.

Prior to mixing chemicals not previously combined at the facility, the BMP Committee will review the MSDS of each material to determine the compatibility of the materials, or will contact the manufacturers of the materials.

4.2.7 Vegetative Cover

Vegetative cover is the most effective method of sediment control. This method involves application of grass and/or legume seed to exposed areas. The root system established by the plants binds the soil together and the leaves protect the ground surface from raindrop impact. The seeds may be applied by broadcasting by hand or machine or by hydroseeding. Permanent vegetation has been established and will be maintained in areas not used for parking, driveways, or equipment or materials storage.

4.2.8 Paving

Paving reduces migration of sediment particles during rainwater runoff from exposed areas. In addition, paving reduces "tracking" sediment into streets and roadways where it may be transported off-site by rainfall runoff. Gravel should be placed in the miscellaneous storage area northwest of the closed landfill and just south of the Staging Area. This area contains a stormwater runoff location that has had a history of elevated levels of suspended solids. Placing gravel in this area will dissipate the energy of the rainfall as it impacts the ground surface, reducing sediment migration offsite in storm water runoff.

A sweeper truck is also used at the facility each day the plant is operating to minimize sediment migration off-site.

4.2.9 Security

A chain-link fence with barbed wire is located around the perimeter of the site to prevent unauthorized access to the site. In addition, security guards are posted 24 hours a day, seven days a week, at the main entrance to the facility to minimize unauthorized access to the site.

4.2.10 General Housekeeping

General housekeeping includes practices, that, when conducted on a daily basis, may improve the effectiveness of the SWPP Plan. These include, but are not limited to, the following:

- properly label all containers being used and have the containers turned with the labels visible;
- do not leave containers of liquids in employee pathways;
- all ASTs should be properly labeled;
- prompt cleanup of spilled materials, and placement of cleanup material into appropriate receptacles for disposal;
- no liquids or solid wastes are to be disposed of on the ground or burned at any time with the exception of approved materials to be disposed of in the cupola;
- put trash and other debris in properly labeled receptacles; and
- periodic inspections by supervisors or their designated employees to ensure that housekeeping measures are being maintained.

4.3 INSPECTION SCHEDULE

inspections of BMPs are performed and documented monthly. Mr. Scot Aler or his designees will perform the inspections. Reproducible BMP inspection forms have been included as Appendix C.

It is the understanding of Environmental Engineers, Inc. that a competent contract company is conducting annual sampling as required under the facility Permit. Therefore, no details concerning rainfall criteria to be met for sampling, equipment required, proper sampling techniques, sample handling, etc. are outlined in this Plan.

4.4 PERSONNEL TRAINING

According to EPA's Guidance Manual for Developing Best Management Practices, dated October 1993, the BMP Committee has numerous responsibilities, including the following:

- develop the scope of the BMP Plan
- make recommendations to management in support of company BMP policy
- review any existing accidental spill control plans to evaluate existing BMPs
- identify toxic and hazardous substances
- identify areas with potential for release to the environment
- conduct assessments to prioritize substances and areas of concern
- determine and select appropriate BMPs
- set forth standard operating procedures for implementation of BMPs
- oversee the implementation of the BMPs
- establish procedures for recordkeeping and reporting

- coordinate facility environmental release response, cleanup, and regulatory agency notification procedures
- establish BMP training for plant and contractor personnel
- evaluate the effectiveness of the BMP Plan in preventing and mitigating releases of pollutants
- periodically review the BMP Plan to evaluate the need to update and/or modify the BMP Plan

Meetings are conducted with facility employees on a regular basis to assure understanding of the SWPP Plan purpose and goals. All employee SWPP Plan training will be planned and coordinated by the BMP Committee. Mr. Scot Aler is the lead Committee member designated to coordinate personnel training. Personnel in each department will be trained on spill response techniques and procedures for materials located in their respective department. These briefings will highlight and describe any known BMP deficiencies, and employees will be refreshed in BMP techniques and latest developments in precautionary measures that can be implemented. Records of these training sessions, i.e. who conducted the training, the date the training was performed, who attended the training, the topics that were addressed, etc. should be maintained in Mr. Aler's office.

