Edward F. Poolos
Director

Jeffery W. Kitchens
Deputy Director

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

Kay Ivey
Governor

February 10, 2026

Mr. Steven Smith
CEO
MS Industries II, LLC
101 Jackson Ave. North
Russellville, AL 35653

RE: Draft Permit
Masterson Site
NPDES Permit Number AL0082759
Lawrence County (079)

Dear Mr. Smith:

Transmitted herein is a draft of the above referenced permit. Please review the enclosed draft permit carefully. If previously permitted, the draft may contain additions/revisions to the language in your current permit. Please submit any comments on the draft permit to the Department within 30 days from the date of receipt of this letter.

Since the Department has made a tentative decision to reissue and modify the above referenced permit, ADEM Admin. Code r. 335-6-6-.21 requires a public notice of the draft permit followed by a period of at least 30 days for public comment before the permit can be issued. The United States Environmental Protection Agency will also receive the draft permit for review during the 30-day public comment period.

Any mining, processing, construction, land disturbance, or other regulated activity proposed to be authorized by this draft permit is prohibited prior to the effective date of the formal permit. Any mining or processing activity within the drainage basin associated with each permitted outfall which is conducted prior to Departmental receipt of certification from a professional engineer licensed to practice in the State of Alabama, that the Pollution Abatement/Prevention Plan was implemented according to the design plan, or notification from the Alabama Surface Mining Commission that the sediment control structures have been certified, is prohibited.

This permit requires Discharge Monitoring Reports (DMR) to be submitted utilizing the Department's web-based electronic reporting system. Please read Part I.D of the permit carefully and visit https://aepacs.adem.alabama.gov/nviro/ncore/external/home.

Should you have any questions concerning this matter, please contact Robert Glover at (334) 271-7975 or robert.glover@adem.alabama.gov.

Sincerely,

William D. McClimans, Chief
Mining and Natural Resource Section
Stormwater Management Branch
Water Division

WDM/wdm File: DPER/46048

cc: Robert Glover, ADEM
William McClimans, ADEM
Environmental Protection Agency Region IV
Alabama Department of Conservation and Natural Resources
U.S. Fish and Wildlife Service
Alabama Historical Commission
Advisory Council on Historic Preservation
U.S. Army Corps of Engineers Mobile District
U.S. Army Corps of Engineers Nashville District
Alabama Department of Workforce

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

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

Coastal Office
1615 South Broad Street
Mobile, AL 36605
(251) 450-3400
(251) 479-2593 (FAX)

ADEM
Alabama Department of Environmental Management

NATIONAL POLLUTANT DISCHARGE ELIMINATION SYSTEM PERMIT

PERMITTEE:	MS Industries II, LLC 101 Jackson Ave North Russellville, AL 35653
FACILITY LOCATION:	Masterson Site 2228 County Road 135 Town Creek, AL 35672 Lawrence County T5S, R9W, S28
PERMIT NUMBER:	AL0082759

DSN & RECEIVING STREAM:	003 - 1	Unnamed Tributary to Hogwood Branch
	004 - 1	Unnamed Tributary to Hogwood Branch

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
Water Division Chief

NATIONAL POLLUTANT DISCHARGE ELIMINATION SYSTEM (NPDES) PERMIT

SANDSTONE, DIRT AND CHERT, SHALE AND CLAY, AND BAUXITIC CLAY MINE, WET AND DRY PREPARATION, TRANSPORTATION AND STORAGE, AND ASSOCIATED AREAS

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 each point source identified on Page 1 of this Permit and described more fully in the Permittee's application, if the outfalls have been constructed and certified. Discharges shall be limited and monitored by the Permittee as specified below:

Parameter	Discharge Limitations			Monitoring Requirements	
	Daily Minimum	Monthly Average	Daily Maximum	Sample Type	Measurement Frequency[1]
pH 00400	6.0 s.u.	-------	8.5 s.u.	Grab	2/Month
Solids, Total Suspended 00530	-------	20.0 mg/L	30.0 mg/L	Grab	2/Month
Iron, Total (As Fe) 01045	-------	0.5 mg/L	1.0 mg/L	Grab	2/Month
Aluminum, Total (As Al) 01105	-------	1.0 mg/L	2.0 mg/L	Grab	2/Month
Flow, In Conduit or Thru Treatment Plant[2] 50050	-------	Report MGD	Report MGD	Instantaneous	2/Month

B. REQUIREMENTS TO ACTIVATE A PROPOSED MINING OUTFALL

1. Discharge from any point source identified on Page 1 of this Permit which is a proposed outfall is not authorized by this Permit until the outfall has been constructed and certification received by the Department from a professional engineer, registered in the State of Alabama, certifying that such facility has been constructed according to good engineering practices and in accordance with the Pollution Abatement and/or Prevention (PAP) Plan.

2. Certification required by Part I.B.1. shall be submitted on a completed ADEM Form 432. The certification shall include the latitude and longitude of the constructed and certified outfall.

3. Discharge monitoring and Discharge Monitoring Report (DMR) reporting requirements described in Part I.C. of this Permit do not apply to point sources that have not been constructed and certified.

4. Upon submittal of the certification required by Part I.B.1. to the Department, all monitoring and DMR submittal requirements shall apply to the constructed and certified outfall.

C. DISCHARGE MONITORING AND RECORD KEEPING REQUIREMENTS

1. Sampling Schedule and Frequency

a. The Permittee shall collect at least one grab sample of the discharge to surface waters from each constructed and certified point source identified on Page 1 of this Permit and

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[1] See Part I.C.2. for further measurement frequency requirements.

[2] Flow must be determined at the time of sample collection by direct measurement, calculation, or other method acceptable to the Department.

described more fully in the Permittee's application twice per month at a rate of at least every other week if a discharge occurs at any time during the two week period, but need not collect more than two samples per calendar month. Each sample collected shall be analyzed for each parameter specified in Part I.A. of this Permit.

b. If the final effluent is pumped in order to discharge (e.g. from incised ponds, old highwall cuts, old pit areas or depressions, etc.), the Permittee shall collect at least one grab sample of the discharge from each point source identified on Page 1 of this Permit and described more fully in the Permittee's application each quarterly (three month) monitoring period if a discharge occurs at any time during the quarterly monitoring period which results from direct pumped drainage. Each sample collected shall be analyzed for each parameter specified in Part I.A. of this Permit.

c. The Permittee may increase the frequency of sampling listed in Parts I.C.1.a and I.C.1.b; however, all sampling results must be reported to the Department and included in any calculated results submitted to the Department in accordance with this Permit.

2. Measurement Frequency

Measurement frequency requirements found in Part I.A. shall mean:

a. A measurement frequency of one day per week shall mean sample collection on any day of discharge which occurs every calendar week.

b. A measurement frequency of two days per month shall mean sample collection on any day of discharge which occurs every other week, but need not exceed two sample days per month.

c. A measurement frequency of one day per month shall mean sample collection on any day of discharge which occurs during each calendar month.

d. A measurement frequency of one day per quarter shall mean sample collection on any day of discharge which occurs during each calendar quarter.

e. A measurement frequency of one day per six months shall mean sample collection on any day of discharge which occurs during the period of January through June and during the period of July through December.

f. A measurement frequency of one day per year shall mean sample collection on any day of discharge which occurs during each calendar year.

3. Monitoring Schedule

The Permittee shall conduct the monitoring required by Part I.A. in accordance with the following schedule:

a. 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. More frequently than monthly and monthly monitoring may be done anytime during the month, unless restricted elsewhere in this Permit, but the results should be reported on the last Discharge Monitoring Report (DMR) due for the quarter (i.e., with the March, June, September, and December DMRs).

b. 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 the results should be reported on the last DMR due for the quarter (i.e., with the March, June, September, and December DMRs).

c. 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 semiannual calendar 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 reported on the last DMR due for the month of the semiannual period (i.e., with the June and December DMRs).

d. 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 reported on the December DMR.

4. Sampling Location

Unless restricted elsewhere in this Permit, samples collected to comply with the monitoring requirements specified in Part I.A. shall be collected at the nearest accessible location just prior to discharge and after final treatment, or at an alternate location approved in writing by the Department.

5. Representative Sampling

Sample collection and measurement actions 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.

6. 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, guidelines published pursuant to Section 304(h) of the FWPCA, 33 U.S.C. Section 1314(h), and ADEM Standard Operating Procedures. 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 pollutant 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 identified in Parts I.C.6.a. and b. 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.

7. 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 or measurements;

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.

8. Routine Inspection by Permittee

a. The Permittee shall inspect all point sources identified on Page 1 of this Permit and described more fully in the Permittee's application and all treatment or control facilities or systems used by the Permittee to achieve compliance with the terms and conditions of this Permit at least as often as the applicable sampling frequency specified in Part I.C.1 of this Permit.

b. The Permittee shall maintain a written log for each point source identified on Page 1 of this Permit and described more fully in the Permittee's application in which the Permittee shall record the following information:

(1) The date and time the point source and any associated treatment or control facilities or systems were inspected by the Permittee;

(2) Whether there was a discharge from the point source at the time of inspection by the Permittee;

(3) Whether a sample of the discharge from the point source was collected at the time of inspection by the Permittee;

(4) Whether all associated treatment or control facilities or systems appeared to be in good working order and operating as efficiently as possible, and if not, a description of the problems or deficiencies; and

(5) The name and signature of the person performing the inspection of the point source and associated treatment or control facilities or systems.

9. Records Retention and Production

a. 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 this 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 (3) years from the date of the sample collection, 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, AEMA, 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, the Permittee shall provide the Director with a copy of any record required to be retained by this paragraph. Copies of these records should not be submitted unless requested.

b. All records required to be kept for a period of three (3) years shall be kept at the permitted facility or an alternate location approved by the Department in writing and shall be available for inspection.

10. 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.

D. DISCHARGE REPORTING REQUIREMENTS

1. Requirements for Reporting of Monitoring

a. Monitoring results obtained during the previous three (3) months shall be summarized for each month on a Discharge Monitoring Report (DMR) Form approved by the Department, and submitted to the Department so that it is received by the Director no later than the 28th day of the month following the quarterly reporting period (i.e., on the 28th day of January, April, July, and October of each year).

b. The Department utilizes a web-based electronic reporting system for submittal of DMRs. **Except as allowed by Part I.D.1.c. or d., the Permittee shall submit all DMRs required by Part I.D.1.a. by utilizing the Department's current electronic reporting system.** The Department's current reporting system, Alabama Environmental Permitting and

Compliance System (AEPACS), can be found online at https://aepacs.adem.alabama.gov/nviro/ncore/external/home.

c. If the electronic reporting system is down (i.e. electronic submittal of DMR data is unable to be completed due to technical problems originating with the Department's system; this could include entry/submittal issues with an entire set of DMRs or individual parameters), permittees are not relieved of their obligation to submit DMR data to the Department by the required submittal date. However, if the electronic reporting system is down on the 28th day of the month or is down for an extended period of time as determined by the Department when a DMR is required to be submitted, the facility 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 five calendar days of the electronic reporting system resuming operation, the Permittee shall enter the data into the reporting system unless an alternate timeframe is approved by the Department. An attachment should be included with the electronic DMR submittal verifying the original submittal date (date of the fax, copy of dated e-mail, or hand-delivery stamped date).

d. 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 Part I.D.1.i.

e. If the Permittee, using approved analytical methods as specified in Part I.C.6., monitors any discharge from a point source identified on Page 1 of this Permit and describe more fully in the Permittee's application 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 Form, and the increased frequency shall be indicated on the DMR Form.

f. In the event no discharge from a point source identified on Page 1 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 Form.

g. Each DMR Form submitted by the Permittee to the Department in accordance with Part I.D.1. must be legible and bear an original signature or electronic signature. Photo and electronic copies of the signature are not acceptable and shall not satisfy the reporting requirements of this Permit.

h. All reports and forms required to be submitted by this Permit, the AWPCA, and the Department's rules and regulations, shall be signed by a "responsible official" of the Permittee as defined in ADEM Admin. Code r. 335-6-6-.09 or a "duly authorized representative" of such official as defined in ADEM Admin. Code r. 335-6-6-.09 and shall bear the following certification:

> "I certify under penalty of law that this document and all attachments were prepared under my direction or supervision in accordance with a system designed to assure that qualified personnel properly gather and evaluate the information submitted. Based on my inquiry of the person or persons who manage the system, or those persons directly responsible for gathering the information, the

information submitted is, to the best of my knowledge and belief, true, accurate, and complete. I am aware that there are significant penalties for submitting false information, including the possibility of fine and imprisonment for knowing violations."

i. All DMRs, reports, and forms required to be submitted by this Permit, the AWPCA and the Department's rules and regulations, shall be submitted through the Department's electronic reporting system, AEPACS, or, if in hardcopy, shall be addressed to:

Alabama Department of Environmental Management
Water Division, Mining and Natural Resource Section
Post Office Box 301463
Montgomery, Alabama 36130-1463

Certified and Registered Mail shall be addressed to:

Alabama Department of Environmental Management
Water Division, Mining and Natural Resource Section
1400 Coliseum Boulevard
Montgomery, Alabama 36110-2059

j. Unless authorized in writing by the Department, approved reporting forms required by this Permit or the Department are not to be altered, and if copied or reproduced, must be consistent in format and identical in content to the ADEM approved form. Unauthorized alteration, falsification, or use of incorrectly reproduced forms constitutes noncompliance with the requirements of this Permit and may significantly delay processing of any request, result in denial of the request, result in permit termination, revocation, suspension, modification, or denial of a permit renewal application, or result in other enforcement action.

k. If this Permit is a reissuance, 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.D.1.

2. Noncompliance Notification

a. The Permittee must notify the Department if, for any reason, the Permittee's discharge:

(1) Potentially threatens human health or welfare;

(2) Potentially threatens fish or aquatic life;

(3) Causes an in-stream water quality criterion to be exceeded;

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

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

(6) Exceeds any discharge limitation for an effluent parameter as a result of an unanticipated bypass or upset.

The Permittee shall orally or electronically report any of the above occurrences, describing the circumstances and potential effects 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 or electronic report, the Permittee shall submit to the Director a written report as provided in Part I.D.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 a written report to the Director as provided in Part I.D.2.c. This report must be submitted with the next Discharge Monitoring Report required to be submitted by Part I.D.1. of this Permit after becoming aware of the occurrence of such noncompliance.

c. An electronic Noncompliance Notification Form in a Department-approved format must be submitted to the Director in accordance with Parts I.D.2.a. and b. The completed form must document 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.

3. **Reduction, Suspension, or Termination of Monitoring and/or Reporting**

a. The Director may, with respect to any point source identified on Page 1 of this Permit and described more fully in the Permittee's application, authorize the Permittee to reduce, suspend, or terminate the monitoring and/or reporting required by this Permit upon the submission of a written request for such reduction, suspension, or termination by the Permittee provided:

(1) All mining, processing, or disturbance in the drainage basin(s) associated with the discharge has ceased and site access is adequately restricted or controlled to preclude unpermitted and unauthorized mining, processing, transportation, or associated operations/activity;

(2) Permanent, perennial vegetation has been re-established on all areas mined or disturbed for at least one year since mining has ceased in the drainage basin(s) associated with the surface discharge, or all areas have been permanently graded such that all drainage is directed back into the mined pit to preclude all surface discharges;

(3) Unless waived in writing by the Department, the Permittee has been granted, in writing, a 100% Bond Release, if applicable, by the Alabama Department of Industrial Relations and, if applicable, by the Surface Mining Commission for all areas mined or disturbed in the drainage basin(s) associated with the discharge;

(4) Unless waived in writing by the Department, the Permittee has submitted inspection reports prepared and certified by a Professional Engineer (PE) registered in the State of Alabama or a qualified professional under the PE's direction which certify that the facility has been fully reclaimed or that water quality remediation has been achieved. The first inspection must be conducted approximately one year prior to and the second inspection must be conducted

within thirty days of the Permittee's request for termination of monitoring and reporting requirements;

(5) All surface effects of the mining activity such as fuel or chemical tanks, preparation plants or equipment, old tools or equipment, junk or debris, etc., must be removed and disposed of according to applicable state and federal regulations;

(6) The Permittee's request for termination of monitoring and reporting requirements contained in this Permit has been supported by monitoring data covering a period of at least six consecutive months or such longer period as is necessary to assure that the data reflect discharges occurring during varying seasonal climatological conditions;

(7) The Permittee has stated in its request that the samples collected and reported in the monitoring data submitted in support of the Permittee's request for monitoring termination or suspension are representative of the discharge and were collected in accordance with all Permit terms and conditions respecting sampling times (e.g., rainfall events) and methods and were analyzed in accordance with all Permit terms and conditions respecting analytical methods and procedures;

(8) The Permittee has certified that during the entire period covered by the monitoring data submitted, no chemical treatment of the discharge was provided;

(9) The Permittee's request has included the certification required by Part I.D.1.e. of this Permit; and

(10) The Permittee has certified to the Director in writing as part of the request, its compliance with (1) through (9) above.

b. It remains the responsibility of the Permittee to comply with the monitoring and reporting requirements of this Permit until written authorization to reduce, suspend, or terminate such monitoring and/or reporting is received by the Permittee from the Director.

E. 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 on Page 1 of this Permit and described more fully in the Permittee's application have permanently ceased.

3. Updating Information

a. The Permittee shall inform the Director of any change in the Permittee's mailing address or telephone number or in the Permittee's designation of a facility contact or officer(s) having the authority and responsibility to prevent and abate violations of the AWPCA, the AEMA, the Department's rules and regulations, and the terms and conditions of this Permit,

in writing, no later than ten (10) days after such change. Upon request of the Director, 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**

a. The Permittee shall furnish to the Director, within a reasonable time, any information which the Director may request to determine whether cause exists for modifying, suspending, terminating, or revoking and reissuing this Permit, in whole or in part, or to determine compliance with this Permit. The Permittee shall also furnish to the Director upon request, copies of records required to be maintained by this Permit.

b. The Permittee shall furnish to the Director upon request, within a reasonable time, available information (name, phone number, address, and site location) which identifies offsite sources of material or natural resources (mineral, ore, or other material such as iron, coal, coke, dirt, chert, shale, clay, sand, gravel, bauxite, rock, stone, etc.) used in its operation or stored at the facility.

F. SCHEDULE OF COMPLIANCE

The Permittee shall achieve compliance with the discharge limitations specified in Part I.A. of this Permit in accordance with the following schedule:

Compliance must be achieved by the effective date of this Permit.

PART II OTHER REQUIREMENTS, RESPONSIBILITIES, AND DUTIES

A. OPERATIONAL AND MANAGEMENT REQUIREMENTS

1. Facilities Operation and Management

The Permittee shall at all times 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 this 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 this Permit.

2. Pollution Abatement and/or Prevention Plan

a. The Pollution Abatement and/or Prevention (PAP) Plan shall be prepared and certified by a registered Professional Engineer (PE), licensed to practice in the State of Alabama, and shall include at a minimum:

(1) The information indicated in ADEM Admin Code r. 335-6-9-.03 and ADEM Admin. Code ch. 335-6-9 and its Appendices A and B;

(2) A description of methods which will be implemented to prevent offsite vehicle tracking onto roadways and/or into ditches at the entrances and/or exits of the Permittee's operations;

(3) A description of setbacks from waters of the State in units of linear feet on the horizontal plane; a description of the methods taken to visibly delineate setbacks from waters of the State; and a description of any other actions taken to prevent encroachment upon setbacks;

(4) A description of the methods used to delineate the boundaries of coverage under this Permit such that the boundaries are readily visible during the life of the operation;

(5) A description of any other Best Management Practices (BMPs) which will be implemented to provide control of all nonpoint source pollution that is or may be associated with the Permittee's operations;

b. The PAP Plan shall become a part of this Permit and all requirements of the PAP Plan shall become requirements of this Permit pursuant to ADEM Admin Code r. 335-6-9-.05(2). The PAP Plan shall be amended if the Department determines that the existing sediment control measures, erosion control measures, or other site management practices are ineffective or do not meet the requirements of this Permit.

c. For existing sources, the PAP Plan shall be updated to include all requirements of this section within 180 days of the effective date of this permit. New sources shall submit the PAP plan with the NPDES Individual Permit application prior to coverage under this Permit.

3. Best Management Practices (BMPs)

a. Unless otherwise authorized in writing by the Director, the Permittee shall provide a means of subsurface withdrawal for any discharge from each point source identified on Page 1 of this Permit and described more fully in the Permittee's application. Notwithstanding the above provision, a means of subsurface withdrawal need not be provided for any discharge caused by a 24-hour precipitation event greater than a 10-year, 24-hour precipitation event.

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

c. The Permittee shall minimize the contact of water with overburden, including but not limited to stabilizing disturbed areas through grading, diverting runoff, achieving quick growing stands of temporary vegetation, sealing acid-forming and toxic-forming materials, and maximizing placement of waste materials in back-fill areas.

d. The Permittee shall prepare, submit to the Department for approval, and implement a Best Management Practices (BMPs) Plan for containment of any or all process liquids or solids, in a manner such that these materials do not present a potential for discharge, if so required by the Director. 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.

e. Spill Prevention, Control, and Management

The Permittee shall prepare, implement, and maintain a Spill Prevention, Control and Countermeasures (SPCC) Plan acceptable to the Department that is prepared and certified by a Professional Engineer (PE), registered in the State of Alabama, for all onsite petroleum product or other pollutant storage tanks or containers as provided by ADEM Admin. Code r. 335-6-6-.08(j)5. The Plan shall describe and the Permittee shall implement appropriate structural and/or non-structural spill prevention, control, and/or management pursuant to ADEM Admin. Code r. 335-6-6-.12 (r) sufficient to prevent any spills of pollutants from entering a ground or surface water of the State or a publicly or privately owned treatment works. The Plan shall include at a minimum, the engineering requirements provided in 40 C.F.R. §§112.1. 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. Such containment systems shall be capable of retaining a volume equal to 110 percent of the capacity of the largest tank for which containment is provided. The Plan shall list any materials which the Permittee may utilize to contain and to absorb fuel and chemical spills and leaks. The Permittee shall maintain sufficient amounts of such materials onsite or have sufficient amounts of such materials readily available to contain and/or absorb fuel and chemical spills and leaks. Soil contaminated by chemical spills, oil spills, etc., must be immediately cleaned up or be removed and disposed of in a manner consistent with all State and federal regulations.

f. All surface drainage and storm water runoff which originate within or enters the Permittee's premises and which contains any pollutants or other wastes shall be discharged, if at all, from a point source identified on Page 1 of this Permit and described more fully in the Permittee's application.

g. The Permittee shall take all reasonable precautions to prevent any surface drainage or storm water runoff which originates outside the Permittee's premises and which contains any pollutants or other wastes from entering the Permittee's premises. At no time shall the Permittee discharge any such surface drainage or storm water runoff which enters the Permittee's premises if, either alone or in combination with the Permittee's effluent, the discharge would exceed any applicable discharge limitation specified in Part I.A. of this Permit.

4. Biocide Additives

a. The Permittee shall notify the Director in writing not later than sixty (60) days prior to instituting the use of any biocide corrosion inhibitor or chemical additive in any cooling or boiler system(s) regulated by this Permit. Notification is not 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:

(a) Name and general composition of biocide or chemical;

(b) 96-hour median tolerance limit data for organisms representative of the biota of the water(s) which the discharge(s) enter(s);

(c) Quantities to be used;

(d) Frequencies of use;

(e) Proposed discharge concentrations; and

(f) EPA registration number, if applicable.

b. The use of any biocide or chemical additive containing tributyl tin, tributyl tin oxide, zinc, chromium, or related compounds in any cooling or boiler system(s) regulated by the Permit 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.

5. Facility Identification

The Permittee shall clearly display prior to commencement of any regulated activity and until permit coverage is properly terminated, the name of the Permittee, entire NPDES permit number, facility or site name, and other descriptive information deemed appropriate by the Permittee at an easily accessible location(s) to adequately identify the site, unless approved otherwise in writing by the Department. The Permittee shall repair or replace the sign(s) as necessary upon becoming aware that the identification is missing or is unreadable due to age, vandalism, theft, weather, or other reason.

6. Removed Substances

Solids, sludges, filter backwash, or any other pollutants or other wastes removed in the course of treatment or control of wastewaters shall be disposed of in a manner that complies with all applicable Department rules and regulations.

7. Loss or Failure of Treatment Facilities

Upon the loss or failure of any treatment facility, 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 Part I.A. of this Permit or any other terms or conditions of this Permit, cease, reduce, or otherwise control production and/or discharges until treatment is restored.

8. Duty to Mitigate

The Permittee shall promptly take all reasonable steps to minimize or prevent any violation of this Permit or to mitigate and minimize any adverse impact to waters resulting from noncompliance with any discharge limitation specified in Part I.A. of this Permit, including such accelerated or additional monitoring of the discharge and/or the receiving waterbody as is necessary to determine the nature and impact of the noncomplying discharge.

B. BYPASS AND UPSET

1. Bypass

a. Any bypass is prohibited except as provided in Parts II.B.1.b. and c.

b. A bypass is not prohibited if:

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

(2) The discharge resulting from such bypass enters the same receiving water as the discharge from the permitted outfall;

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

(4) The Permittee monitors the discharge resulting from such bypass at a frequency, at least daily, sufficient to prove compliance with the discharge limitations specified in Part I.A. of this Permit.

c. A bypass is not prohibited and need not meet the discharge limitations specified in Part 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 the Permittee could have installed adequate backup equipment 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, if possible, prior to the anticipated bypass or within 24 hours of an unanticipated bypass, the Permittee is granted such authorization, and Permittee complies with any conditions imposed by the Director to minimize any adverse impact to waters resulting from the bypass.

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

2. Upset

a. The Permittee may seek to demonstrate that noncompliance with technology-based effluent limits occurred as a result of an upset if the conditions of Part II.B.2.b are met and if the Permittee complies with the conditions provided in Part II.B.2.c.

b. If the Permittee wishes to establish the affirmative defense of an upset for technology-based effluent limit noncompliance, the Permittee must demonstrate through properly signed, contemporaneous operating logs, or other relevant evidence that:

(1) An upset occurred and that the Permittee can identify the specific cause(s) of the upset;

(2) The wastewater treatment facility was at the time being properly operated in accordance with Part II.B.d.

(3) The Permittee submitted notice of the noncompliance during the upset as required by Part II.B.2.c; and

(4) The Permittee complied with any remedial measures required under Part II.A.7. of this Permit.

c. If the Permittee wishes to establish the affirmative defense of an upset for technology-based effluent limit noncompliance, the Permittee shall:

(1) No later than 24-hours after becoming aware of the occurrence of the upset, orally report the occurrence and circumstances of the upset to the Director in accordance with Part I.G.2.; and

(2) No later than five (5) days after becoming aware of the occurrence of the upset, furnish the Director with evidence, including properly signed, contemporaneous operating logs, design drawings, construction certification, maintenance records, weir flow measurements, dated photographs, rain gauge measurements, 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 treatment 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 to waters resulting from the upset.

d. A discharge which is an overflow from a treatment facility or system, or an excess discharge from a point source associated with a treatment facility or system and which results from a 24-hour precipitation event larger than a 10-year, 24-hour precipitation event is not eligible to be considered as a result of an upset unless:

(1) The treatment facility or system is designed, constructed, and maintained to contain the maximum volume of wastewater which would be generated by the facility during a 24-hour period without an increase in volume from precipitation and the maximum volume of wastewater resulting from a 10-year, 24-hour precipitation event or to treat the maximum flow associated with these volumes. In computing the maximum volume of wastewater which would result from a 10-year, 24-hour precipitation event, the volume which would result from all areas contributing runoff to the individual treatment facility must be included (i.e., all runoff that is not diverted from the mining area and runoff which is not diverted from the preparation plant area); and

(2) The Permittee takes all reasonable steps to maintain treatment of the wastewater and minimize the amount of overflow or excess discharge.

e. The Permittee has the burden of proof in defense of any enforcement action as a result of noncompliance of technology-based effluent limits the Permittee proposes to attribute to an upset.

C. PERMIT CONDITIONS AND RESTRICTIONS

1. Prohibition against Discharge from Facilities Not Certified

a. Notwithstanding any other provisions of this Permit, if the permitted facility has not obtained or is not required to obtain a permit from the Alabama Surface Mining Commission, any discharge(s) from any point or nonpoint source(s) from the permitted facility which was not certified to the Department on a form approved by the Department by a professional engineer, registered in the State of Alabama, as being designed, constructed, and in accordance with plans and specifications reviewed by the Department is prohibited; or

b. Notwithstanding any other provisions of this Permit, if the permitted facility has obtained or is required to obtain a permit from the Alabama Surface Mining Commission, any discharge(s) from any point or nonpoint source(s) from the permitted facility which is associated with a treatment facility which was not constructed and certified to the Alabama Surface Mining Commission pursuant to applicable provisions of said Commission's regulations, is prohibited until the Permittee submits to the Alabama Surface Mining Commission, certification by a professional engineer, registered in the State of Alabama, certifying that such facility has been constructed in accordance with plans and specifications approved by the Alabama Surface Mining Commission. This requirement shall not apply to pumped discharges from the underground works of underground coal mines where no surface structure is required by the Alabama Surface Mining Commission, provided the Department is notified in writing of the completion or installation of such facilities, and the pumped discharges will meet permit effluent limits without treatment.

2. Permit Modification, Suspension, Termination, and Revocation

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

(1) The violation of any term or condition of this Permit;

(2) The obtaining of this Permit by misrepresentation or the failure to disclose fully all relevant facts;

(3) The submission of materially false or inaccurate statements or information in the permit application or reports required by the Permit;

(4) The need for a change in any condition that requires either a temporary or permanent reduction or elimination of the permitted discharge;

(5) The existence of any typographical or clerical errors or of any errors in the calculation of discharge limitations;

(6) The existence of 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;

(7) The threat of the Permittee's discharge on human health or welfare; or

(8) Any other cause allowed by ADEM Admin. Code ch. 335-6-6.

b. The filing of a request by the Permittee for modification, suspension, termination, or revocation and reissuance of this Permit, in whole or in part, does not stay any Permit term or condition of this Permit.

3. **Automatic Expiration of Permits for New or Increased Discharges**

a. Except as provided by ADEM Admin. Code r. 335-6-6-.02(h) and 335-6-6-.05, if this Permit was issued for a new discharger or new source, it shall expire eighteen months after the issuance date if construction has not begun during that eighteen month period.

b. Except as provided by ADEM Admin. Code r. 335-6-6-.02(h) and 335-6-6-.05, if any portion of this Permit was issued or modified to authorize the discharge of increased quantities of pollutants to accommodate the modification of an existing facility, that portion of this Permit shall expire eighteen months after this Permit's issuance if construction of the modification has not begun within eighteen month period.

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

(1) Begun, or caused to begin as part of a continuous on-site construction program:

(i) Any placement, assembly, or installation of facilities or equipment; or

(ii) 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

(2) 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.

d. The automatic expiration of this Permit for new or increased discharges if construction has not begun within the eighteen month period after the issuance of this Permit may be tolled by administrative or judicial stay.

4. **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 this 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.

5. **Groundwater**

Unless authorized on page 1 of this Permit, this Permit does not authorize any discharge 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.

6. **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. RESPONSIBILITIES

1. **Duty to Comply**

a. The Permittee must comply with all terms and conditions of this Permit. Any permit noncompliance constitutes a violation of the AWPCA, AEMA, 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 Permittee shall comply with effluent standards or prohibitions established under Section 307(a) of the FWPCA for toxic pollutants within the time provided in the regulations that establish these standards or prohibitions, even if this Permit has not yet been modified to incorporate the effluent standard, prohibition or requirement.

c. For any violation(s) of this Permit, the Permittee is subject to a civil penalty as authorized by the AWPCA, the AEMA, the FWPCA, and Code of Alabama 1975, §§22-22A-1 et. seq., as amended, and/or a criminal penalty as authorized by Code of Alabama 1975, §22-22-1 et. seq., as amended.

d. The necessity to halt or reduce production or other activities in order to maintain compliance with the conditions of this Permit shall not be a defense for a Permittee in an enforcement action.

e. Nothing in this Permit shall be construed to preclude or 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.

f. 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.

g. 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.

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, increase the quantity of a discharged pollutant, or that could result in an additional discharge point. This requirement also applies to pollutants 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 knows or has reason to believe that it has begun or expects to begin to discharge any pollutant listed as a toxic pollutant pursuant to Section 307(a) of the FWPCA, 33 U.S.C. §1317(a), any substance designated as a hazardous substance pursuant to Section 311(b)(2) of the FWPCA, 33 U.S.C. §1321(b)(2), any waste listed as a hazardous waste pursuant to Code of Alabama 1975, §22-30-10, or any other pollutants or other wastes which is not subject to any discharge limitations specified in Part I.A. of this Permit and was not reported in the Permittee's application, was reported in the Permittee's application in concentrations or mass rates lower than that which the Permittee expects to begin to be discharged, or has reason to believe has begun to be discharged.

3. Compliance with Toxic or Other Pollutant Effluent 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 Sections 301(b)(2)(C),(D),(E) and (F) of the FWPCA, 33 U.S.C. §1311(b)(2)(C),(D),(E), and (F); 304(b)(2) of the FWPCA, 33 U.S.C. §1314(b)(2); or 307(a) of the FWPCA, 33 U.S.C. §1317(a), for a toxic or other pollutant discharged by the Permittee, and such standard or prohibition is more stringent than any discharge limitation on the pollutant specified in Part I.A. of this Permit or controls a pollutant not limited in Part I.A. of this Permit, this Permit shall be modified to conform to the toxic or other 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 or other pollutant effluent standard or prohibition before the effective date of such standard or prohibition, the authorization to discharge in this Permit shall be void to the extent that any discharge limitation on such pollutant in Part I.A. of this Permit exceeds or is inconsistent with the established toxic or other pollutant effluent standard or prohibition.

4. Compliance with Water Quality Standards and Other Provisions

a. 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 will assure compliance with applicable water quality standards. However, this Permit does not relieve the Permittee from compliance with applicable State water quality standards established in ADEM Admin. Code ch. 335-6-10, and does not preclude the Department from taking action as appropriate to address the potential for contravention of applicable State water quality standards which could result from discharges of pollutants from the permitted facility.

b. Compliance with Permit terms and conditions notwithstanding, if the Permittee's discharge(s) from point source(s) identified on Page 1 of this Permit cause(s) or contribute(s) to a condition in contravention of State water quality standards, the Department may require abatement action to be taken by the Permittee, modify the Permit pursuant to the Department's rules and regulations, or both.

c. If the Department determines, on the basis of a notice provided pursuant to Part II.C.2. of 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 noticed act until the Permit has been modified.

5. Compliance with Statutes and Rules

a. This Permit has been issued under ADEM Admin. Code div. 335-6. All provisions of this division, that are applicable to this Permit, are hereby made a part of this Permit. A copy of this division may be obtained for a small charge from the Office of General Counsel, Alabama Department of Environmental Management, 1400 Coliseum Blvd., Montgomery, AL 36110-2059.

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.

6. Right of Entry and Inspection

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

a. Enter upon the Permittee's premises where a regulated facility or activity 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 this Permit;

c. Inspect at reasonable times any facilities, equipment (including monitoring and control equipment), practices, or operations regulated or required under this Permit; and

d. Sample or monitor at reasonable times, for the purposes of assuring Permit compliance or as otherwise authorized by the AWPCA, any substances or parameters at any location.

7. 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 with the Department a complete permit application for reissuance of this Permit at least 180 days prior to its expiration. **Applications must be submitted electronically via the Department's current electronic permitting system. The Department's current online permitting system, Alabama Environmental Permitting and Compliance System (AEPACS), can be found online at https://aepacs.adem.alabama.gov/nviro/ncore/external/home.**

b. If the Permittee does not desire to continue the discharge(s) allowed by this Permit, the Permittee shall notify the Department at least 180 days prior to expiration of this Permit of the Permittee's intention not to request reissuance of this Permit. This notification must include the information required in Part I.D.4.a. and be signed by an individual meeting the signatory requirements for a permit application as set forth in ADEM Admin. Code r. 335-6-6-.09.

c. Failure of the Permittee to submit to the Department a complete application for reissuance of this Permit at least 180 days prior to the expiration date of this Permit will void the automatic continuation of this Permit provided by ADEM Admin. Code r. 335-6-6-.06; and should this Permit not be reissued for any reason, any discharge after the expiration of this Permit will be an unpermitted discharge.

PART III ADDITIONAL REQUIREMENTS, CONDITIONS, AND LIMITATIONS

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 this Permit shall, upon conviction, be subject to penalties and/or imprisonment as provided by the AWPCA and/or the AEMA.

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 punished as provided by applicable State and Federal law.

3. Permit Enforcement

This NPDES Permit is a Permit for the purpose of the AWPCA, the AEMA, and the FWPCA, and as such all terms, conditions, or limitations of this Permit are enforceable under State and Federal law.

4. Relief From Liability

Except as provided in Part II.B.1. (Bypass) and Part II.B.2. (Upset), nothing in this Permit shall be construed to relieve the Permittee of civil or criminal liability under the AWPCA, AEMA, 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 to under Section 311 of the FWPCA, 33 U.S.C. §1321.

C. AVAILABILITY OF REPORTS

Except for data determined to be confidential under Code of Alabama 1975, §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. Knowingly making any false statement in any such report may result in the imposition of criminal penalties as provided for in Section 309 of the FWPCA, 33 U.S.C. §1319, and Code of Alabama 1975, §22-22-14.

D. DEFINITIONS

1. Alabama Environmental Management Act (AEMA) - means Code of Alabama 1975, §§22-22A-1 et. seq., as amended.

2. Alabama Water Pollution Control Act (AWPCA) - means Code of Alabama 1975, §§22-22-1 et. seq., as amended.

3. 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).

4. Arithmetic Mean - means the summation of the individual values of any set of values divided by the number of individual values.

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. Controlled Surface Mine Drainage – means any surface mine drainage that is pumped or siphoned from the active mining area.

9. 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.

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

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

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

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

14. Director - means the Director of the Department or his authorized representative or designee.

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

16. Discharge monitoring report (DMR) - means the form approved by the Director to accomplish monitoring report requirements of an NPDES Permit.

17. DO - means dissolved oxygen.

18. E. coli – means the pollutant parameter Escherichia coli.

19. 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.

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

21. Federal Water Pollution Control Act (FWPCA) - means 33 U.S.C. §§1251 et. seq., as amended.

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

23. 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).

24. 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.

25. 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.

26. 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.

27. mg/L - means milligrams per liter of discharge.

28. MGD - means million gallons per day.

29. Monthly Average - means, other than for E. coli bacteria, the arithmetic mean of all the composite or grab samples taken for the daily discharges collected in one month period. The monthly average for E. coli 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. (Zero discharges shall not be included in the calculation of monthly averages.)

30. 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. From which the discharge of pollutants did not commence 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.

31. New Source - means:

    a. A new source as defined for coal mines by 40 CFR Part 434.11 (1994); and

    b. Any building, structure, facility, or installation from which there is or may be a discharge of pollutants, the construction of which commenced:

        (1) After promulgation of standards of performance under Section 306 of FWPCA which are applicable to such source; or

        (2) After proposal of standards of performance in accordance with Section 306 of the FWPCA which are applicable to such source, but only if the standards are promulgated in accordance with Section 206 within 120 days of their proposal.

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

33. 1-year, 24-hour precipitation event - means the maximum 24-hour precipitation event with a probable recurrence interval of once in one year as defined by the National Weather Service and Technical Paper No. 40, "Rainfall Frequency Atlas of the U.S.," May 1961, or equivalent regional or rainfall probability information developed therefrom.

34. Permit application - means forms and additional information that are required by ADEM Admin. Code r. 335-6-6-.08 and applicable permit fees.

35. 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. §1362(14).

36. Pollutant - includes for purposes of this Permit, but is not limited to, those pollutants specified in Code of Alabama 1975, §22-22-1(b)(3) and those effluent characteristics, excluding flow, specified in Part I.A. of this Permit.

37. Pollutant of Concern - means those pollutants for which a water body is listed as impaired or which contribute to the listed impairment.

38. Pollution Abatement and/or Prevention Plan (PAP Plan) – mining operations plan developed to minimize impacts on water quality to avoid a contravention of the applicable water quality standards as defined in ADEM Admin. Code r. 335-6-9-.03

39. Preparation, Dry - means a dry preparation facility within which the mineral/material is cleaned, separated, or otherwise processed without use of water or chemical additives before it is shipped to the customer or otherwise utilized. A dry preparation plant includes all ancillary operations and structures necessary to clean, separate, or otherwise process the mineral/material, such as storage areas and loading facilities. Dry preparation also includes minor water spray(s) used solely for dust suppression on equipment and roads to minimize dust emissions.