4.5 RESPONSIBLE OFFICIAL

The facility has a BMP Committee that is responsible for reviewing new construction/changes in processes or procedures, providing guidance to other U.S. Pipe management to properly implement the SWPP Plan, ensuring no unpermitted discharges are occurring in the facility, and evaluating the effectiveness of the SWPP Plan. The BMP Committee meets on a quarterly basis to discuss any needed changes or modifications to the BMPs in order to minimize pollutant migration from the site. These meetings are documented, and records of the meetings are kept in the office of Mr. Scot Aler, the facility Environmental Engineer. Reproducible BMP Committee Meeting Forms have been included as Appendix D.

Mr. Aler also heads the BMP Committee meetings, and is responsible for ensuring that any future modifications to the existing conditions at this facility are reflected in the SWPP Plan.

Signature:_____ Date:_____

Secondary Containment Stormwater Discharge Records
U.S. Pipe and Foundry - Bessemer Plant

Secondary Containment Areas To Be Drained

Date	Time	SCS*	Depth (in)	Volume(gal)	Boom(Y/N)	Released By

* - Secondary Containment Structure; the bold designation above the table

For volume calculations, use the following formula: $V_d(gal) = L_c(ft) \times W_c(ft) \times D_f(ft) \times 7.48(gal/ft^3)$
Where,

V_d = Volume being discharged
L_c = Length of containment
W_c = Width of containment
D_f = Depth of fluid

FIGURES

Figure 1 – Site Location Map

U.S Pipe and Foundry Company, LLC. (U.S. Pipe), in located the city of Bessemer, Jefferson County, Alabama approximately 30 miles southwest of Birmingham.