40. Preparation, Wet - means a wet preparation facility within which the mineral/material is cleaned, separated, or otherwise processed using water or chemical additives before it is shipped to the customer or otherwise utilized. A wet preparation plant includes all ancillary operations and structures necessary to clean, separate, or otherwise process the mineral/material, such as storage areas and loading facilities. Wet preparation also includes mineral extraction/processing by dredging, slurry pumping, etc.

41. 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".

42. Publicly Owned Treatment Works (POTW) - 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.

43. Receiving Stream - means the "waters" receiving a "discharge" from a "point source".

44. 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.

45. 10-year, 24-hour precipitation event - means that amount of precipitation which occurs during the maximum 24-hour precipitation event with a probable recurrence interval of once in ten years as

defined by the National Weather Service and Technical Paper No. 40, "Rainfall Frequency Atlas of the U.S.," May 1961, or equivalent regional or rainfall probability information developed therefrom.

46. TKN - means the pollutant parameter Total Kjeldahl Nitrogen.

47. TON - means the pollutant parameter Total Organic Nitrogen.

48. TRC - means Total Residual Chlorine.

49. TSS – means the pollutant parameter Total Suspended Solids

50. Treatment facility and treatment system - means all structures which contain, convey, and as necessary, chemically or physically treat mine and/or associated preparation plant drainage, which remove pollutants limited by this Permit from such drainage or wastewater. This includes all pipes, channels, ponds, tanks, and all other equipment serving such structures.

51. 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.

52. 24-hour precipitation event - means that amount of precipitation which occurs within any 24-hour period.

53. 2-year, 24-hour precipitation event - means the maximum 24-hour precipitation event with a probable recurrence interval of once in two years as defined by the National Weather Service and Technical Paper No. 40, "Rainfall Frequency Atlas of the U.S.," May 1961, or equivalent regional or rainfall probability information developed therefrom.

54. 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 control of the Permittee. An upset does not include noncompliance to the extent caused by operational error, improperly designed treatment facilities, inadequate facilities, lack of preventive maintenance, or careless or improper operation.

55. 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, §22-22-1(b)(2). "Waters" include all "navigable waters" as defined in §502(7) of the FWPCA, 33 U.S.C. §1362(7), which are within the State of Alabama.

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

57. 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.

E. 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.

F. PROHIBITIONS AND ACTIVIES NOT AUTHORIZED

1. Discharges from disposal or landfill activities as described in ADEM Admin. Code div. 335-13 are not authorized by this Permit unless specifically approved by the Department.

2. Relocation, diversion, or other alteration of a water of the State is not authorized by this Permit unless specifically approved by the Department.

3. Lime or cement manufacturing or production and discharge of process waters from such manufacturing or production is not authorized by this Permit unless specifically approved by the Department.

4. Concrete or asphalt manufacturing or production and discharge of process waters from such manufacturing or production is not authorized by this Permit unless specifically approved by the Department.

5. 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.

G. DISCHARGES TO IMPAIRED WATERS

1. This Permit does not authorize new sources or new discharges of pollutants of concern to impaired waters unless consistent with an EPA-approved or EPA-established Total Maximum Daily Load (TMDL) and applicable State law, or unless compliance with the limitations and requirements of the Permit ensure that the discharge will not contribute to further degradation of the receiving stream. Impaired waters are those that do not meet applicable water quality standards and are identified on the State of Alabama's §303(d) list or on an EPA-approved or EPA-established TMDL. Pollutants of concern are those pollutants for which the receiving water is listed as impaired or contribute to the listed impairment.

2. Facilities that discharge into a receiving stream which is listed on the State of Alabama's §303(d) list of impaired waters, and with discharges that contain the pollutant(s) for which the waters are impaired, must within six (6) months of the Final §303(d) list approval, document in its BMP plan how the BMPs will control the discharge of the pollutant(s) of concern, and must ensure that there will be no increase of the pollutants of concern. A monitoring plan to assess the effectiveness of the BMPs in achieving the allocations must also be included in the BMP plan.

3. If the facility discharges to impaired waters as described above, it must determine whether a TMDL has been developed and approved or established by EPA for the listed waters. If a TMDL is approved or established during this Permit cycle by EPA for any waters into which the facility discharges, the facility must review the applicable TMDL to see if it includes requirements for control of any water discharged by the Permittee. Within six (6) months of the date of TMDL approval or establishment, the facility must notify the Department on how it will modify its BMP plan to include best management practices specifically targeted to achieve the allocations prescribed

by the TMDL, if necessary. Any revised BMP plans must be submitted to the Department for review. The facility must include in the BMP plan a monitoring component to assess the effectiveness of the BMPs in achieving the allocations.

ALABAMA DEPARTMENT OF ENVIRONMENTAL MANAGEMENT
WATER DIVISION

NPDES INDIVIDUAL PERMIT RATIONALE

Company Name:	MS Industries II, LLC
Facility Name:	Masterson Site
County:	Lawrence
Permit Number:	AL0082759
Prepared by:	William McClimans
Date:	February 10, 2026
Receiving Waters:	Unnamed Tributary to Hogwood Branch
Permit Coverage:	Sandstone, Dirt and Chert, Shale and Clay, and Bauxitic Clay Mine, Wet and Dry Preparation, Transportation and Storage, and Associated Areas
SIC Code:	1429, 1442 & 1459

The Department has made a tentative determination that the available information is adequate to support modification and reissuance of this permit. The modification is to correct an administrative error from the previous final permit. The previous permit listed outfalls as 001-1 and 002-1 instead of the correct outfalls as 003-1 and 004-1. The previous draft permit (October 8, 2020) that was placed on public notice listed the correct outfalls as 003-1 and 004-1.

This proposed permit covers a wet and dry preparation sandstone, dirt and chert, shale and clay, and bauxitic clay mine, and associated areas which discharge to surface waters of the state. Sand and gravel, slate, and iron compounds are estimated to make up approximately 14% of the mined material. Asphaltic sandstone mining is not authorized by this Permit.

This proposed permit authorizes treated discharges into a stream segment, other State water, or local watershed that currently has a water quality classification of Fish and Wildlife (F&W) per ADEM Admin. Code Ch. 335-6-11. If the requirements of the proposed permit are fully implemented, the facility will not discharge pollutants at levels that will cause or contribute to a violation of the F&W classification.

Full compliance with the proposed permit terms and conditions is expected to be protective of instream water quality and ensure consistency with applicable instream State water quality standards (WQS) for the receiving stream.

The mining discharge limitations for Total Suspended Solids, Total Iron as Fe, and Total Aluminum as Al are based on best professional judgement with consideration given to bauxite ore limitations established in 40 CFR Part 440.20. These parameters are indicative of the pollutants typically discharged by similar facilities covered by similar permits and have been shown not to adversely affect water quality.

The instream water quality standards for pH of 6.0 – 8.5 s.u. are based on ADEM Admin. Code r. 335-6-10-.09 for streams classified as Fish and Wildlife. The proposed limitations have been shown to be protective of water quality. Regardless, the discharge shall not cause the in-stream pH to deviate more than 1.0 s.u. from the normal or natural pH, nor be less than 6.0 s.u. nor greater than 8.5 s.u.

The applicant has requested, in accordance with 40 CFR Part 122.21 and their NPDES permit application, a waiver from testing for the Part A, B, and C pollutants listed in the EPA Form 2C and 2D that are not addressed in their application. They have also certified that due to the processes involved in their mining activity these pollutants are believed to be not present in the waste stream.

The Pollution Abatement/Prevention (PAP) plan for this facility has been prepared by a professional engineer (PE) registered in the State of Alabama and is designed to ensure reduction of pollutants in the waste stream to a level that, if operated properly, the discharge will not contribute to or cause a violation of applicable State WQS. The proposed permit terms and conditions are predicated on the basis of ensuring a reduction of pollutants in the discharge to a level that reduces the potential of contributing to or causing a violation of applicable State WQS.

In accordance with ADEM Admin. Code r. 335-6-3-.07 the design PE, as evidenced by their seal and/or signature on the application, has accepted full responsibility for the effectiveness of the waste treatment facility to treat the Permittee's effluent to meet NPDES permit limitations and requirements, and to fully comply with Alabama's WQS, when such treatment facilities are properly operated.

If there is a reasonable potential that a pollutant present in the treated discharges from a facility could cause or contribute to a contravention of applicable State WQS above numeric or narrative criteria, 40 CFR Part 122 requires the Department to establish effluent limits using calculated water quality criterion, establish effluent limits on a case-by-case basis using criteria established by EPA, or establish effluent limits based on an indicator parameter. Based on available information, potential pollutants discharged from this facility, if discharged within the concentrations allowed by this permit, would not have a reasonable potential to cause or contribute to a contravention of applicable State WQS.

Pursuant to ADEM Admin. Code r. 335-6-6-.12(r) this permit requires the Permittee to design and implement a Spill Prevention Control and Countermeasures (SPCC) plan for all stored chemicals, fuels and/or stored pollutants that have the potential to discharge to a water of the State. This plan must meet the minimum engineering requirements as defined in 40 CFR Part 112 and must provide for secondary containment adequate to control a potential spill.

The applicant is not proposing discharges of pollutants to a water of the State with an approved Total Maximum Daily Load (TMDL).

The applicant is not proposing discharges into a stream segment or other State water that is included on Alabama's current CWA §303(d) list.

The applicant is not proposing new discharges of pollutant(s) to an ADEM identified Tier I water.

The proposed permit does not authorize new or increased discharges of pollutants to a Tier II water. Therefore, the Antidegradation Policy (ADEM Admin. Code 335-6-10-.04) does not apply to this permit.

NPDES Individual Permit - Modification/Reissuance - Mining (Form 315)

version 4.9

(Submission #: HQE-FE53-3M07C, version 1)

Details

Submission ID HQE-FE53-3M07C

Form Input

General Instructions

NPDES Individual Application - Mining and Coalbed Methane Operations - Mod/Reissuance (Form 315/549)

PLEASE CONTACT YOUR ASSIGNED PERMIT CONTACT TO DISCUSS THE TYPE OF MODIFICATION YOU SHOULD APPLY FOR BEFORE COMPLETING THIS FORM.

This form should be used to submit the following permit requests for individually permitted Mining and Coalbed Methane Operations:

Modifications/Reissuances that include Permit Transfers and/or Permittee/Facility Name Changes
Minor Modifications
Major Modifications
Reissuances
Reissuance of a permit on or after the current permit's expiration date
Revocation and Reissuance before the current permit's expiration date

Please complete all questions and attach all necessary documentation as prompted throughout the application process. Incomplete or incorrect information will delay processing.

Applicable Fees:
Minor Modifications
$3,400 (Mineral/Resource Extraction Mining, Storage Transloading, Dry Processing)
$3.940 (Wet Preparation, Processing, Beneficiation)
$3,940 (Coalbed Methane Operations)
Major Modifications
$5,820 (Mineral/Resource Extraction Mining, Storage Transloading, Dry Processing)
$6,860 (Wet Preparation, Processing, Beneficiation)
$6,860 (Coalbed Methane Operations)
Reissuances
$5,820 (Mineral/Resource Extraction Mining, Storage Transloading, Dry Processing)
$6,860 (Wet Preparation, Processing, Beneficiation)
$6,860 (Coalbed Methane Operations)
Potential Add-on Fees for Major Modifications and Reissuances
$1,015 (Biomonitoring & Toxicity Limits)
$2,705 (Review of Model Performed by Others)
$4,855 (Modeling – desktop)
For assistance, please click here to determine the permit staff responsible for the site or call (334) 394-4372.

Processing Information

Purpose of Application
Reissuance of Permit Due to Approaching Expiration

Please indicate if the Permittee is applying for a permit transfer and/or name change in addition to permit modification or reissuance:
None

Action Type
Reissuance

Briefly describe any planned changes at the facility that are included in this reissuance application:
No changes

Is this a coalbed methane operation?
No

Permit Information

Permit Number
AL0082759

Current Permittee Name
MS Industries II, LLC

Permittee

Permittee Name
MS Industries II, LLC

Mailing Address

101 Jackson Ave N

Russellville, AL 35653

Responsible Official

Prefix
Mr.

First Name	Last Name
Steven	Smith

Title
CEO

Organization Name
MS Industries II, LLC

Phone Type	Number	Extension
Business	2563836740	

Email
ssmsindustries@gmail.com

Mailing Address

101 JACKSON AVE N

RUSSELLVILLE, AL 35653-2229

Existing Permit Contacts

Affiliation Type	Contact Information	Remove?
Permittee	MS Industries II, LLC	*NONE PROVIDED*
Notification Recipient,Responsible Official	Steven D. Smith, MS Industries II, LLC	*NONE PROVIDED*

Facility/Operations Information

Facility/Operations Name
Masterson Site

Permittee Organization Type
LLC

Parent Corporation and Subsidiary Corporations of Applicant, if any:
none

Landowner(s) Name, Address and Phone Number:
MS Industries II, LLC
101 Jackson Avenue North
Russellville, AL 35653
256-383-6740

Sub-contractor(s)/Operator(s), if known:
none

Is the "Company/Permittee" properly registered and in good standing with the Alabama Secretary of State's office?
Yes

Facility/Operations Address or Location Description

2228 County Road 135

Town Creek, AL 35672

Facility/Operations County (Front Gate)
Lawrence

Do the operations span multiple counties?
No

Detailed Directions to the Facility/Operations
From Highway 157, turn south onto CR 235 for approximately 2 miles to intersection of CR 236; then right (west) for 1/2 mile; then left (south) on CR 135 for 1/2 mile to site

Please refer to the link below for Lat/Long map instruction help:
Map Instruction Help

Facility/Operations Front Gate Latitude and Longitude
34.58469400000000,-87.48647200000001

2228 County Road 135, Town Creek, AL

Township(s), Range(s), Section(s) (Note: If you are submitting multiple TRSs, please separate each TRS by a semicolon. Example: T19S,R1E,S15; T20S,R2E,S16)
Lawrence County T5S, R9W, S28
W 1/2 of NE 1/4 of SE 1/4 and NE 1/4 of SE 1/4

SIC Code(s) [Please select your primary SIC code first]:
1446-Industrial Sand
1499-Miscellaneous Nonmetallic Minerals Except Fuels

NAICS Code(s) [Please select your primary NAICS code first]:
212322-Industrial Sand Mining
212323-Kaolin, Clay, And Ceramic And Refractory Minerals Mining

Facility/Operations Contact

Prefix
Mr.

First Name	Last Name
John	Christmas

Title
COO

Organization Name
MS Industries II, LLC

Phone Type	Number	Extension
Mobile	4045029375	
Other	2563836740	

Email
jchristmas@msind.com

Member Information

Identify the name, title/position, and unless waived in writing by the Department, the resident address of every officer (a PO Box is not acceptable), general partner, LLP partner, LLC member, investor, director, or person performing a function similar to a director, of the applicant, and each person who is the record or beneficial owner of 10 percent or more of any class of voting stock of the applicant, or any other responsible official(s) of the applicant with legal or decision making responsibility or authority for the facility/operations (if this does not apply, then enter N/A after selecting "Manually Enter in Table"):

List of Names/Titles/Addresses will be entered by:
Manually Entering in Table

Name	Title/Position	Physical Address of Residence
Steven D. Smith	CEO/Manager	101 Jackson Ave N, Russellville, AL 35653
John F. Christmas	COO	101 Jackson Ave N, Russellville, AL 35653

Other than the "Company/Permittee", identify the name of each corporation, partnership, association, and single proprietorship for which any individual identified above is or was an officer, general partner, LLP partner, LLC member, investor, director, or individual performing a function similar to a director, or principal (10% or more) stockholder, that had an Alabama NPDES permit at any time during the five year (60 month) period immediately preceding the date on which this form is signed (if this does not apply, then enter N/A after selecting "Manually Enter in Table"):

List of Corporations/Partnerships/etc, Names and Titles will be entered by:
Manually Entering in Table

Name of Corporation, Partnership, Association, or Single Proprietorship	Name of Individual	Title/Position in Corporation, Partnership, Association, or Single Proprietorship
AJSWC, LLC	Steven D. Smith	Managing Partner

Additional Contacts (1 of 2)

ADDITIONAL CONTACTS: Owner

Contact Type
Owner

Contact

First Name **Last Name**
Steven D. Smith

Title
CEO

Organization Name
MS Industries II, LLC

Phone Type **Number** **Extension**
Business 2563836740

Email
ssmsindustries@gmail.com

Address
101 JACKSON AVE N
RUSSELLVILLE, AL 35653-2229

Additional Contacts (2 of 2)

ADDITIONAL CONTACTS:

Contact Type
NONE PROVIDED

Contact

First Name	Last Name
John	Christmas

Title
COO

Organization Name
MS Industries II, LLC

Phone Type	Number	Extension
Mobile	4045029375	
Other	2563836740	

Email
jchristmas@msind.com

Address
101 JACKSON AVE N
RUSSELLVILLE, AL 35653-2229

Compliance History

Has the applicant ever had any of the following:

Event	Apply?
An Alabama NPDES, SID, or UIC permit suspended or terminated	No
An Alabama or federal environmental permit suspended/terminated	No
An Alabama State Oil Gas Board permit or other approval suspended or terminated	No
An Alabama or federal performance/environmental bond, or similar security deposited in lieu of a bond, or portion thereof, forfeited	No

Has the applicant, parent corporation, subsidiary, general partner, LLP partner, or LLC Member had any Warning Letters, Notice of Violations (NOVs), Administrative Actions, or litigation filed by ADEM or EPA during the three year (36 month) period preceding the date on which this form is signed?
No

For this facility, list any other NPDES or other environmental permits (including permit numbers), authorizations, or certifications that have been applied for or issued within the State by ADEM, EPA, Alabama Department of Labor (ADOL), US Army Corp of Engineers (USACE), or other agency, to the applicant, parent corporation, subsidiary, or LLC member whether presently effective, expired, suspended, revoked, or terminated:
ADOL File Number 42-MS-3, Permit Number 016357

For other facilities, list any other NPDES or other ADEM permits (including permit numbers), authorizations, or certifications that have been applied for or issued within the State by ADEM, EPA, ASMC, ADOL, or USACE, to the applicant, parent corporation, subsidiary, or LLC member whether presently effective, expired, suspended, revoked, or terminated:
AJSWC, LLC: NPDES #ALR10AM094, Air Permit #701-0060-X001;
MS Industries II, LLC: NPDES #ALG890415, Air Permit #704-0027 (ADOL File Number 42-MS-4, Permit Number 015598 (voluntarily terminated); General NPDES Permit Number ALG890415 (voluntarily terminated)

Anti-Degradation Evaluation

Pursuant to ADEM Admin. Code ch. 335-6-10-.12(9), responses to the following questions must be provided by the applicant requesting NPDES permit coverage for new or expanded discharges of pollutant(s) to Tier 2 waters (except discharges eligible for coverage under general permits). As part of the permit application review process, the Department is required to consider, based on the applicant's demonstration, whether the proposed new or increased discharge to Tier 2 waters is necessary for important economic or social development in the area in which the waters are located. Does this modification/reissuance include new or expanded discharges to Tier II water(s)?
No

Activity Description & Information

Narrative description of activity(s):
Clay, sand, ores and other minerals mining

Total Facility/Operations Area (acres)
114.00

Total Disturbed Area (acres)
99.00

Anticipated Commencement Date
07/01/2025

Anticipated Completion Date
07/01/2035

Please identify which of the following apply to this operation:

Activity/Condition	Appy?
An existing facility/operation which currently results in discharges to State waters?	Yes
A proposed facility/operation which will result in a discharge to State waters?	No
Be located within any 100-year flood plain?	No
Discharge to Municipal Separate Storm Sewer?	No
Discharge to waters of or be located in the Coastal Zone?	No
Need/have ADEM UIC permit coverage?	No
Be located on Indian/historically significant lands?	No
Need/have ADEM SID permit coverage?	No
Need/have ASMC permit coverage?	No
Need/have State Oil & Gas Board permit coverage?	No
Need/have ADOL permit coverage?	Yes
Generate, treat, store, or dispose of hazardous or toxic waste?	No
Be located in or discharge to a Public Water Supply (PWS) watershed or be located within mile of any PWS well?	No
Incised pit	No

Does your facility/operation use cooling water?
No

Material to be Removed, Processed, or Transloaded

Material To Be Removed, Processed, Or Transloaded (Note: Sum must equal 100.)