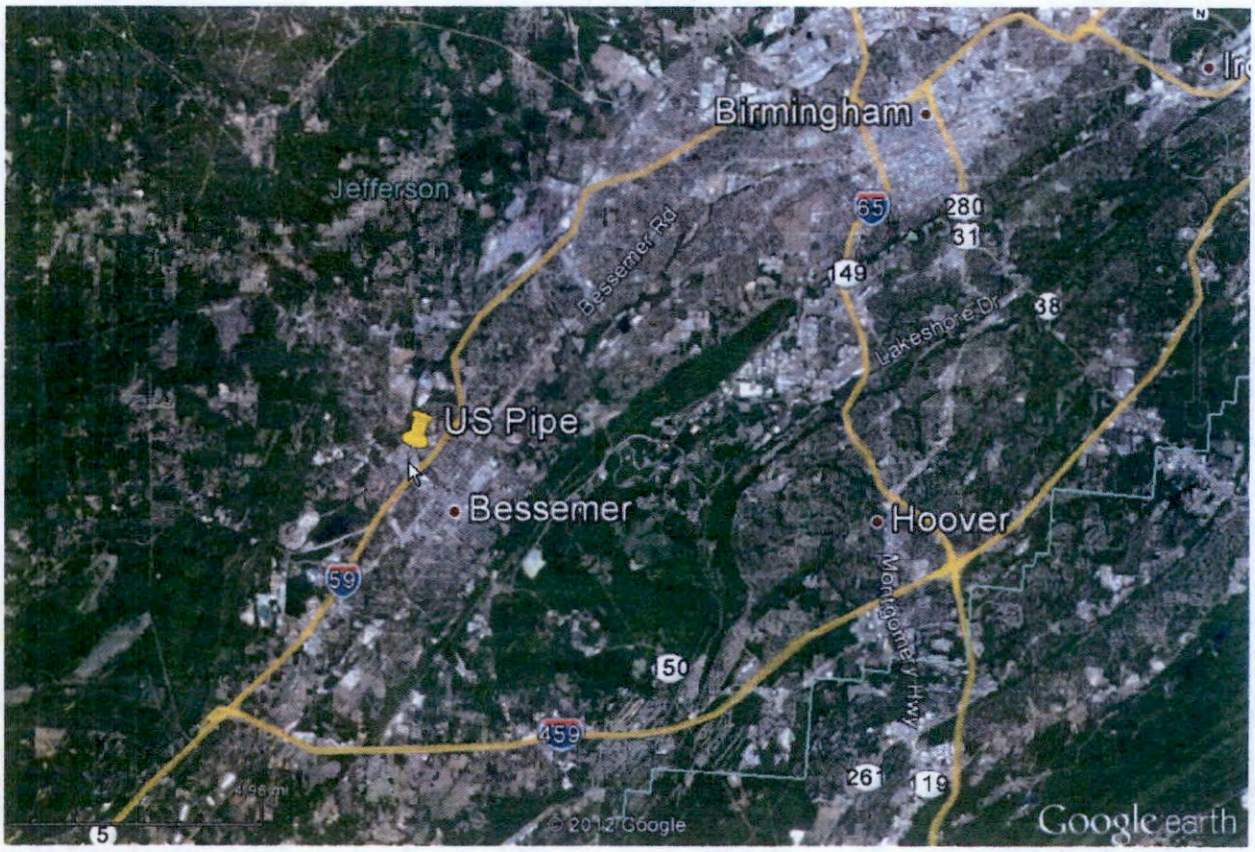

Figure 2 – Site Topographic Map

The site has minor elevation changes and is bounded on the north by Valley Creek which flows from east to west.

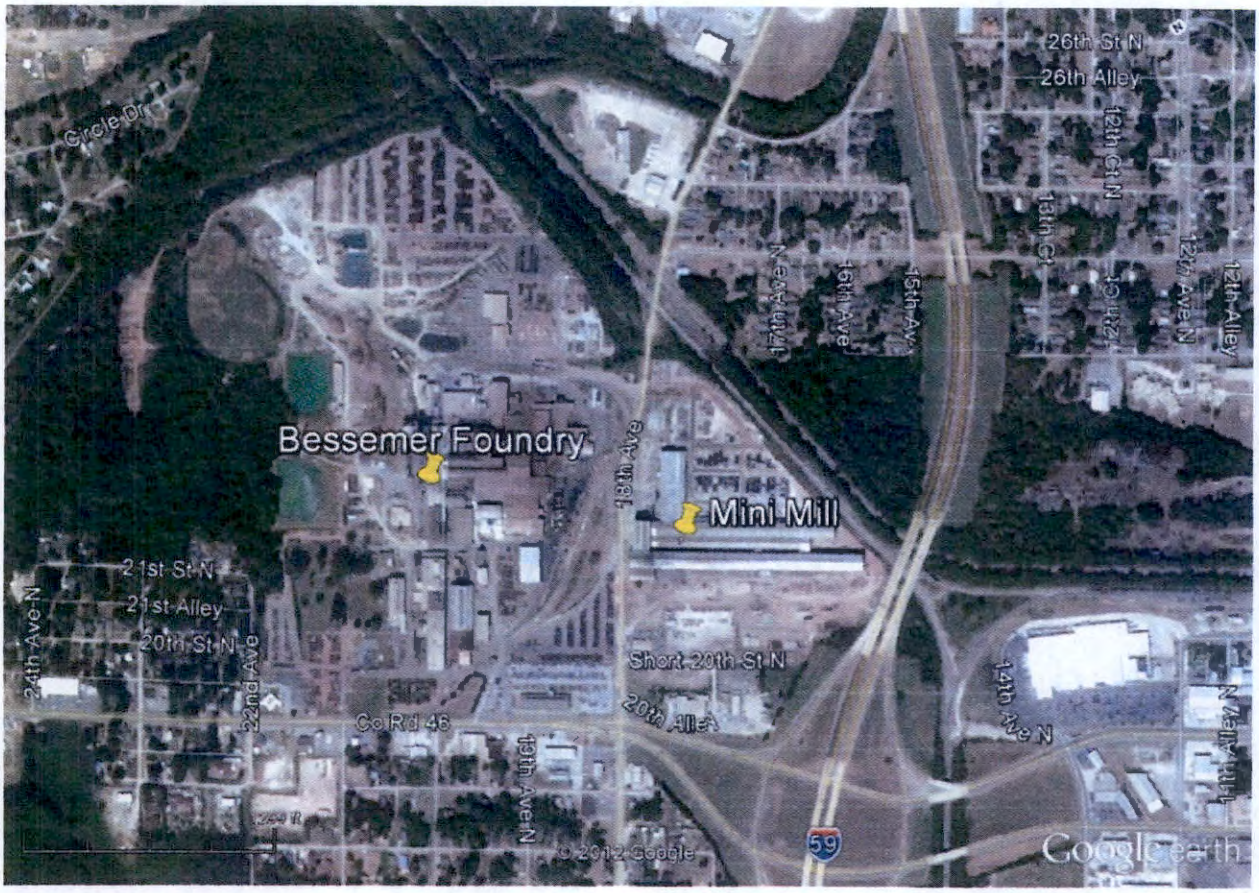

Figure 3
Water Balance Diagram

Figure 3: Process Flow Diagram

US Pipe, Bessemer Foundry

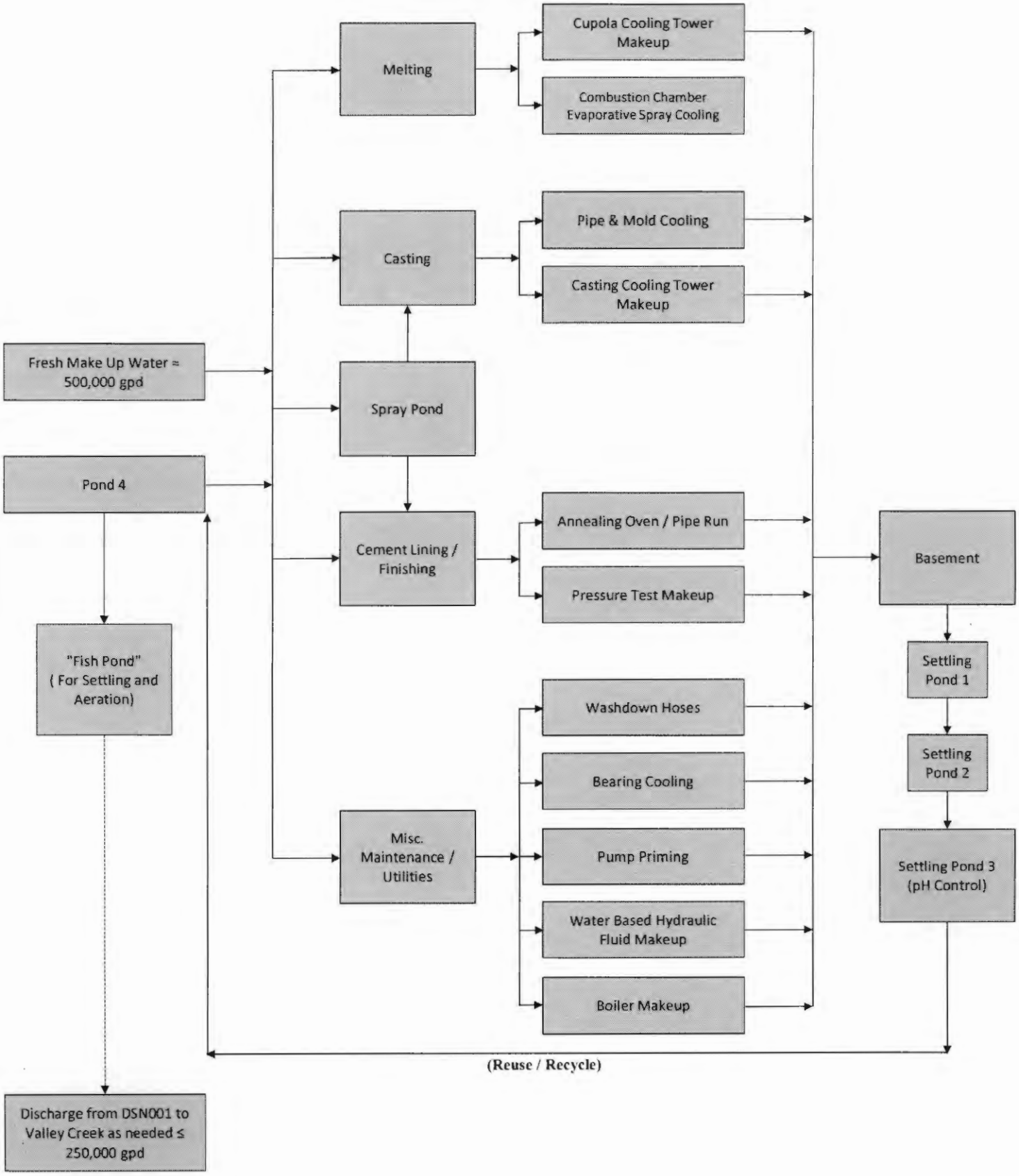

Figure 4

Industrial Water Intake Map

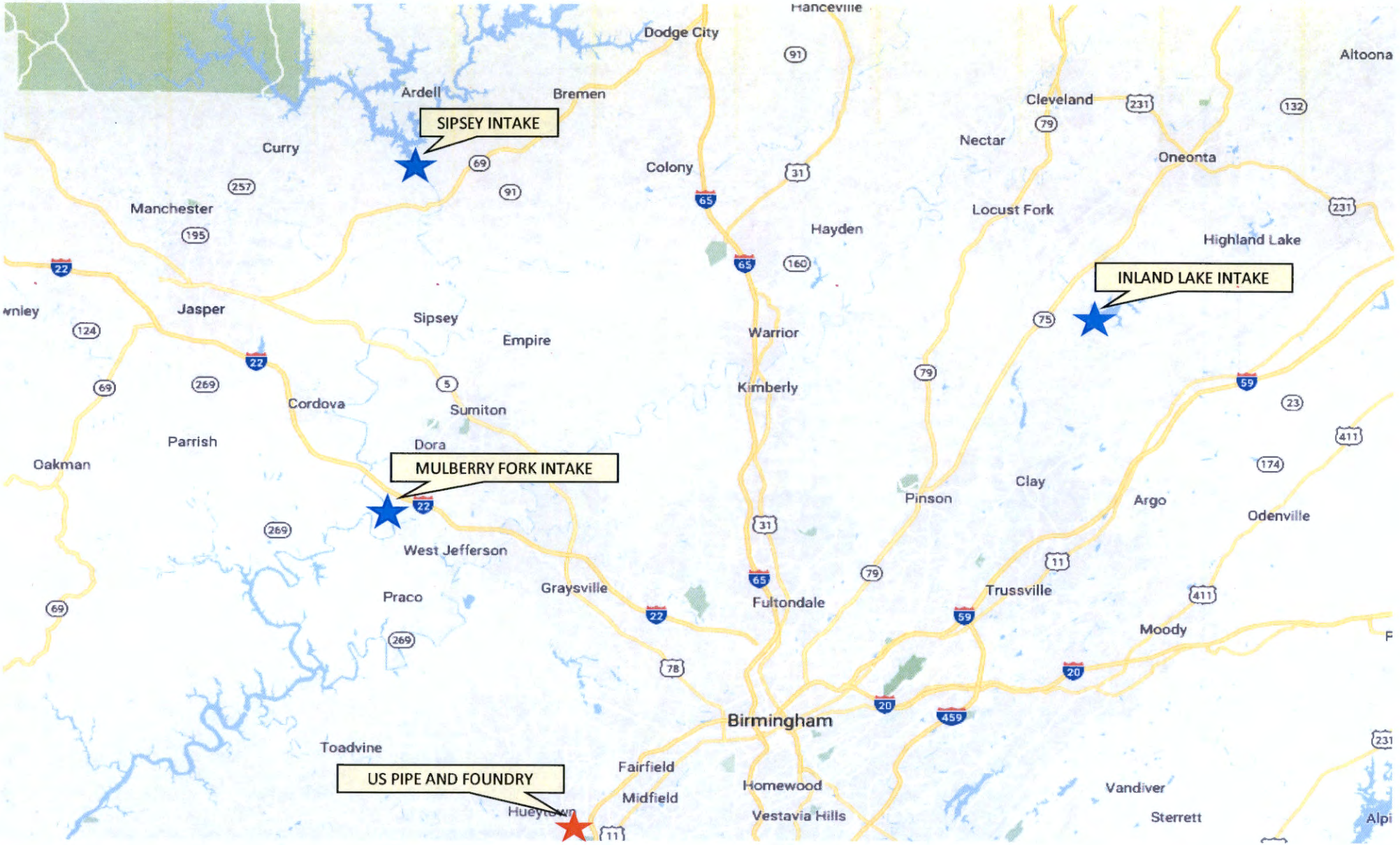
SIPSEY INTAKE
INLAND LAKE INTAKE
MULBERRY FORK INTAKE
US PIPE AND FOUNDRY
Hanceville
Dodge City
Altoona
Ardell
Bremen
Cleveland
Nectar
Oneonta
Curry
Colony
Manchester
Locust Fork
Hayden
Highland Lake
Jasper
Sipsey
Empire
Warrior
Kimberly
Cordova
Sumiton
Parrish
Dora
Oakman
Pinson
Clay
Argo
Odenville
West Jefferson
Graysville
Praco
Fultondale
Trussville
Moody
Birmingham
Toadvine
Fairfield
Midfield
Homewood
Vestavia Hills
Vandiver
Sterrett