Mineral(s)/Mineral product(s)	%
Dirt and/or Chert	30
Bauxitic Clay	10
Sand and/or Gravel	5
Shale and/or Common Clay	15
Other: Slate	5
Other: Iron Compounds	4
Other: Sandstone (non-asphaltic)	31
	Sum: 100

Proposed Activity To Be Conducted

Type(s) of activity presently conducted at applicant's existing facility or proposed to be conducted at facility (Select Yes or No)):

Activity	Apply?
Adjacent/associated asphalt/concrete plant(s)	No
Alternative fuels operation	No
Auger mining	No
Cement production	No
Chemical processing or leaching	No
Chemicals used in process or wastewater treatment (coagulant, biocide, etc.)	No
Construction related temporary borrow pits/areas	No
Creek/stream crossings	No
Dredging	No
Excavation	No
Grading, clearing, grubbing, etc.	Yes
Hydraulic mining	No
Hydraulic mining, dredging, instream or between stream-bank mining	No
Lime production	No
Low volume sewage treatment package plant	No
Mineral dry processing (crushing & screening)	Yes
Mineral loading	Yes
Mineral storing	Yes
Mineral transportation	Yes
Mineral wet preparation	Yes
Onsite construction debris or equipment storage/disposal	Yes
Onsite mining debris or equipment storage/disposal	Yes
Other beneficiation & manufacturing operations	No
Pre-construction ponded water removal	No
Pre-mining logging or land clearing	Yes
Preparation plant waste recovery	No
Quarrying	Yes
Reclamation of disturbed areas	Yes
Solution mining	No
Surface mining	Yes
Synthetic fuel production	No
Underground mining	No
Waterbody relocation or other alteration	No
Within-bank mining	No

If the operation will include activities other than those listed above, please describe them below:

NONE PROVIDED

If the type of activity presently conducted or proposed is Mineral Transportation, please indicate which of the following apply:

Barge	Apply?
Barge	No
Rail	No
Truck	Yes

Fuel - Chemical Handling, Storage, & Spill Prevention Control & Countermeasures (SPCC) Plan

Will fuels, chemicals, compounds, or liquid waste be used or stored onsite?

Yes

Please identify the fuel, chemicals, compounds, or liquid waste and indicate the volume of each:

Volume (gallons)	Contents
1,000.0	diesel fuel
100.0	used motor oil
250.0	motor oil
550.0	oil

SPCC Plan

SPCC 7-31-2025.pdf - 08/04/2025 01:08 PM

Comment

NONE PROVIDED

ASMC Regulated Entities

Is this a coal mining operation regulated by ASMC?

No

Topographic Map Submittal

Topographic Map

Attach to this application a 7.5 minute series U.S.G.S. topographic map(s) or equivalent map(s) no larger than, or folded to a size of 8.5 by 11 inches (several pages may be necessary), of the area extending to at least one mile beyond property boundaries. The topographic or equivalent map(s) must include a caption indicating the name of the topographic map, name of the applicant, facility name, county, and township, range, & section(s) where the facility are located. Unless approved in advance by the Department, the topographic or equivalent map(s), at a minimum, must show: a) An accurate outline of the area to be covered by the permit (b) An outline of the facility (c) All existing and proposed disturbed areas (d) Location of intake and discharge areas (e) Proposed and existing discharge points (f) Perennial, intermittent, and ephemeral streams (g) Lakes, springs, water wells, wetlands (h) All known facility dirt/improved access/haul roads (i) All surrounding unimproved/improved roads (j) High-tension power lines and railroad tracks (k) Contour lines, township-range-section lines (l) Drainage patterns, swales, washes (m) All drainage conveyance/treatment structures (ditches, berms, etc.) (n) Any other pertinent or significant feature.

Topographic Map

Hatton Quad 7-31-2025.pdf - 08/04/2025 09:44 AM

Comment

NONE PROVIDED

Detailed Facility Map Submittal

Detailed Facility Map

1 Title Page MS Industries 7-31-2025 11x17.pdf - 08/03/2025 12:59 PM
2 Overall Site Plan MS Industries 7-31-2025 11x17.pdf - 08/03/2025 12:59 PM
3 Overall Mine Plan MS Industries 7-31-2025 11x17.pdf - 08/03/2025 12:59 PM
4 Mine 1 Details MS Industries 7-31-2025 11x17.pdf - 08/03/2025 12:59 PM
5 Mine 2 Details MS Industries 7-31-2025 11x17.pdf - 08/03/2025 12:59 PM
6 Sediment Pond 3 MS Industries 7-31-2025 11x17.pdf - 08/03/2025 12:59 PM
7 Erosion Control MS Industries 7-31-2025 11x17.pdf - 08/03/2025 12:59 PM
8 Details 1 MS Industries 7-31-2025 11x17.pdf - 08/03/2025 12:59 PM
9 Details 2 MS Industries 7-31-2025 11x17.pdf - 08/03/2025 12:59 PM

Comment

NONE PROVIDED

Outfalls (1 of 2)

Outfall Identifier: 003

Feature Type

Outfall (External)

Outfall Identifier
003

Outfall Status
Existing

> Please be aware that you should only mark an outfall status as existing if (1) the Department has been previously notified that it was constructed as proposed or (2) it began discharge prior to this application. A proposed outfall is one that is being newly added to the permit OR one that has never discharged or has never been authorized by the Department to discharge. Should you have any questions about which status to select, please contact the Department's permit engineer for this site.

Permit Action
Reissue

Receiving Water
Hogwood Branch

Check below if the discharge enters the receiving water via an unnamed tributary.
Unnamed Tributary

Location of Outfall
34.58722200000000, -87.48222199999999

Are the location coordinates above still correct for this outfall?
Yes

Distance to Receiving Water (ft)
100.0

Disturbed Area (acres)
42.0

Drainage Area (acres)
42.0

303(d) Segment?
No

TMDL Segment?
No

Please do not add a new outfall unless you are requesting a modification that includes a new outfall. All of the currently permitted outfalls are already included in this form. If you add an outfall in error, please choose "Delete" under "Permit Action" for the outfall. If you have any questions, please contact your permit engineer BEFORE proceeding.

Outfalls (2 of 2)

Outfall Identifier: 004

Feature Type
Outfall (External)

Outfall Identifier
004

Outfall Status
Existing

Please be aware that you should only mark an outfall status as existing if (1) the Department has been previously notified that it was constructed as proposed or (2) it began discharge prior to this application. A proposed outfall is one that is being newly added to the permit OR one that has never discharged or has never been authorized by the Department to discharge. Should you have any questions about which status to select, please contact the Department's permit engineer for this site.

Permit Action
Reissue

Receiving Water
Hogwood Branch

Check below if the discharge enters the receiving water via an unnamed tributary.
Unnamed Tributary

Location of Outfall
34.58861100000000, -87.48227799999999

Are the location coordinates above still correct for this outfall?
Yes

Distance to Receiving Water (ft)
50.0

Disturbed Area (acres)
12.0

Drainage Area (acres)
15.0

303(d) Segment?
No

TMDL Segment?
No

Please do not add a new outfall unless you are requesting a modification that includes a new outfall. All of the currently permitted outfalls are already included in this form. If you add an outfall in error, please choose "Delete" under "Permit Action" for the outfall. If you have any questions, please contact your permit engineer BEFORE proceeding.

Discharge Characterization

EPA Form 2C, EPA Form 2D, and/or ADEM Form 567 Submittal
Yes, pursuant to 40 CFR 122.21, the applicant requests a waiver for completion of EPA Form 2C, EPA Form 2D, and ADEM Form 567 and certifies that the operating facility will discharge treated stormwater only; that chemical/compound additives are not used (unless waived in writing by the Department on a programmatic, categorical, or individual compound/chemical basis); that there are no process, manufacturing, or other industrial operations or wastewaters, including but not limited to lime or cement production and synfuel operations; and that coal and coal products are not mined nor stored onsite.

Please download the following Excel file to enter your information. Once complete, please attach to the below control.
Download spreadsheet here.

Required attachment:
Discharge Characterization Workbook.xlsx - 07/30/2025 12:12 PM
Comment
NONE PROVIDED

Please download the following Excel file to enter your information. Once complete, please attach to the below control.
Download spreadsheet here.

Required attachment:
Discharge Characterization Workbook.xlsx - 07/30/2025 12:14 PM
Comment
NONE PROVIDED

Discharge Structure Description & Pollutant Source

Please download the following Excel file to enter your information. Once complete, please attach to the below control.
Download spreadsheet here.

Required attachment:
Discharge Structure Description & Pollutant Source Workbook.xlsx - 07/30/2025 12:14 PM
Comment
NONE PROVIDED

Variance Request

Do you intend to request or renew one or more of the CWA technology variances authorized at 40 CFR 122.21(m)?
No

Pollution Abatement & Prevention (PAP) Plan Summary (1 of 2)

Outfall(s):
003E

Outfall Questions:	Please select one:
Runoff from all areas of disturbance is controlled	Yes
Drainage from pit area, stockpiles, and spoil areas directed to a sedimentation pond	Yes
Sedimentation basin at least 0.25 acre/feet for every acre of disturbed drainage	Yes
Sedimentation basin cleaned out when sediment accumulation is 60% of design capacity	Yes
Trees, boulders, and other obstructions removed from pond during initial construction	Yes
Width of top of dam greater than 12'	Yes
Side slopes of dam no steeper than 3:1	Yes
Cutoff trench at least 8' wide	Yes
Side slopes of cutoff trench no less than 1:1	Yes
Cutoff trench located along the centerline of the dam	Yes
Cutoff trench extends at least 2' into bedrock or impervious soil	Yes
Cutoff trench filled with impervious material	Yes
Embankments and cutoff trench 95% compaction standard proctor ASTM	Yes
Embankment free of roots, tree debris, stones >6" diameter, etc.	Yes
Embankment constructed in lifts no greater than 12"	Yes
Spillpipe sized to carry peak flow from a one year storm event	Yes
Spillpipe will not chemically react with effluent	Yes
Subsurface withdrawal	Yes
Anti-seep collars extend radially at least 2' from each joint in spillpipe	Yes
Splashpad at the end of the spillpipe	Yes
Emergency Spillway sized for peak flow from 25-yr 24-hr event if discharge not into PWS classified stream	Yes
Emergency spillway sized for peak flow from 50-yr 24-hr event if discharge is into PWS classified stream	No
Emergency overflow at least 20' long	Yes
Side slopes of emergency spillway no steeper than 2:1	Yes
Emergency spillway lined with riprap or concrete	Yes

Outfall Questions:	Please select one:
Minimum of 1.5' of freeboard between normal overflow and emergency overflow	Yes
Minimum of 1.5' of freeboard between max. design flow of emergency spillway and top of dam	Yes
All emergency overflows are sized to handle entire drainage area for ponds in series	Yes
Dam stabilized with permanent vegetation	Yes
Sustained grade of haul road <10%	Yes
Maximum grade of haul road <15% for no more than 300'	Yes
Outer slopes of haul road no steeper than 2:1	Yes
Outer slopes of haul road vegetated or otherwise stabilized	Yes
Detail drawings supplied for all stream crossings	N/A
Short-Term Stabilization/Grading And Temporary Vegetative Cover Plans	Yes
Long-Term Stabilization/Grading And Permanent Reclamation or Water Quality Remediation Plans	Yes

Identify and provide detailed explanation for any "N" or "N/A" response(s):
Discharge not into PWS classified stream; emergency spillway sized for peak flow from 50-year 24-hour event. Existing farm road crosses UT to Hagwood Branch between shop and mine site.

Pollution Abatement & Prevention (PAP) Plan Summary (2 of 2)

Outfall(s):
004E

Outfall Questions:	Please select one:
Runoff from all areas of disturbance is controlled	Yes
Drainage from pit area, stockpiles, and spoil areas directed to a sedimentation pond	No
Sedimentation basin at least 0.25 acre/feet for every acre of disturbed drainage	No
Sedimentation basin cleaned out when sediment accumulation is 60% of design capacity	No
Trees, boulders, and other obstructions removed from pond during initial construction	No
Width of top of dam greater than 12'	No
Side slopes of dam no steeper than 3:1	No
Cutoff trench at least 8' wide	No
Side slopes of cutoff trench no less than 1:1	No
Cutoff trench located along the centerline of the dam	No
Cutoff trench extends at least 2' into bedrock or impervious soil	No
Cutoff trench filled with impervious material	No
Embankments and cutoff trench 95% compaction standard proctor ASTM	No
Embankment free of roots, tree debris, stones >6" diameter, etc.	No
Embankment constructed in lifts no greater than 12"	No
Spillpipe sized to carry peak flow from a one year storm event	No
Spillpipe will not chemically react with effluent	No
Subsurface withdrawal	No
Anti-seep collars extend radially at least 2' from each joint in spillpipe	No
Splashpad at the end of the spillpipe	No
Emergency Spillway sized for peak flow from 25-yr 24-hr event if discharge not into PWS classified stream	No
Emergency spillway sized for peak flow from 50-yr 24-hr event if discharge is into PWS classified stream	No
Emergency overflow at least 20' long	No
Side slopes of emergency spillway no steeper than 2:1	No
Emergency spillway lined with riprap or concrete	No
Minimum of 1.5' of freeboard between normal overflow and emergency overflow	No
Minimum of 1.5' of freeboard between max. design flow of emergency spillway and top of dam	No

Outfall Questions:	Please select one:
All emergency overflows are sized to handle entire drainage area for ponds in series	No
Dam stabilized with permanent vegetation	No
Sustained grade of haul road <10%	No
Maximum grade of haul road <15% for no more than 300'	No
Outer slopes of haul road no steeper than 2:1	No
Outer slopes of haul road vegetated or otherwise stabilized	No
Detail drawings supplied for all stream crossings	No
Short-Term Stabilization/Grading And Temporary Vegetative Cover Plans	No
Long-Term Stabilization/Grading And Permanent Reclamation or Water Quality Remediation Plans	No

Identify and provide detailed explanation for any "N" or "N/A" response(s):
Outfall 004 was constructed under the NPDES General Permit ALR10AT61 and will be maintained with temporary Best Management Practices (BMP's) for land disturbance activities until permanent stabilization is achieved. If additional disturbance activities or future operations are anticipated through this outfall, the permittee will design and construction applicable structural controls appropriate for the anticipated use as part of a modification to this Individual NPDES permit

Pollution Abatement & Prevention (PAP) Plan Review Checklist

General Information:	Please select one:
PE Seal with License #	Yes
Name and Address of Operator	Yes
Legal Description of Facility	Yes
Name of Company	Yes
Number of Employees	Yes
Products to be Mined	Yes
Hours of Operation	Yes
Water Supply and Disposition	Yes

Maps:	Please select one:
Topographic Map including Information from Part XIII (a) " (o) of this Application	Yes
1" " 500" or Equivalent Facility Map including Information from Part XIV of this Application	Yes

Detailed Design Diagrams:	Please select one:
Plan Views	Yes
Cross-section Views	Yes
Method of Diverting Runoff to Treatment Basins	Yes
Line Drawing of Water Flow through Facility with Water Balance or Pictorial Description of Water Flow	No

Identify and provide detailed explanation for any "N" or "N/A" response(s):
Line drawing not applicable for open surface mine with pump to sediment basin.

Narrative of Operations:	Please select one:
Raw Materials Defined	Yes
Processes Defined	Yes
Products Defined	Yes

Schematic Diagram:	Please select one:
Points of Waste Origin	Yes
Collection System	Yes
Disposal System	Yes

Post Treatment Quantity and Quality of Effluent:	Please select one:
Flow	Yes
Suspended Solids	Yes
Iron Concentration	Yes
pH	Yes

Description of Waste Treatment Facility:	Please select one:
Pre-Treatment Measures	Yes
Recovery System	Yes
Expected Life of Treatment Basin	Yes
Measures for Ensuring Access to All Treatment Structures and Related Appurtenances including Outfall Locations	Yes
Schedule of Cleaning and/or Abandonment	Yes

Other:	Please select one:
Precipitation/Volume Calculations/Diagram Attached	Yes
BMP Plan for Haul Roads	Yes
Measures for Minimizing Impacts to Adjacent Stream (e.g., Buffer Strips, Berms)	Yes
Measures for Ensuring Appropriate Setbacks are Maintained at All Times	Yes
Methods for Minimizing Nonpoint Source Discharges	Yes
If Chemical Treatment Used, Methods for Ensuring Appropriate Dosage	Yes
Facility Closure Plans	Yes
PE Rationale(s) For Alternate Standards, Designs or Plans	N/A

Identify and provide detailed explanation for any ﷿N﷿ or ﷿N/A﷿ response(s):
No Alternate standards, designs or plans.

Pollution Abatement & Prevention (PAP) Plan

Is this a coal mining operation regulated by ASMC?
No

PAP Plan (non-coal mining facilities)
MRB PAP Masterson Site 7-31-2025.pdf - 08/03/2025 01:01 PM
Comment
Mining site was not in operation from 2020 to the present and therefore no changes have been made to the plan.

Professional Engineer (PE)

Registration License Number
17422

Professional Engineer

Prefix
Mr.

First Name	Last Name
Marvin	Blethen

Title
President/Managing Member

Organization Name
Blethen Mine Consultants, LLC

Phone Type	Number	Extension
Business	8564593517	
Mobile	8563926402	

Email
mblethen@blethenminingassociates.com

Address
217 W COMMERCE ST
BRIDGETON, NJ 08302-1807

Information for the Applicant

Please read the following information and acknowledge below:

Contact the Department prior to submittal with any questions or to request acceptable alternate content/format.

Be advised that you are not authorized to commence regulated activity until this application can be processed, publicly noticed, and approval to proceed is received in writing from the Department.

EPA Form(s) 1 and 2F need not be submitted unless specifically required by the Department. EPA Form(s) 2C and/or 2D are required to be submitted unless the
applicant is eligible for a waiver and the Department grants a waiver, or unless the relevant information required by EPA Form(s) 2C and/or 2D are submitted to the Department in an alternative format acceptable to the Department.

Planned/proposed mining sites that are greater than 5 acres, that mine/process coal or metallic mineral/ore, or that have wet or chemical processing, must apply for and obtain coverage under an Individual or General NPDES Permit prior to commencement of any land disturbance. Such Individual NPDES Permit coverage may be requested via this ADEM Form 315.

The applicant is advised to contact:
(1) The Alabama Surface Mining Commission (ASMC) if coal, coal fines, coal refuse, or other coal related materials are mined, transloaded, processed, etc.;
(2) The Alabama Department of Labor (ADOL) if conducting non-coal mining operations;
(3) The Alabama Historical Commission for requirements related to any potential historic or culturally significant sites;
(4) The Alabama Department of Conservation and Natural Resources (ADCNR) for requirements related to potential presence of threatened/endangered species;
(5) The US Army Corps of Engineers, Mobile or Nashville Districts, if this project could cause fill to be placed in federal waters or could interfere with navigation.

The Department must be in receipt of a completed version of this form, including any supporting documentation, and the appropriate processing fee [including Greenfield Fee and Biomonitoring & Toxicity Limits fee(s), if applicable], prior to development of a draft NPDES permit.

Acknowledgement
I acknowledge I have read and understand the information above.

Additional Attachments

Additional Attachments
NONE PROVIDED
Comment
NONE PROVIDED

Application Preparer

Application Preparer

Prefix
Mr.

First Name **Last Name**
Steven D. Smith

Title
CEO

Organization Name
MS Industries II, LLC

Phone Type	Number	Extension
Business	2563836740	

Email
ssmsindustries@gmail.com

Address
101 JACKSON AVE N
RUSSELLVILLE, AL 35653-2229

Fees Assessed

The following itemized fees have been assessed in accordance with Fee Schedule D and 335-1-6-.04(a) of ADEM Admin. Code Division 1 regulations based on the information provided in this application.

If the correct fees are not displayed, please contact your permit engineer PRIOR to submitting the form. Do NOT answer questions erroneously in order to have the correct fee assessed.

Wet Preparation, Processing, Beneficiation:
6860

Fee

Fee
6860

Agreements and Signature(s)

SUBMISSION AGREEMENTS

- ☑ I am the owner of the account used to perform the electronic submission and signature.
- ☑ I have the authority to submit the data on behalf of the facility I am representing.
- ☑ I agree that providing the account credentials to sign the submission document constitutes an electronic signature equivalent to my written signature.
- ☑ I have reviewed the electronic form being submitted in its entirety, and agree to the validity and accuracy of the information contained within it to the best of my knowledge.

Professional Engineer (PE)

A detailed, comprehensive Pollution Abatement & Prevention (PAP) Plan must be prepared, signed, and certified by a professional engineer (PE), registered in the State of Alabama, and the PE must certify as follows: I certify under penalty of law that the technical information and data contained in this application, and a comprehensive Pollution Abatement & Prevention (PAP) Plan, including any attached SPCC plan, maps, engineering designs, etc. acceptable to ADEM, for the prevention and minimization of all sources of pollution in stormwater and authorized related process wastewater runoff has been prepared under my supervision for this facility utilizing effective, good engineering and pollution control practices and in accordance with the provisions of this Permit, and ADEM Admin. Code Division 335-6, including Chapter 335-6-9 and Appendices A & B. If the PAP Plan is properly implemented and maintained by the Permittee, discharges of pollutants can reasonably be expected to be effectively minimized to the maximum extent practicable and according to permit discharge limitations and other permit requirements. The applicant has been advised that appropriate pollution abatement/prevention facilities and structural & nonstructural management practices or Department approved equivalent management practices as detailed in the PAP Plan must be fully implemented and regularly maintained as needed at the facility in accordance with good sediment, erosion, and other pollution control practices, permit requirements, and other ADEM requirements to ensure protection of groundwater and surface water quality.

Signed By Marvin Blethen on 08/05/2025 at 10:00 AM

Responsible Official

This application must be signed and initialed by a Responsible Official of the applicant pursuant to ADEM Admin. Code Rule 335-6-6-.09 who has overall responsibility for the operation of the facility. I certify under penalty of law that this document, including technical information and data, the PAP Plan, including any SPCC plan, maps, engineering designs, and all other attachments were prepared under my direction or supervision in accordance with a system designed to assure that qualified personnel properly gathered and evaluated the information submitted. Based on my inquiry of the PE and other person or persons under my supervision 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 or imprisonment for knowing violations. A comprehensive PAP Plan to prevent and minimize discharges of pollution to the maximum extent practicable has been prepared at my direction by a PE for this facility utilizing effective, good engineering and pollution control practices and in accordance with the provisions of ADEM Admin. Code Division 335-6, including Chapter 335-6-9 and Appendices A & B, and information contained in this application, including any attachments. I understand that regular inspections must be performed by, or under the direct supervision of, a PE and all appropriate pollution abatement/prevention facilities and structural & nonstructural management practices or Department approved equivalent management practices identified by the PE must be fully implemented prior to and concurrent with commencement of regulated activities and regularly maintained as needed at the facility in accordance with good sediment, erosion, and other pollution control practices and ADEM requirements. I understand that the PAP Plan must be fully implemented and regularly maintained so that discharges of pollutants can reasonably be expected to be effectively minimized to the maximum extent practicable and according to permit discharge limitations and other requirements to ensure protection of groundwater and surface water quality. I understand that failure to fully implement and regularly maintain required management practices for the protection of groundwater and surface water quality may subject the Permittee to appropriate enforcement action. I certify that this form has not been altered, and if copied or reproduced, is consistent in format and identical in content to the ADEM approved form. I further certify that the discharges described in this application have been tested or evaluated for the presence of non-stormwater discharges and any non-mining associated beneficiation/process pollutants and wastewaters have been fully identified. I acknowledge my understanding that I may be required to obtain a permit from the ADOL. I acknowledge my understanding that if the proposed activities will be conducted in or potentially impact waters of the state or waters of the US (including wetlands), that I may be required to obtain a permit from the USACE.

Signed By John Christmas on 08/04/2025 at 4:43 PM

Outfall	Discharge structure Description	Description of Origin of pollutants	Surface Discharge	Groundwater Discharge	Wet Prep-Other Production Plant	Pumped or Controlled Discharge	Low Volume STP
003E	Pipe	Pumped from Surface Mine	Y	N	Y	Y	N/A
004E	Stabilized Swale	Overland Flow from Clearing	Y	N	N	Y	N

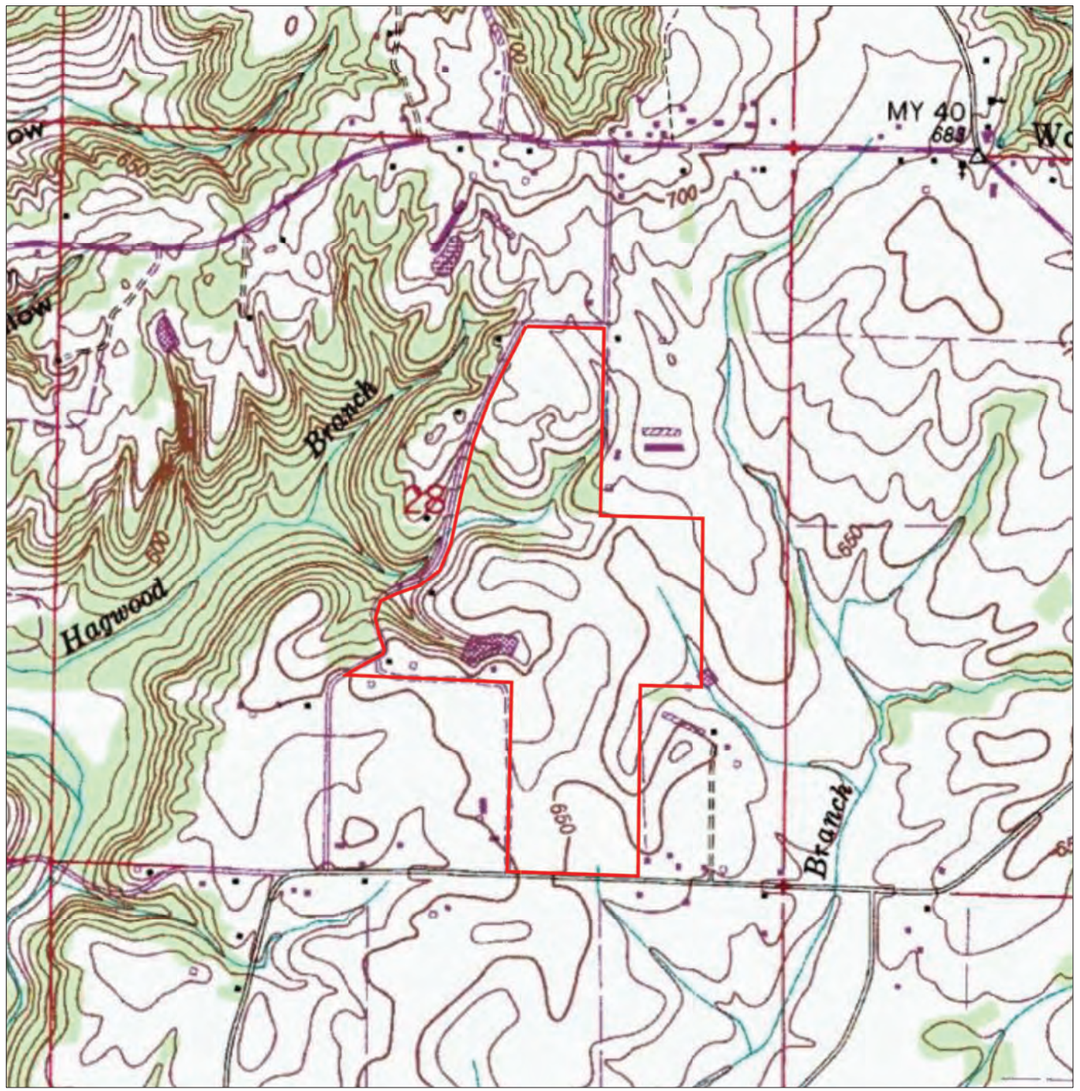
Outfall E/P	Information Source - # of Samples	Flow (cfs)	Flow (gpd)	Frequency (hours/day)	Frequency (days/month)	Sum/Win Temp. (C)	pH (s.u.)	BOD5 (lbs/day)	TSS (lbs/day)	Tot Fe (lbs/day)	Tot Mn (lbs/day)	Tot Al (lbs/day)
003E	N/A	0.003	2.000	1.00	20	24	7.50	0	0.166	0.02	0.0016	0.0016
004E	N/A	0.0006	450	0.25	5	24	7.50	0	0.0375	0	0	0

Outfall E/P	Information Source - # of Samples	Flow (cfs)	Flow (gpd)	Frequency (hours/day)	Frequency (days/month)	Sum/Win Temp. (C)	pH (s.u.)	BOD5 (lbs/day)	TSS (lbs/day)	Tot Fe (lbs/day)	Tot Mn (lbs/day)	Tot Al (lbs/day)
003E	N/A	0.003	2.000	1.00	20	24	7.50	0	0.166	0.02	0.0016	0.0016
004E	N/A	0.0006	450	0.25	5	24	7.50	0	0.0375	0	0	0

EXISTING MINING - MASTERSON SITE V4
PLANS FOR RENEWAL APPLICATION PERIOD 2/1/2026-1/31/2031
CLAY, SAND, ORES, AND OTHER NON FUEL MINERALS

FOR

MS INDUSTRIES II, LLC
LAWRENCE COUNTY, ALABAMA



MS INDUSTRIES II, LLC
101 N. JACKSON AVENUE
RUSSELLVILLE, ALABAMA 35653

PLAN ASSEMBLY:

GRAPHIC SCALE

500 0 250 500 1000 2000

(IN FEET)
1 inch = 500 ft.

Notes:

REV:	DESCRIPTION:	BY:	DATE:
1	UPDATE TITLE FOR RENEWAL ADDED GRAPHIC SCALE	MRB	7/31/25

STATUS: MINE PLANNING

Marvin R. Blethen, PE

Digitally signed by Marvin R. Blethen, PE
Date: 2025.08.03 13:10:37 -04'00'

MARVIN R. BLETHEN, PE, MS, MBA

ALABAMA PE #17422

ALABAMA REGISTERED NO. 17422 PROFESSIONAL ENGINEER MARVIN R. BLETHEN

SEAL

CLIENT: MS INDUSTRIES II, LLC
101 N. JACKSON AVENUE
RUSSELLVILLE, ALABAMA 35653
PHONE: 256-383-6740

ENGINEER: BLETHEN MINE CONSULTANTS, LLC
217 WEST COMMERCE STREET
BRIDGETON, NJ 08302-1807
PHONE: 856-459-3517

SITE: 2228 COUNTY ROAD 135
TOWN CREEK, ALABAMA 35672

TITLE: TITLE PAGE
MASTERSON PROPERTY

SCALE:	DATE:	DRAWN:	CHECKED:
AS SHOWN	6/30/2020	MRB	MTB

PROJECT NO:	DRAWING NO:	REVISION:
ALBMC 1001-02	1	

MAGNETIC

GRAPHIC SCALE

200 0 100 200 400 800

(IN FEET)
1 inch = 200 ft.

Notes:

REV:	DESCRIPTION:	BY:	DATE:
1	ADDED AERIAL PHOTO	MRB	7/31/25

STATUS: MINE PLANNING

Marvin R. Blethen, PE

Digitally signed by Marvin R. Blethen, PE
Date: 2025.08.03 13:11:44 -04'00'

MARVIN R. BLETHEN, PE, MS, MBA

ALABAMA PE #17422

ALABAMA REGISTERED NO. 17422 PROFESSIONAL ENGINEER MARVIN R. BLETHEN

SEAL

CLIENT: MS INDUSTRIES II, LLC
101 N. JACKSON AVENUE
RUSSELLVILLE, ALABAMA 35653
PHONE: 256-383-6740

ENGINEER: BLETHEN MINE CONSULTANTS, LLC
217 WEST COMMERCE STREET
BRIDGETON, NJ 08302-1807
PHONE: 856-459-3517

SITE: 2228 COUNTY ROAD 135
TOWN CREEK, ALABAMA 35672

TITLE: OVERALL SITE PLAN
MASTERSON PROPERTY

SCALE:	DATE:	DRAWN:	CHECKED:
AS SHOWN	6/30/2020	MRB	MTB

PROJECT NO:	DRAWING NO:	REVISION:
ALBMC 1001-02	2	

Notes:

1. Operator shall adhere to all appropriate pollution abatement prevention facilities and structural and nonstructural management practices or Alabama Department of Environmental Management approved equivalent management practices as detailed in the PAP plan. All practices described therein must be fully implemented and regularly maintained as needed at the facility in accordance with good sediment, erosion, and other pollution control practices, permit requirements, and other ADEM requirements to ensure protection of groundwater and surface water quality.

2. These drawings are part of the Pollution Abatement Plan (PAP) for the Masterson Site. All activities associated with this project shall strictly comply with the PAP and all attachments.

3. All disturbed areas not receiving rock surfacing shall be temporarily seeded when the areas are not undergoing active disturbance or active construction and or progressive construction for longer than 13 days.

GRAPHIC SCALE

200 0 100 200 400 800

(IN FEET)
1 inch = 200 ft.

Notes:

REV:	DESCRIPTION:	BY:	DATE:
1	ADDED GRAPHIC SCALE	MRB	7/31/25

STATUS: MINE PLANNING

Marvin R. Blethen, PE

Digitally signed by Marvin R. Blethen, PE
Date: 2025.08.03 13:12:41 -04'00'

MARVIN R. BLETHEN, PE, MS, MBA

ALABAMA PE #17422

ALABAMA REGISTERED NO. 17422 PROFESSIONAL ENGINEER MARVIN R. BLETHEN

SEAL

CLIENT: MS INDUSTRIES II, LLC
101 N. JACKSON AVENUE
RUSSELLVILLE, ALABAMA 35653
PHONE: 256-383-6740

ENGINEER: BLETHEN MINE CONSULTANTS, LLC
217 WEST COMMERCE STREET
BRIDGETON, NJ 08302-1807
PHONE: 856-459-3517

SITE: 2228 COUNTY ROAD 135
TOWN CREEK, ALABAMA 35672

TITLE: OVERALL MINE PLAN
MASTERSON PROPERTY

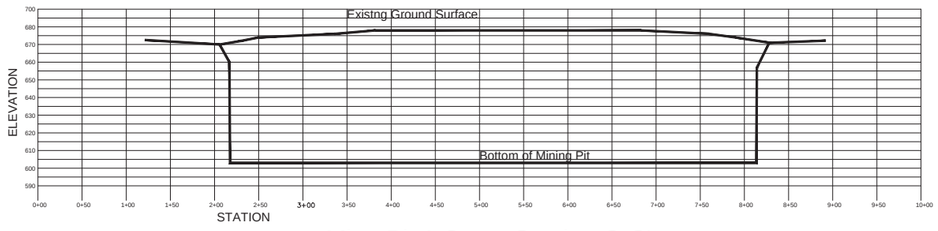
SCALE:	DATE:	DRAWN:	CHECKED:
AS SHOWN	6/30/2020	MRB	MTB

PROJECT NO:	DRAWING NO:	REVISION:
ALBMC 1001-02	3	

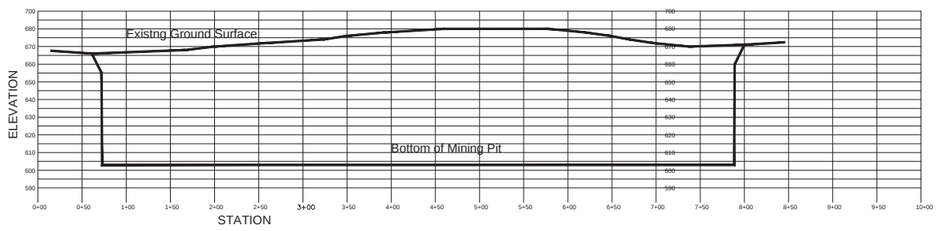
GRAPHIC SCALE

100 0 50 100 200 400

(IN FEET)
1 inch = 100 ft.



Mine Pit 1 Cross Section C-C'



Mine Pit 1 Cross Section D-D'

FIRST 11 FEET TO 12 FEET OF OVERBURDEN IS SLOPED AT 45 DEGREES, THE SANDSTONE PIT IS SLOPED AT 89 DEGREES.

SCALE ON CROSS SECTIONS ARE SCALED 2 : 1 (V : H).

Mining Pit Notes:

1. Entrance / Exit road is 10% or less in slope

2. Mining pit walls shall be maintained in accordance with erosion control details and plan.

Notes:

REV:	DESCRIPTION:	BY:	DATE:
1	ADDED AERIAL PHOTO	MRB	7/31/25

STATUS: MINE PLANNING

Marvin R. Blethen, PE

Digitally signed by Marvin R. Blethen, PE
Date: 2025.08.03 13:14:20 -04'00'

MARVIN R. BLETHEN, PE, MS, MBA

ALABAMA PE #17422

ALABAMA REGISTERED NO. 17422 PROFESSIONAL ENGINEER MARVIN R. BLETHEN

SEAL

CLIENT: MS INDUSTRIES II, LLC
101 N. JACKSON AVENUE
RUSSELLVILLE, ALABAMA 35653
PHONE: 256-383-6740

ENGINEER: BLETHEN MINE CONSULTANTS, LLC
217 WEST COMMERCE STREET
BRIDGETON, NJ 08302-1807
PHONE: 856-459-3517

SITE: 2228 COUNTY ROAD 135
TOWN CREEK, ALABAMA 35672

TITLE: MINE 1 DETAILS
MASTERSON PROPERTY

SCALE:	DATE:	DRAWN:	CHECKED:
AS SHOWN	6/30/2020	MRB	MTB

PROJECT NO:	DRAWING NO:	REVISION:
ALBMC 1001-02	4	

Mining Pit Notes:

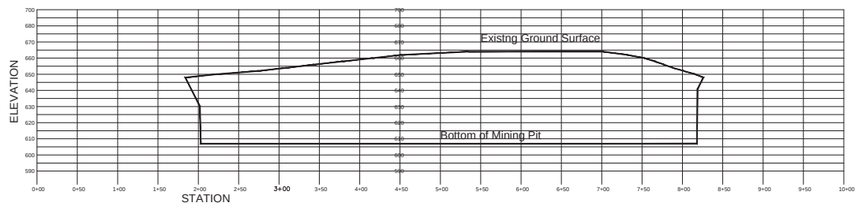
1. Entrance / Exit road is 10% or less in slope

2. Mining pit walls shall be maintained in accordance with erosion control details and plan.

GRAPHIC SCALE

100 0 50 100 200 400

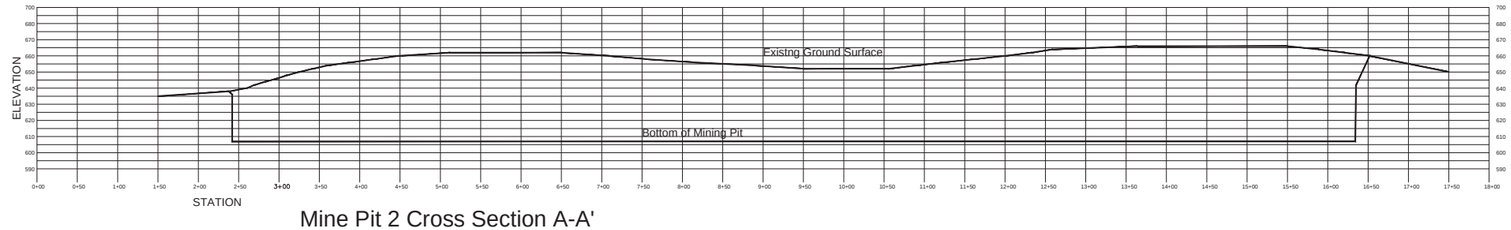
(IN FEET)
1 inch = 100 ft.



Mine Pit 2 Cross Section B-B'

FIRST 11 FEET TO 12 FEET OF OVERBURDEN IS SLOPED AT 45 DEGREES, THE SANDSTONE PIT IS SLOPED AT 89 DEGREES.

SCALE ON CROSS SECTIONS ARE SCALED 2 : 1 (V : H).