Figure 5

Biocides and Corrosion Inhibitors Chart

Table 187.C.5 - Supplement to Form 187, Section C, Item 5 - Biocides & Corrosion Inhibitors						
Trade Name	Chemical Composition	96-hr	Quantity Used	Frequency of Use	Proposed Discharge Concentration	EPA Registration
BIO/TEC 320 Microbiocide	Bis[tetrakis (hydroxymethyl) phosphonium] sulfate 18-22% Water 78-82%	LC50, C. dubia, 48 hr, 117ppm; LC50, P. promelas, 48hr, 399 ppm	60ppm, 3 times/week	Scheduled injection 3 times per week	No Discharge	464-782-55137
AF 900 Microbiocide	Sodium Hypocholorite 15%, Sodium Hydroxide 3%	LC50, C. dubia, 48hr, 1.15 ppm; LC50, P. promelas, 48hr, 2.38 ppm	30 ppm, twice / week	Scheduled injection 2 times per week, or as needed	No Discharge	148-1288-55137
AF 908 Anti-Foulant / Scale Inhibitor	Proprietary Mixture including Alkylamide hydrolysate	N/A	50 ppm, twice / week	Scheduled injection 2 times per week, or as needed	No Discharge	N/A
MIT 1032 Corrosion Inhibitor	Proprietary Mixture including Sodium Metabisulfite, Potassium Hydroxide, Sodium Hydroxide, and Morpholine	N/A	200 ppm	Continuous feed to maintain 200 ppm in Cooling Tower	No Discharge	N/A
SWE 3358 Scale Inhibitor	Proprietary Mixture including Phosphoric Acid < 5%, Potassium Hydroxide < 15%	N/A	150 ppm	Continuous feed to maintain 150 ppm in Cooling Tower	No Discharge	N/A
SWE5041 Biocide	Proprietary Mixture including Sodium Metabisulfite, Morpholine, and Potassium Hydroxide	N/A	40 ppm	Continuous feed to maintain 40 ppm in Cooling Tower	No Discharge	N/A

Figure 6

Bessemer Stormwater Drainage /
Petroleum & Chemical Storage Map

205.A Forterra Company

2023 St. Louis Ave
Bessemer, Alabama 35020

July 15, 2019
Letter #: SFA-19-104
Federal Express #: 7757-4052-6931

R#19-49390

Alex Chavers, Water Division, Industrial Section
Alabama Department of Environmental Management
1400 Coliseum Blvd.
Montgomery, Alabama 36110-2400

Re: Applications Fee Payment
United States Pipe and Foundry Company, LLC
Alabama Works (Bessemer Foundry & Mini Mill)
NPDES Permit AL0003271

Please find attached, a check for $4,855 for updated waste load allocation modeling. Please call or e-mail if you have any questions, comments or require additional information.

Sincerely,

Scot Aler

A Forterra Company

Scot Aler
Associate VP Environmental Services

2023 St. Louis Avenue
Bessemer, AL 35020
T 205.254.7654 C 205.329.1547
saler@uspipe.com
uspipe.com

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

JUN 19 2019

MR SCOT ALER
AVP, ENVIRONMENTAL SERVICES
US PIPE AND FOUNDRY - BESSEMER
2023 ST LOUIS AVENUE
BESSEMER AL 35020

RE: WATER NPDES INDUSTRIAL MINOR FEE
NPDES PERMIT AL0003271
JEFFERSON COUNTY (073)

Dear Mr. Aler:

Pursuant to the Alabama Department of Environmental Management Administrative Code 335-1-6, the Department is authorized to collect application fees. The amended application fees became effective February 4, 2016.

The fee for processing your application is $10,470. Your application included a payment of $5615.00, which includes the fee for renewal of a Minor NPDES Industrial Discharge Permit. Before processing can begin, the Department must be in receipt of the $4,855 balance, which includes the fee for an updated wasteload allocation. All fees should be made payable to the Alabama Department of Environmental Management and sent to the attention of Alex Chavers, Water Division, Alabama Department of Environmental Management, PO Box 301463, Montgomery, Alabama 36130-1463. All fees paid pursuant to the regulation requirements are non-refundable.

Should you have any questions or comments concerning this report, please feel free to contact Alex Chavers by phone at **(334) 271-7851** or by e-mail at **adchavers@adem.alabama.gov**.

Sincerely,

Alex Chavers
Industrial Section
Water Division

FILE: FEEL/0000012604