Mine Pit 2 Cross Section A-A'

Notes:

REV:	DESCRIPTION:	BY:	DATE:
1	ADDED AERIAL PHOTO	MRB	7/31/25

STATUS: MINE PLANNING

Marvin R. Blethen, PE

Digitally signed by Marvin R. Blethen, PE
Date: 2025.08.03 13:15:53 -04'00'

MARVIN R. BLETHEN, PE, MS, MBA

ALABAMA PE #17422

ALABAMA REGISTERED NO. 17422 PROFESSIONAL ENGINEER MARVIN R. BLETHEN

SEAL

CLIENT: MS INDUSTRIES II, LLC
101 N. JACKSON AVENUE
RUSSELLVILLE, ALABAMA 35653
PHONE: 256-383-6740

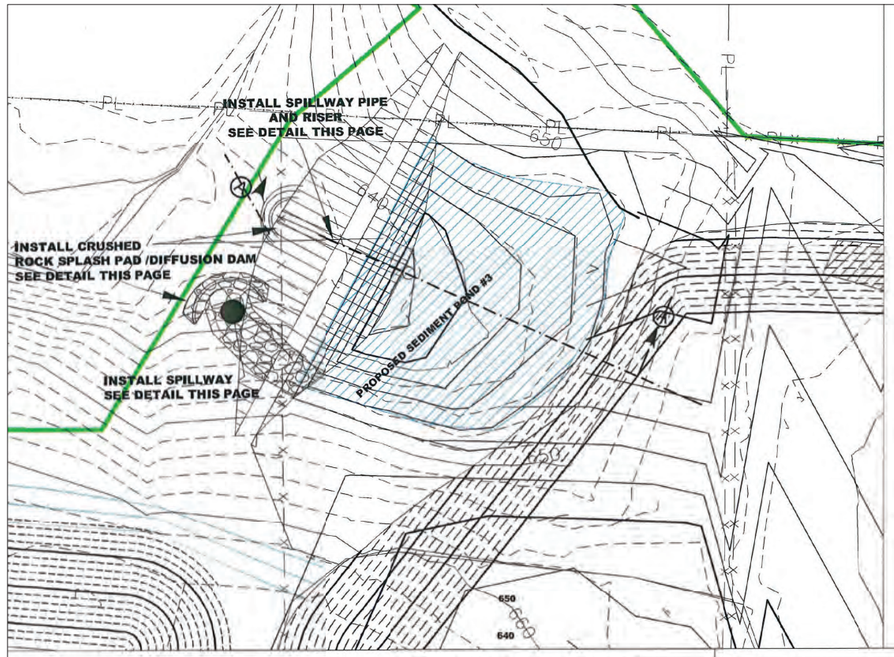
ENGINEER: BLETHEN MINE CONSULTANTS, LLC
217 WEST COMMERCE STREET
BRIDGETON, NJ 08302-1807
PHONE: 856-459-3517

SITE: 2228 COUNTY ROAD 135
TOWN CREEK, ALABAMA 35672

TITLE: MINE 2 DETAILS
MASTERSON PROPERTY

SCALE:	DATE:	DRAWN:	CHECKED:
AS SHOWN	6/30/2020	MRB	MTB

PROJECT NO:	DRAWING NO:	REVISION:
ALBMC 1001-02	5	



NOTE:
1.) ALL SLOPES 3:1 UNLESS OTHERWISE SHOWN IN PLAN.

2.) CUTOFF CORE TO EXTEND 2' INTO BEDROCK OR IMPERVIOUS SOIL. MINIMUM WIDTH TO BE 8 FEET. EMBANKMENT AND CUTOFF CORE TO BE 95% COMPACTION STANDARD PROCTOR. PROVIDE COMPACTION TEST EACH LIFT. LIFTS TO BE 12 INCH MAX. SIDE SLOPES FOR CUTOFF CORE 1:1. ANY STANDING WATER TO BE REMOVED FROM CUTOFF TRENCH PRIOR TO BACKFILL.

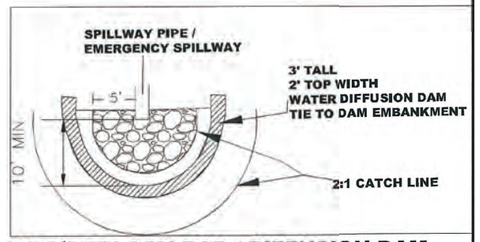
3.) SEE EROSION CONTROL PLAN FOR PERMANENT AND TEMPORARY EROSION CONTROL DEVICES.

PROPOSED SEDIMENT POND #3 NOTE:

DRAINAGE AREA 10.2 ACRES
Q 1 YEAR STORM = 18 CFS
Q 50 YEAR STORM = 31 CFS

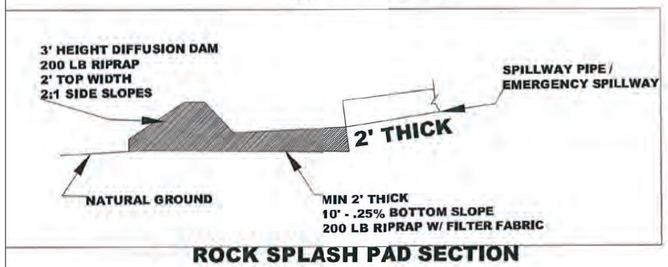
STORAGE PROVIDED @ 648 EL:
7800 CUYDS - 4.8 ACRE FEET

STORAGE REQUIRED:
3952 CUYDS - 2.45 ACRE FEET

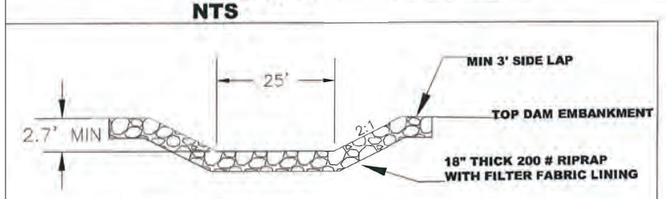


ROCK SPLASH PAD / DIFFUSION DAM
PLAN VIEW
NTS

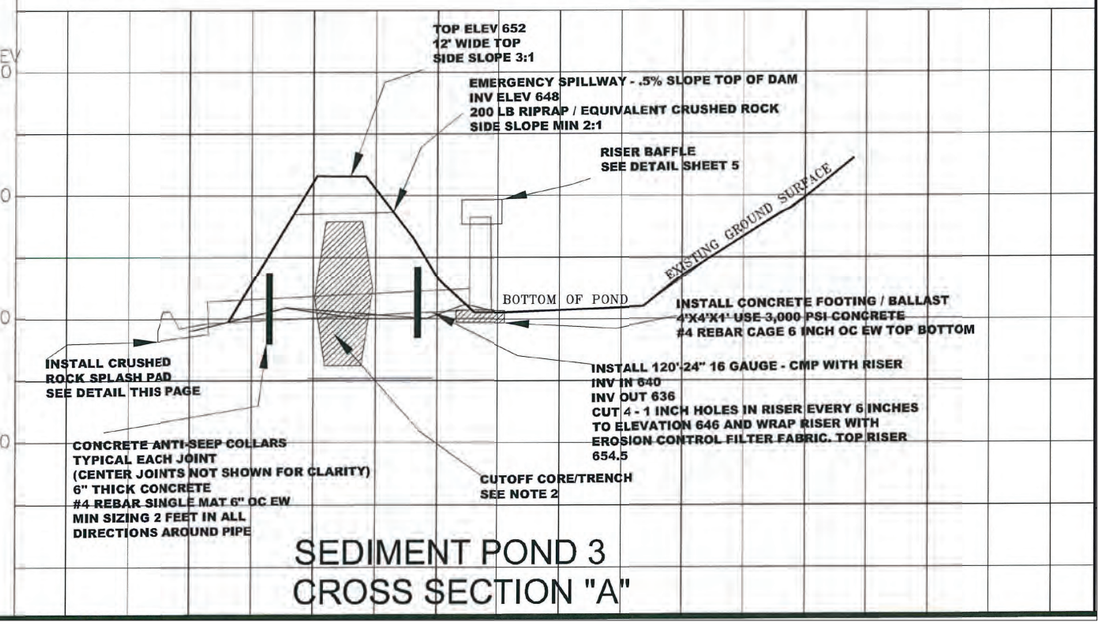
PROPOSED SEDIMENT POND 3
PLAN VIEW W/PROFILE BASELINE
SCALE 1" TO 100'



ROCK SPLASH PAD SECTION
NTS



POND 3 EMERGENCY SPILLWAY SECTION
NTS



SEDIMENT POND 3
CROSS SECTION "A"

Notes:

1. Proposed pond is now an existing pond and meets the specifications as outlined in plan.

REV:	DESCRIPTION:	BY:	DATE:

STATUS: MINE PLANNING

Marvin R. Blethen, PE

Digitally signed by Marvin R. Blethen, PE
Date: 2025.08.03 13:16:37 -04'00'

MARVIN R. BLETHEN, PE, MS, MBA

ALABAMA PE #17422

ALABAMA REGISTERED NO. 17422 PROFESSIONAL ENGINEER MARVIN R. BLETHEN

SEAL

CLIENT: MS INDUSTRIES II, LLC
101 N. JACKSON AVENUE
RUSSELLVILLE, ALABAMA 35653
PHONE: 256-383-6740

ENGINEER: BLETHEN MINE CONSULTANTS, LLC
217 WEST COMMERCE STREET
BRIDGETON, NJ 08302-1807
PHONE: 856-459-3517

SITE: 2228 COUNTY ROAD 135
TOWN CREEK, ALABAMA 35672

TITLE: POND 3 DETAILS
MASTERSON PROPERTY

SCALE:	DATE:	DRAWN:	CHECKED:
AS SHOWN	6/30/2020	MRB	MTB

PROJECT NO:	DRAWING NO:	REVISION:
ALBMC 1001-02	6	

Notes:

1. Contractor to provide and install erosion control materials as shown and as described in the permit.

2. All disturbed areas not receiving rock surfacing shall be temporarily seeded when the areas are not undergoing active disturbance or active construction and or progressive construction for longer than 30 days. Seeding shall include 4" of topsoil, fertilizer, seeding and mulching. Submit topsoil source, fertilizer rates, and seed analysis for approval.

3. Positive drainage away from entrance road shall be maintained at all times.

4. Any disturbance from within in mining pit area shall drain to a point in the mine and then pumped as required to sediment basin 3 or pumped to the wet plant for use.

GRAPHIC SCALE

200 0 100 200 400 800

(IN FEET)
1 inch = 200 ft.

Notes:

REV:	DESCRIPTION:	BY:	DATE:
1	ADDED AERIAL PHOTO	MRB	7/31/25

STATUS: MINE PLANNING

Marvin R. Blethen, PE

Digitally signed by Marvin R. Blethen, PE
Date: 2025.08.03 13:17:19 -04'00'

MARVIN R. BLETHEN, PE, MS, MBA

ALABAMA PE #17422

ALABAMA REGISTERED NO. 17422 PROFESSIONAL ENGINEER MARVIN R. BLETHEN

SEAL

CLIENT: MS INDUSTRIES II, LLC
101 N. JACKSON AVENUE
RUSSELLVILLE, ALABAMA 35653
PHONE: 256-383-6740

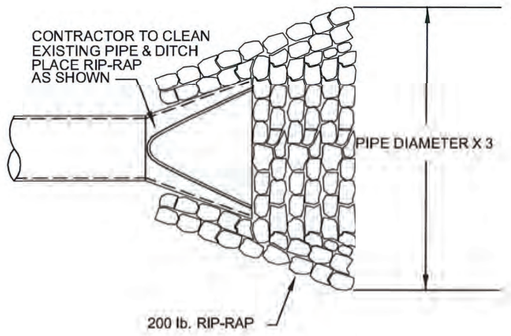
ENGINEER: BLETHEN MINE CONSULTANTS, LLC
217 WEST COMMERCE STREET
BRIDGETON, NJ 08302-1807
PHONE: 856-459-3517

SITE: 2228 COUNTY ROAD 135
TOWN CREEK, ALABAMA 35672

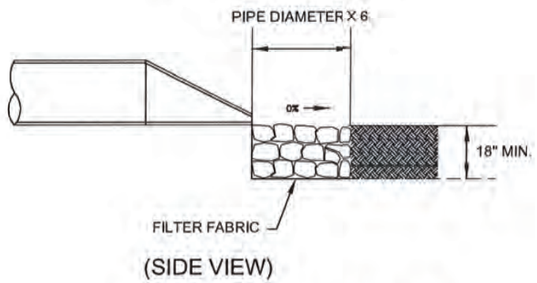
TITLE: EROSION CONTROL PLAN
MASTERSON PROPERTY

SCALE:	DATE:	DRAWN:	CHECKED:
AS SHOWN	6/30/2020	MRB	MTB

PROJECT NO:	DRAWING NO:	REVISION:
ALBMC 1001-02	7	



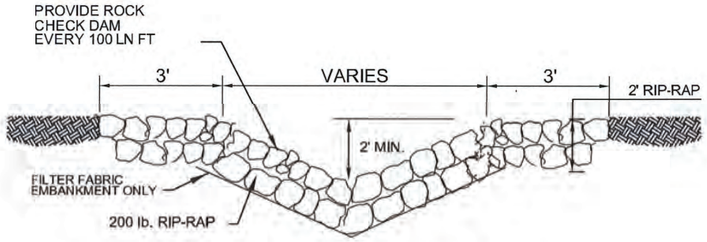
(PLAN VIEW)



(SIDE VIEW)

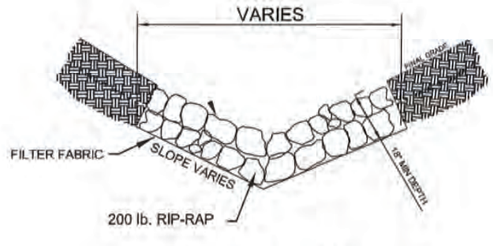
RIP-RAP OUTLET PROTECTION DETAIL

DETAIL "A"



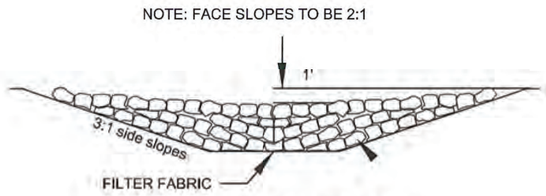
DRAINAGE STRUCTURE DETAIL

DETAIL "B"



RIP-RAP DETAIL

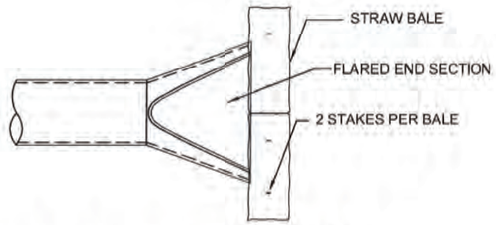
DETAIL "C"



ROCK DAM DETAIL

(FLAT-BOTTOM OR V DITCH)

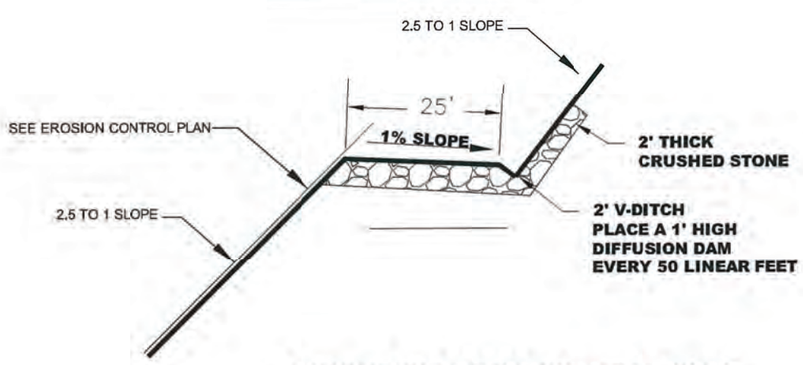
DETAIL "D"



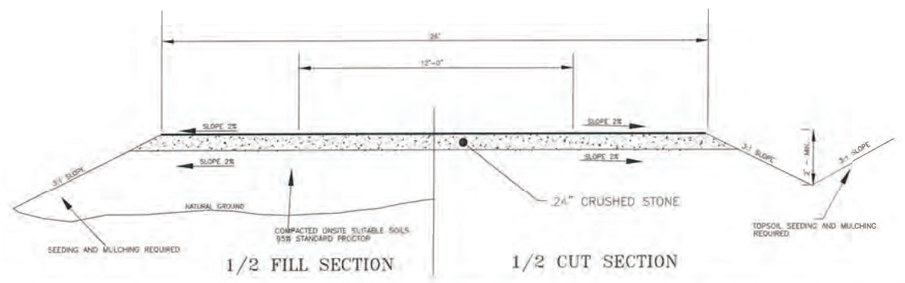
STRAW BALE INLET PROTECTION

(TEMPORARY MEASURE)

DETAIL "E"



MINING PIT ENTRANCE / EXIT ROAD
NTS



ENTRANCE ROAD TYPICAL SECTION

Notes:

REV:	DESCRIPTION:	BY:	DATE:

STATUS: MINE PLANNING

Marvin R. Blethen, PE

Digitally signed by Marvin R. Blethen, PE
Date: 2025.08.03 13:18:08 -04'00'

MARVIN R. BLETHEN, PE, MS, MBA

ALABAMA PE #17422

ALABAMA REGISTERED NO. 17422 PROFESSIONAL ENGINEER MARVIN R. BLETHEN

SEAL

CLIENT: MS INDUSTRIES II, LLC
101 N. JACKSON AVENUE
RUSSELLVILLE, ALABAMA 35653
PHONE: 256-383-6740

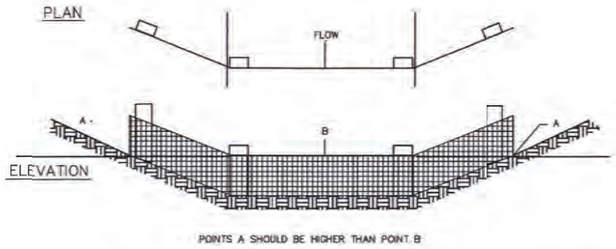
ENGINEER: BLETHEN MINE CONSULTANTS, LLC
217 WEST COMMERCE STREET
BRIDGETON, NJ 08302-1807
PHONE: 856-459-3517

SITE: 2228 COUNTY ROAD 135
TOWN CREEK, ALABAMA 35672

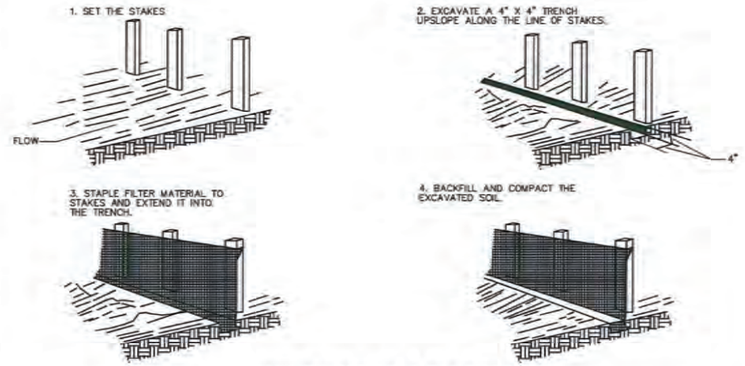
TITLE: DETAILS 1
MASTERSON PROPERTY

SCALE:	DATE:	DRAWN:	CHECKED:
AS SHOWN	6/30/2020	MRB	MTB

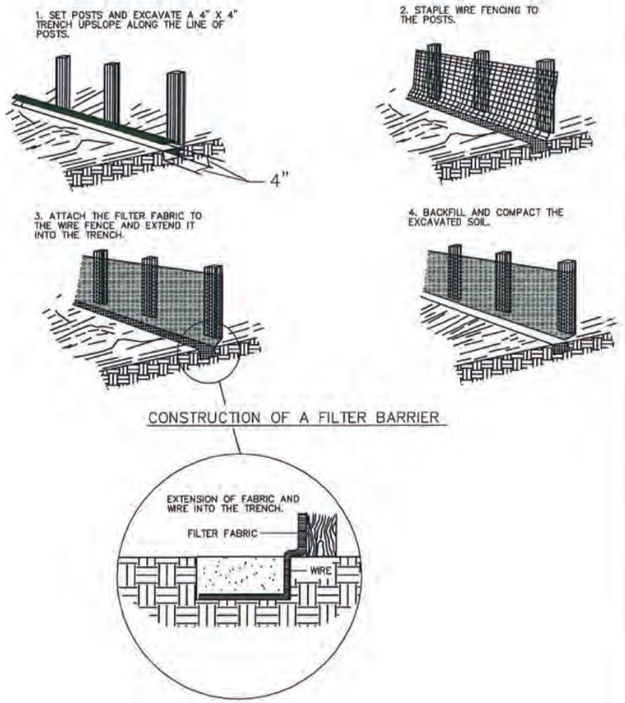
PROJECT NO:	DRAWING NO:	REVISION:
ALBMC 1001-02	8	



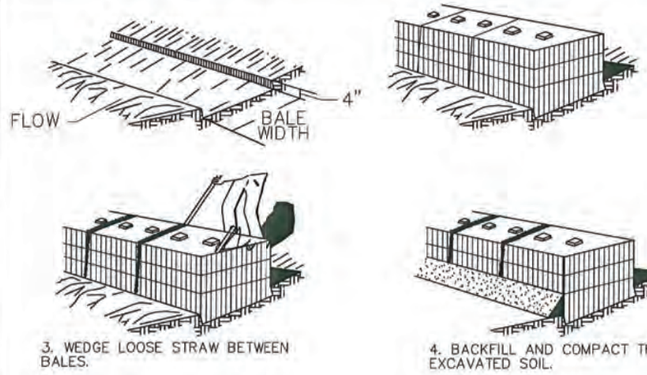
PROPER PLACEMENT OF A FILTER BARRIER IN A DRAINAGE WAY



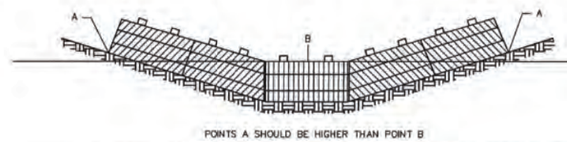
CONSTRUCTION OF A SILT FENCE



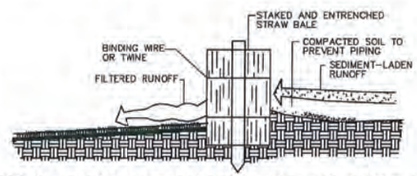
CONSTRUCTION OF A FILTER BARRIER



CONSTRUCTION OF A STRAW BALE BARRIER



PROPER PLACEMENT OF STRAW BALE BARRIER IN DRAINAGE WAY



CROSS-SECTION OF A PROPERLY INSTALLED STRAW BALE

STRAW BALE DROP INLET SEDIMENT FILTER

NOTES:
1.) CONTRACTOR TO PROVIDE AND INSTALL EROSION CONTROL MATERIALS AS SHOWN ON THE EROSION CONTROL PLAN.

2.) ALL SLOPES SHALL BE SEEDED, WHICH SHALL INCLUDE 4" TOPSOIL, FERTILIZER, SEEDING AND MULCHING. SUBMIT TOPSOIL SOURCE, FERTILIZER RATES, AND SEED ANALYSIS FOR APPROVAL.

Notes:

REV:	DESCRIPTION:	BY:	DATE:

STATUS: MINE PLANNING

Marvin R. Blethen, PE

Digitally signed by Marvin R. Blethen, PE
Date: 2025.08.03 13:18:46 -04'00'

MARVIN R. BLETHEN, PE, MS, MBA

ALABAMA PE #17422

ALABAMA REGISTERED NO. 17422 PROFESSIONAL ENGINEER MARVIN R. BLETHEN

SEAL

CLIENT: MS INDUSTRIES II, LLC
101 N. JACKSON AVENUE
RUSSELLVILLE, ALABAMA 35653
PHONE: 256-383-6740

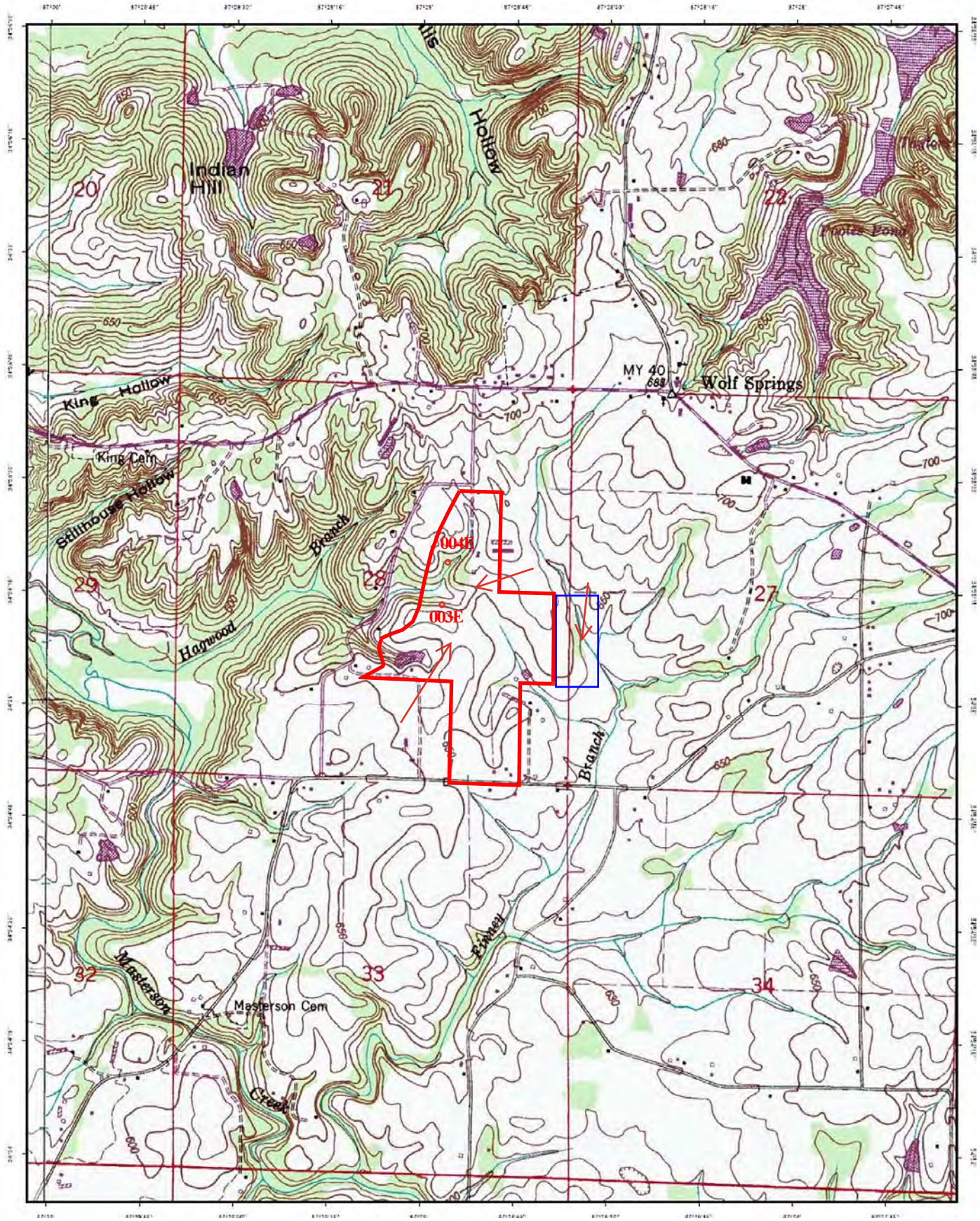
ENGINEER: BLETHEN MINE CONSULTANTS, LLC
217 WEST COMMERCE STREET
BRIDGETON, NJ 08302-1807
PHONE: 856-459-3517

SITE: 2228 COUNTY ROAD 135
TOWN CREEK, ALABAMA 35672

TITLE: DETAILS 2
MASTERSON PROPERTY

SCALE:	DATE:	DRAWN:	CHECKED:
AS SHOWN	6/30/2020	MRB	MTB

PROJECT NO:	DRAWING NO:	REVISION:
ALBMC 1001-02	9	



Masterson Mine Site v4
Section 28, Township 5 South, Range 9 West
Hatton Quadrangle
MS Industries II, LLC
Lawrence County, AL

Vicinity Map

Index Map

mytopo
A TRIMBLE COMPANY

Map Created For:
Blethen Mine Consultants, LLC

1:10000 scale

Universal Transverse Mercator (UTM) Projection Zone 16

SPILL PREVENTION, CONTROL, AND COUNTERMEASURE PLAN

MS Industries II, LLC

Masterson Mine Site and Plant

2228 County Road 135
Town Creek, Alabama 35672

Prepared by
Blethen Mine Consultants, LLC
217 West Commerce Street
Bridgeton, New Jersey 08302

July 31, 2025

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112.7(h)	Loading/Unloading Rack – N/A (no rack present at this facility)	N/A
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*Only provisions listed are applicable to this facility.

Introduction

The purpose of this Spill Prevention Control and Countermeasure (SPCC) Plan is to describe measures implemented by MS Industries II, LLC to prevent oil discharges from occurring, and to prepare MS Industries II, LLC to respond in a safe, effective, and timely manner to mitigate the impacts of a discharge from the Masterson Mine and Plant. This SPCC Plan has been prepared and implemented in accordance with the SPCC requirements contained in 40 CFR Part 112.

In addition to fulfilling requirements of 40 CFR Part 112, this SPCC Plan is used as a reference for oil storage information and testing records, as a tool to communicate practices on preventing and responding to discharges with MS Industries II, LLC employees and contractors, as a guide on facility inspections, and as a resource during emergency response.

Management Approval

40 CFR 112.7

MS Industries II, LLC is committed to maintaining the highest standards for preventing discharges of oil into the navigable waters of the United States and into the environment through the implementation of this SPCC Plan at the Masterson Mine and Plant. This SPCC Plan has the full approval of MS Industries II, LLC management. MS Industries II, LLC's management has committed the necessary resources to implement the measures described in this Plan.

John Christmas (Chief Operating Officer) is the Designated Person Accountable for Oil Spill Prevention at MS Industries II, LLC's Masterson Mine and Plant and has the authority to commit the necessary resources to implement the Plan as described.

Authorized Facility Representative: John Christmas

Signature: John Christmas

Title: Chief Operating Officer

Date: July 31, 2025

Professional Engineer Certification

40 CFR 112.3(d)

The undersigned Registered Professional Engineer is familiar with the requirements of Part 112 of Title 40 of the *Code of Federal Regulations* (40 CFR part 112) and has visited and examined MS Industries II, LLC's Masterson Mine and Plant, or has supervised examination of the facility by appropriately qualified personnel. The undersigned Registered Professional Engineer attests that this Spill Prevention, Control, and Countermeasure Plan has been prepared in accordance with good engineering practice, including consideration of applicable industry standards and the requirements of 40 CFR part 112; that procedures for required inspections and testing have been established; and that this Plan is adequate for the facility. [112.3(d)]

This certification in no way relieves the owner or operator of the facility of his/her duty to prepare and fully implement this SPCC Plan in accordance with the requirements of 40 CFR Part 112.

Marvin R. Blethen

Signature

July 31, 2025
Date

Marvin R. Blethen, P.E.
Name of Professional Engineer

17422
Registration Number

ALABAMA
Issuing State

Seal

Plan Review
40 CFR 112.5

In accordance with 40 CFR 112.5, MS Industries II, LLC periodically reviews and evaluates this SPCC Plan for any change in the facility design, construction, operation, or maintenance that materially affects the facility's potential for an oil discharge. MS Industries II, LLC reviews this SPCC Plan at least once every five years. Revisions to the Plan, if any are needed, are made within six months of this five-year review. MS Industries II, LLC will implement any amendment as soon as possible, but not later than six months following preparation of any amendment. A registered PE certifies any technical amendment to the Plan, as described above, in accordance with 40 CFR 112.3(d).

Scheduled five-year reviews and Plan amendments are recorded in Table 0-1. This log must be completed even if no amendment is made to the Plan. Unless a technical or administrative change prompts an earlier review, the next scheduled review of this Plan must occur by ***July 31, 2030.***

Table 0-1: Record of Plan Review and Changes

Date	Authorized Individual	Review Type	PE Certification	Summary of Changes
03/30/16	John Christmas, COO	Initial Plan	Yes	N/A
07/30/20	John Christmas, COO	Plan Review with Permit Renewal	Yes	Updated addresses
07/31/25	John Christmas, COO	Plan Review with Permit Renewal	Yes	Updated addresses and personnel

Location of SPCC Plan
40 CFR 112.3(e)

In accordance with 40 CFR 112.3(e), a complete copy of this SPCC is maintained at the mine office of the facility, which is located at 2228 County Road 135, Town Creek, Alabama 35672. Additional copies are available at the MS Industries II, LLC management office, located at 101 North Jackson Avenue, Russellville, Alabama 35653.

Certification of Substantial Harm Determination

40 CFR 112.20(e), 40 CFR 112.20(f)(1)

Facility Name: **MS Industries II, LLC Masterson Mine and Plant**

1. Does the facility transfer oil over water to or from vessels and does the facility have a total oil storage capacity greater than or equal to 42,000 gallons?
Yes ○ No ●

2. Does the facility have a total oil storage capacity greater than or equal to 1 million gallons and does the facility lack secondary containment that is sufficiently large to contain the capacity of the largest aboveground oil storage tank plus sufficient freeboard to allow for precipitation within any aboveground storage tank area?
Yes ○ No ●

3. Does the facility have a total oil storage capacity greater than or equal to 1 million gallons and is the facility located at a distance (as calculated using the appropriate formula) such that a discharge from the facility could cause injury to fish and wildlife and sensitive environments?
Yes ○ No ●

4. Does the facility have a total oil storage capacity greater than or equal to 1 million gallons and is the facility located at a distance (as calculated using the appropriate formula) such that a discharge from the facility would shut down a public drinking water intake?
Yes ○ No ●

5. Does the facility have a total oil storage capacity greater than or equal to 1 million gallons and has the facility experienced a reportable oil spill in an amount greater than or equal to 10,000 gallons within the last 5 years?
Yes ○ No ●

Certification

I certify under penalty of law that I have personally examined and am familiar with the information submitted in this document, and that based on my inquiry of those individuals responsible for obtaining this information, I believe that the submitted information is true, accurate, and complete.

Authorized Facility Representative: John Christmas

Signature: John Christmas

Title: Chief Operating Officer

Date: July 31, 2025

PART I - GENERAL FACILITY INFORMATION

40 CFR 112.7(a)(3)

1.1 Company Information

Name of Facility:	MS Industries II, LLC Masterson Mine and Plant
Type	Sandstone mining operation
Date of Initial Operation	2016
Location	2228 County Road 135 Town Creek, Alabama 35672
Name and Address of Owner	MS Industries II, LLC *Main Office* MS Industries II, LLC 101 North Jackson Avenue Russellville, Alabama 35653. *Steven Smith, CEO*

1.2 Contact Information

The designated person accountable for overall oil spill prevention and response at the facility, also referred to as the facility's "Response Coordinator" (RC), is the Chief Operating Officer, John Christmas. 24-hour contact information is provided in Table 1-1.

Table 1-1: Facility contact information

Name	Title	Telephone	Address
John Christmas	Chief Operating Officer MS Industries II, LLC	(404) 502-9375 (cell) (256) 383-6740 (office)	101 North Jackson Avenue, Russellville, Alabama 35653.
Mike Floersch	Operations Manager MS Industries II, LLC	(208) 819-7248 (cell) (256) 383-6740 (office)	2228 County Road 135 Masterson Mine and Plant Town Creek, AL 35672

1.3 Facility Layout Diagram

Appendix A, at the end of this Plan, shows a general site plan for the plant. The site plan shows the site topography and the location of the plant relative to waterways, roads, and inhabited areas. Appendix A also includes a detailed plant diagram that shows the pipelines, tanks, and transfer areas for the facility. The diagram refers to the Table 1-2 storage tanks and shows the location, capacity, and contents of all oil storage containers greater than 55 gallons in capacity.

1.4 Facility Location and Operations

MS Industries II, LLC owns and operates the Masterson Mine and Plant, which is located approximately eight miles southwest of Town Creek, Alabama in Lawrence County (see Figure A-1 in Appendix A). The site is accessed through a private paved/dirt/gravel road off County Road 135. UTM coordinates for the facility are W -87.486472 Longitude and N 34.584694 Latitude.

The production facility is generally manned 24 hours per day by production or security personnel. MS Industries II, LLC's corporate office is located 20 miles from the site, at 101 Jackson Avenue North, Russellville, Alabama 35653. The production personnel operate the plant, which includes performing equipment inspections and maintenance as needed. The site is a sandstone mining and processing operation that will consist of 2 loaders, 2 dump trucks, 3 pickup trucks, 2 bulldozers, 2 backhoes, 1 man-lift, 1 telescopic forklift, 5 agricultural tractors, 1 water truck, 1 portable screening plant, 1 wet processing plant and ancillary production equipment. The

combined total oil storage at the site is 1,900 gallons. It is not subject to 40 CFR Part 112 but nonetheless, this SPCC Plan covers this operation.

1.5 Oil Storage and Handling

1.5.1 Portable and Fixed Storage

Oil storage at the plant will consist of above ground horizontal storage tanks, 55-gallon storage drums, small personal oil containers of 5 gallons and less, and associated piping, as summarized in Table 1-2. The total oil capacity at this plant is 1,900 gallons.

All oil storage tanks will be shop-built and meet the American Petroleum Institute (API) tank construction standard. Their design and construction are compatible with the oil they contain and the temperature and pressure conditions of storage. Steel tanks are coated to minimize corrosion and are double-walled. The double wall tank is also under cover.

Lubricating oil and other substances, such as solvents and chemicals for maintenance, will also be stored at the plant, but in quantities below the 55-gallon threshold for SPCC applicability. Table 1-2 lists all oil storage containers present at the facility with capacity of 5 gallons or more.

Table 1-2: Characteristics of oil containers

ID	Plant Area	Portable Storage	Construction	Primary Content	Capacity (gallons)
#P1	A	AST Portable Fuel Oil #2	Steel/DW	#2 Fuel Oil	1,000
				TOTAL	**1,000**

ID	Plant Area	Fixed Storage	Construction	Primary Content	Capacity (gallons)
#F1	A	AST Horizontal	Plastic	Used Motor Oil	100
#F2	A	5-gallon pails (50 on site at any one time	Plastic	Motor Oil	250
#F3	A	55-gallon drums (10 on site at any one time)	Steel	Oil	550
				TOTAL	**900**

1.5.2 Transfer Activities

The largest tanker truck visiting the facility has a total capacity of 5,000 gallons. Tanker trucks come to the facility only to transfer oils from the truck to the storage tanks and do not remain at the facility. All transfer operations are attended by the trucker in the plant or by the trucker and plant personnel when fueling the floating fuel barge and meet the minimum requirements of the U.S. Department of Transportation Hazardous Materials Regulations. Appendix B to this Plan summarizes the Tank Truck Unloading Procedure at this facility.

1.6 Proximity to Navigable Waters

The mine and plant are located within the Pickwick Lake watershed, approximately half a mile to the east of Town Creek, and 15 mile south of The Tennessee River. The storage tanks are situated on relatively level ground that slopes in a general northwestern direction. The site plan in Figure A-1 in Appendix A shows the location of the plant relative to nearby waterways. The facility diagram included in Figure A-2 in Appendix A indicates the general direction of drainage. In the event of an uncontrolled discharge from the storage tanks, oil would follow the natural topography of the site and flow into the man-made mining pond.

1.7 Conformance with Applicable State and Local Requirements [112.7(j)]

SPCC regulations at 40 CFR Part 112 is more stringent than the requirements from the state of Alabama for this type of facility. This SPCC Plan was written to conform to 40 CFR Part 112 requirements. The facility thereby conforms to general requirements for mining operations in Alabama. All discharge notifications are made in compliance with local, state, and federal requirements.

PART II. SPILL RESPONSE AND REPORTING

40 CFR 112.7

2.1 Discharge Discovery and Reporting [112.7(a)(3)]

Several individuals and organizations must be contacted in the event of an oil discharge. The Chief Operating Officer is responsible for ensuring that all required discharge notifications have been made. All discharges should be reported to the Chief Operating Officer. The summary table included in Appendix F to this SPCC Plan provides a list of agencies to be contacted under different circumstances. Discharges would typically be discovered during the inspections conducted at the plant in accordance with procedures set forth in Section 3.3.1 of this SPCC Plan, Table 3-2 and Table 3-3, and on the checklist of Appendix C. The Form included in Appendix F of this Plan summarizes the information that must be provided when reporting a discharge, including contact lists and phone numbers.

2.1.1 Verbal Notification Requirements (Local, State, and Federal (40 CFR part 110))

Any unauthorized discharge into air, land or water must be reported immediately to the State Police, Lawrence County Emergency Management Agency, and the State of Alabama Emergency Management Agency as soon as the discharge is detected.

For any discharge that reaches navigable waters, or threatens to reach navigable waters, ***immediate*** notification must be made to the National Response Center Hotline (800-424-8802) and to the United States Environmental Protection Agency Region 4 (404-562-8700).

In the event of a discharge that threatens to result in an emergency condition, plant personnel must verbally notify the Alabama Emergency Management Agency (800-843-0699) **immediately**, and in no case later than *15 minutes* of the discovery of the discharge. An emergency condition is any condition that could reasonably be expected to endanger the health and safety of the public; cause significant adverse impact to the land, water, or air environment; or cause severe damage to property. This notification must be made regardless of the amount of the discharge.

In the event of a discharge that does not present an emergency situation, verbal notification must be made to the Alabama Department of Environmental Management Decatur Branch (by telephone at 256-353-1713 during office hours, after hours, weekends, and holidays *within twenty-four (24) hours* of the discovery of the discharge.

2.1.2 Written Notification Requirements (State and Federal (40 CFR part 112))

A written notification will be made to United States EPA for any single discharge of oil into a navigable waters or adjoining shoreline waterway of more than 1,000 gallons, or for two discharges of 42 gallons of oil into a waterway in any 12-month period. This written notification must be made within 60 days of the qualifying discharge, and a copy will be sent to the Alabama Department of Environmental Management (ADEM), which is the state agency in charge of oil

pollution control activities. This reporting requirement is separate and in addition to reporting under 40 CFR Part 110 discussed above.

For any discharge reported verbally, a written notification must also be sent to the Alabama Department of Environmental Management, Lawrence County Emergency Management Agency, and to the Town Creek Police, within five (5) days of the qualifying discharge.

2.1.3 Submission of SPCC Information

Whenever the site experiences a discharge into navigable waters of more than 1,000 gallons, or two discharges of 42 gallons or more within a 12-month period, MS Industries II, LLC will provide information in writing to the EPA Region 4 office within 60 days of a qualifying discharge as described above. The required information is described in Appendix F of this SPCC Plan.

2.2 Spill Response Materials

Sorbent, booms and other spill response materials are stored in emergency spill equipment locker strategically located on the site and is accessible by MS Industries II, LLC personnel. The response equipment inventory for the facility includes:

(1 each)	65-gallon spill kit
(50 each)	18 inch x 18-inch absorbent pads
(20 each)	17.5 inches x 17.5 inches absorbent pillows
(19 each)	3 inch x 4-foot dikes and socks
(5 each)	3 inch x 8-foot dikes and socks
(2 pair)	Nitrile Gloves
(2 pair)	Goggles
(2 pair)	Tychem QC Coveralls
(1 each)	Floor Stand Spill sign
(1 each)	33-inch x 66-inch HAZ-MAT disposal bag
(1 each)	Spill Response Pocket Guide
(1 each)	DOT Emergency Response Guide
(1 each)	DOT Label Package

The inventory is checked monthly by MS Industries II, LLC plant personnel to ensure that used material is replenished. Supplies and equipment may be ordered from:

(1)	Lowe's Home Improvement	(256) 314-0334
(2)	New Pig	(855) 493-4647
(3)	McPherson Oil Supply	(888) 802-7500
(4)	Lab Safety Supply	(800) 356-0783

2.3 Spill Mitigation Procedures

The following is a summary of actions that must be taken in the event of a discharge. It summarizes the distribution of responsibilities among individuals and describes procedures to follow in the event of a discharge.

In the event of a discharge, MS Industries II, LLC plant personnel or contractor field personnel and the Chief Operating Officer shall be responsible for the following:

2.3.1 Shut Off Ignition Sources

Field personnel must shut off all ignition sources, including motors, electrical circuits, and open flames. See Appendix G for more information about shut-off procedures.

2.3.2 Stop Oil Flow

Plant and/or contractor personnel should determine the source of the discharge, and if safe to do so, immediately shut off the source of the discharge.

2.3.3 Stop the Spread of Oil and Call the Chief Operating Officer

If safe to do so, plant or contractor personnel must use resources available at the facility (see spill response material and equipment listed in Section 2.2) to stop the spilled material from spreading. Measures that may be implemented, depending on the location and size of the discharge, include placing sorbent material or other barriers in the path of the discharge (e.g., sand bags), or constructing earthen berms or trenches.

In the event of a significant discharge, plant or contractor personnel must immediately contact the Chief Operating Officer, who may obtain assistance from authorized company contractors and direct the response and cleanup activities.

2.3.4 Gather Spill Information

The Chief Operating Officer will make certain that the *Discharge Notification Form* is filled out and that notifications have been made to the appropriate authorities. The Chief Operating Officer may ask for assistance in gathering the spill information on the *Discharge Notification Form* (Appendix F) of this Plan:

- Reporter's name
- Exact location of the spill
- Date and time of spill discovery
- Material spilled (e.g., oil, fuel)
- Total volume spilled and total volume reaching or threatening navigable waters
- Weather conditions
- Source of spill

- Actions being taken to stop, remove, and mitigate the effects of the discharge
- Whether an evacuation may be needed
- Spill impacts (injuries; damage; environmental media, e.g., air, waterway, groundwater)
- Names of individuals and/or organizations who have also been contacted

2.3.5 Notify Agencies Verbally

Some notifications must be completed ***immediately*** upon discovering the discharge. It is important to immediately contact the Chief Operating Officer so that timely notifications can be made. If the Chief Operating Officer is not available, or the Chief Operating Officer requests it, plant personnel must designate one person to begin notification. Section 2.1 of this Plan describes the required notifications to government agencies. The Notification List is included in Appendix F of this SPCC Plan. The Chief Operating Officer must also ensure that written notifications, if needed, are submitted to the appropriate agencies.

2.4 Disposal Plan

The cleanup contractor will handle the disposal of any recovered product, contaminated soil, contaminated materials and equipment, decontamination solutions, sorbents, and spent chemicals collected during a response to a discharge incident.

Any recovered product that can be recycled will be placed in a tank to be separated and recycled. Any recovered product not deemed suitable for recycling will be disposed of with the rest of the waste collected during the response efforts.

If the facility responds to a discharge without involvement of a cleanup contractor, MS Industries II, LLC will contract a licensed transportation/disposal company to dispose of waste according to regulatory requirements. The Chief Operating Officer will characterize the waste and arrange for the use of certified waste containers.

All plant personnel handling hazardous wastes must have received both the initial 40-hour and annual 8-hour refresher training in the Hazardous Waste Operations and Emergency Response Standard (HAZWOPER) of the Occupational Health and Safety Administration (OSHA). Training records and certificates are to be kept at the plant office.

PART III. SPILL PREVENTION, CONTROL, AND COUNTERMEASURE PROVISIONS

40 CFR 112.7 and 112.9

3.1 Potential Discharge Volume and Direction of Flow [112.7(b)] and Containment [112.7(a)(3)(iii)]

Table 3-1, below, summarizes potential oil discharge scenarios.

Table 3-1: Potential discharge volume and direction of flow

Source	Type of failure	Maximum Volume (gal)	Maximum Discharge Rate (gal/hr)	Direction of Flow	Containment
Storage Tanks					
Fuel Oil Storage Tank on surface pad	Rupture	1,000	Instantaneous	Southwest	Steel containment jacket around tank
	Partial failure	500	100	Southwest	Steel containment jacket around tank
	Overflow from filling	30	10	Southwest	Steel containment jacket around tank
Transfers and Unloading Operations					
Transport truck unloading hose	Rupture	90	90	Northwest	Steel containment jacket around tank
Tank truck	Over-topping while unloading	90	90	Northwest	Steel containment jacket around tank with concrete

3.2 Containment and Diversionary Structures [112.7(c) and 112.7(a)(3)(iii)]

The plant is configured to minimize the likelihood of a discharge reaching navigable waters. The following measures are provided:

- Steel sleeves around the tanks providing for full containment provide secondary containment for the fixed oil storage tanks.
- The tank truck unloading area is flat but gently slopes to the southwest. The maximum expected amount of a spill from the tanker due to overtopping of the tank during unloading is relatively small and can be contained in the concrete pad with berm.
- Booms, sorbents, shovels, and other discharge response materials are stored in a shed located in close proximity to the unloading area. This material is sufficient to contain small discharges (up to approximately 200 gallons).

These measures are described in more details in the following sections.

3.2.1 Practicability of Secondary Containment [112.7(d)]

Portable storage tanks lack adequate secondary containment, but other measures listed under 40 CFR 112.7(c) such as the use of booms and sorbents are practicable as means of secondary containment since the volumes involved will not exceed the sorbent capacity.

3.3 Inspections, Tests, and Records [112.7(e)]

This Plan outlines procedures for inspecting the facility equipment in accordance with SPCC requirements. Records of inspections performed as described in this Plan and signed by the appropriate supervisor are a part of this Plan, and are maintained with this Plan at the Town Creek, Alabama office and the plant office for a minimum of three years. The reports include a description of the inspection procedure, the date of inspection, whether drainage of accumulated rainwater in the concrete berm was required, and the inspector's signature.

The program established in this SPCC Plan for regular inspection of all oil storage tanks and related production and transfer equipment follows the American Petroleum Institute's *Recommended Practice for Setting Maintenance, Inspection, Operation, and Repair of Tanks in Production Service* (API RP 12R1, Fifth Edition, August 1997). Each tank is inspected monthly by field operation personnel as described in this Plan section and following the checklist provided in Appendix C of this SPCC Plan. The monthly inspection is aimed at identifying signs of deterioration and maintenance needs, including the foundation and support of each container. Any leak from tank seams, gaskets, rivets, and bolts is promptly corrected.

The inspection program is comprised of informal daily examinations, monthly scheduled inspections, and periodic condition inspections. Additional inspections and/or examinations are performed whenever an operation alert, malfunction, shell leak, or potential bottom leak is reported following a scheduled examination. Written examination/inspection procedures and

monthly examination/inspection reports are signed by the field inspector and are maintained at the plant office for a period of at least three years.

3.3.1 Daily Examinations

Plant operations personnel visit the facility daily. The daily visual examination consists of a walk around of the tank. Plant operations personnel check the storage tanks for leaks and proper operation. They examine all aboveground valves, fittings, gauges, and piping at the tank. They look for accumulation of water within the storage tank berms and verify the condition and position of valves. The storage tanks are gauged every day. A daily production report is maintained. All malfunctions, improper operation of equipment, evidence of leakage, stained or discolored soil, etc. are logged and communicated to the MS Industries II, LLC Chief Operating Officer.

Table 3-2: Scope of daily examinations

Facility Area	Item	Observations
Storage Tanks	Leaks	Tank liquid level gauged Drip marks, leaks from weld seams, base of tank Puddles containing spilled or leak material Corrosion, especially at base (pitting, flaking) Cracks in metal Excessive soil or vegetation buildup against base
	Foundation problems	Cracks Puddles containing spilled or leaked material Settling Gaps at base
	Piping problems	Evidence of leaks, especially at connections/collars Corrosion (pitting, flaking) Settling Evidence of stored material seepage from valves or seals

3.3.2 Monthly Inspections

Table 3-3 summarizes the scope of monthly inspections performed by plant personnel.

The monthly inspection covers the storage tanks, pipelines, and all mobile equipment. It also includes verifying the proper functioning of all detection devices, if any. Storage tanks are inspected for signs of deterioration, leaks, or accumulation of oil inside the containment area, or other signs that maintenance or repairs are needed. The secondary containment area is checked for proper drainage, general conditions, evidence of oil, or signs of leakage. The monthly inspection also involves visually inspecting all valves and pipelines and noting the general condition of items such as transfer hoses, flange joints, expansion joints, valve glands

and bodies, catch pans, pipeline supports, bleeder and gauge valves, locking of valves, and metal surfaces.

The checklist provided in Appendix C is used during monthly inspections. These inspections are performed in accordance with written procedures such as API standards (e.g., API RP 12R1), engineering specifications, and maintenance schedule developed by the equipment manufacturers.

Table 3-3: Scope of monthly inspections

Facility Area	Equipment	Inspection Item
A	Storage tanks	Leakage, gaskets, hatches Tank liquid level checked Tank welds in good condition Vacuum vents Overflow lines Piping, valves, and bull plugs Corrosion, paint condition
	Area	Berm and curbing Presence of contaminated/stained soil Excessive vegetation Equipment protectors and signs Engine drip pans and sumps General housekeeping
Truck Unloading	Offload lines, drip pans, valves, catchment berm	Valve closed and in good condition Cap or bull plug at end of offload line/connection Sign of oil or standing water in drip pan(s) Sign of oil or standing water in catchment berm Sign of oil in surrounding area
	Road and Field Ditches	Evidence/puddles of oil
Other	Chemicals, Fuels and Lube Oils	Storage conditions
Response staging areas	Area	Road practicable by field vehicle Area clear of excessive vegetation

3.3.3 Periodic Condition Inspection of Bulk Storage Containers

A condition inspection of tank storage containers is performed by a qualified inspector according to the schedule and scope specified in API RP 12R1. The schedule is determined based on the corrosion rate; with the first inspection performed no more than 15 years after the tank construction, as detailed in Table 3-4.

Table 3-4: Schedule of periodic condition inspection of bulk storage containers

Tank	Year Built	Last Inspection	Next inspection by
#P1	2015	2/19/2015	12/31/2029*

* Dates for subsequent external inspections must follow the recommendations of the certified inspector, not to exceed three-quarters of the predicted shell/roof deck corrosion rate life, or maximum of 15 years.

3.3.4 Brittle Fracture Evaluation [112.7(i)]

At the present time, none of the bulk storage containers at this site was field-erected, and therefore no brittle fracture evaluation is required.

3.4 Personnel, Training, and Discharge Prevention Procedures [112.7(f)]

The Chief Operating Officer has been designated as the point of contact for all oil discharge prevention and response at this facility.

All MS Industries II, LLC plant personnel receive training on proper handling of oil products and procedures to respond to oil discharges prior to entering any MS Industries II, LLC Plant facility. The training ensures that all plant personnel understand the procedures described in this SPCC Plan and are informed of the requirements under applicable pollution control laws, rules and regulations. All MS Industries II, LLC plant personnel also receive an initial MSHA HazCom training (and annual refresher training) as per MSHA standard 30 CFR Part 47.

MS Industries II, LLC ensures that all contractor personnel are familiar with the facility operations, safety procedures, and spill prevention and control procedures described in this Plan prior to working at the facility. All contractors working at the facility receive a copy of this SPCC Plan. Any personnel visiting the facility receive training similar to that provided to MS Industries II, LLC oil handling employees.

MS Industries II, LLC management holds briefings with plant personnel (including contractor personnel as appropriate) at least once a year, as described below.

3.4.1 Spill Prevention Briefing

The General Counsel conducts Spill Prevention Briefings annually to ensure adequate understanding and effective implementation of this SPCC Plan. These briefings highlight and describe known spill events or failures, malfunctioning components, and recently developed precautionary measures. The briefings are conducted in conjunction with the company safety meetings. Sign-in sheets, which include the topics of discussion at each meeting, are maintained with this Plan at MS Industries II, LLC's plant office. A *Discharge Prevention Briefing Log* form is provided in Appendix E to this Plan and is used to document the briefings. The scheduled annual briefing includes a review of MS Industries II, LLC policies and procedures relating to spill prevention, control, cleanup, and reporting; procedures for routine handling of products (e.g., loading, unloading, transfers); SPCC inspections and spill prevention

procedures; spill reporting procedures; spill response; and recovery, disposal, and treatment of spilled material.

Personnel are instructed in operation and maintenance of equipment to prevent the discharge of oil, and in applicable federal, state, and local pollution laws, rules, and regulations. Plant operators and other personnel have an opportunity during the briefings to share their recommendations concerning health, safety, and environmental issues encountered during plant operations.

The general outline of the briefings is as follows:

- Responsibilities of personnel and Designated Person Accountable for Spill Prevention;
- Spill prevention regulations and requirements;
- Spill prevention procedures;
- Spill reporting and cleanup procedures;
- History/cause of known spill events;
- Equipment failures and operational issues;
- Recently developed measures/procedures;
- Proper equipment operation and maintenance; and
- Procedures for draining rainwater from berms.

3.4.2 Contractor Instructions

In order that there will be no misunderstanding on joint and respective duties and responsibilities to perform work in a safe manner, contractor personnel also receive instructions on the procedures outlined in this SPCC Plan. The instructions cover the contractor activities such as servicing a tanks or equipment.

All contractual agreements between MS Industries II, LLC and contractors will specifically state:

> *Personnel must, at all times, act in a manner to preserve life and property, and prevent pollution of the environment by proper use of the facility's prevention and containment systems to prevent hydrocarbon and hazardous material spills. No pollutant, regardless of the volume, is to be disposed of onto the ground or water, or allowed to drain into the ground or water. Federal regulations impose substantial fines and/or imprisonment for willful pollution of navigable waters. Failure to report accidental pollution at this facility, or elsewhere, can be cause for equally severe penalties to be imposed by federal regulations. To this end, all personnel must comply with every requirement of this SPCC Plan, as well as taking necessary actions to preserve life, and property, and to prevent pollution of the environment. It is the contractor's (or subcontractor's) responsibility to maintain his equipment in good working order and in compliance with this SPCC*

Plan. The contractor (or subcontractor) is also responsible for the familiarity and compliance of his personnel with this SPCC Plan. Contractor and subcontractor personnel must secure permission from MS Industries II, LLC's Chief Operating Officer before commencing any work. They must immediately advise the Chief Operating Officer of any hazardous or abnormal condition so that the Chief Operating Officer can take corrective measures.

3.5 Security [112.7(g)]

During non-operating hours at the plant, security personnel guard the property to prevent acts of vandalism and ensure the gates to the property are locked to prevent unauthorized persons from entering the property. They keep daily logs of all activity and report any suspicious activity to the General Manager or his designee at the plant.

APPENDIX A: Facility Diagrams

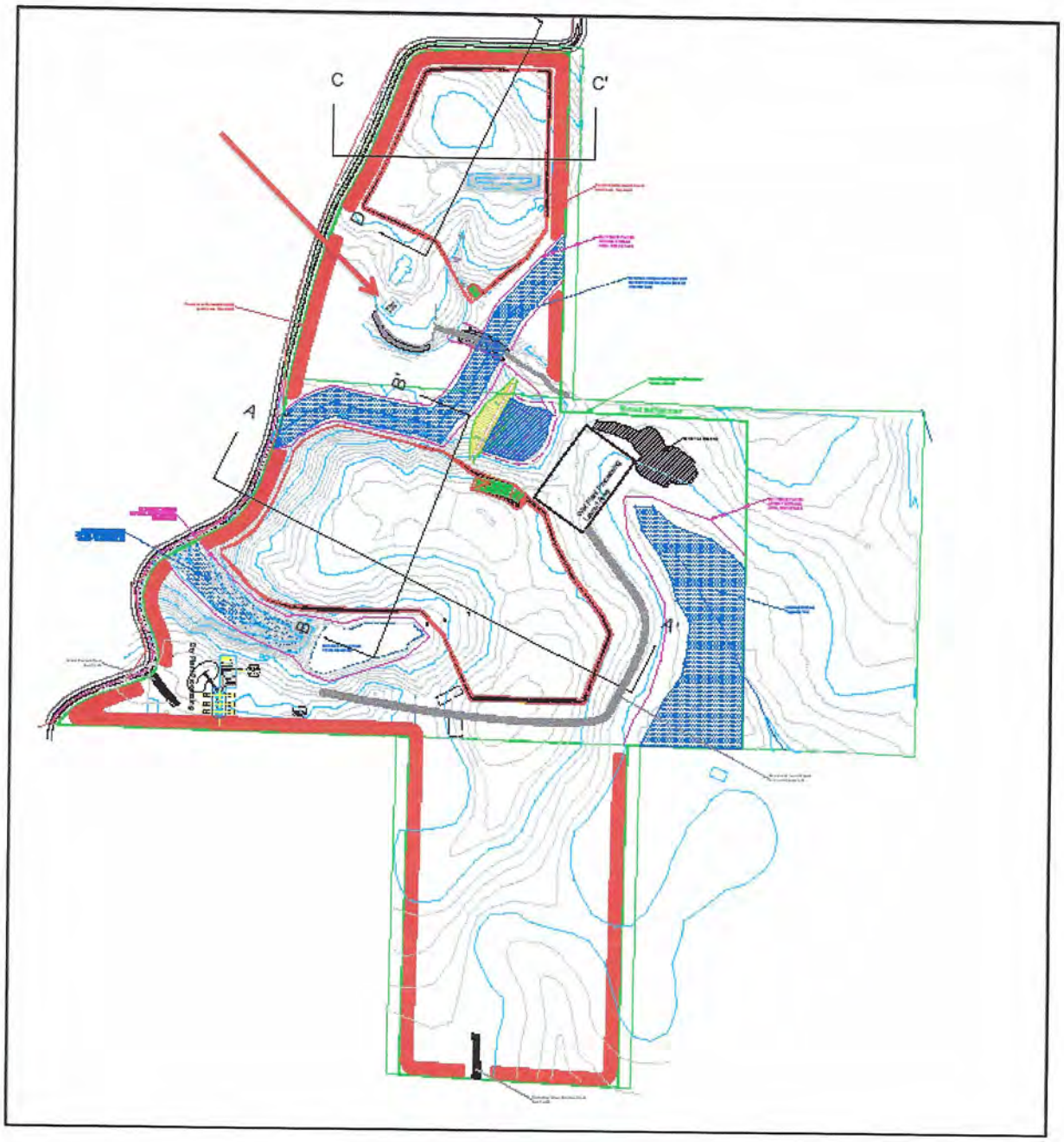


Figure A-1: Site Plan

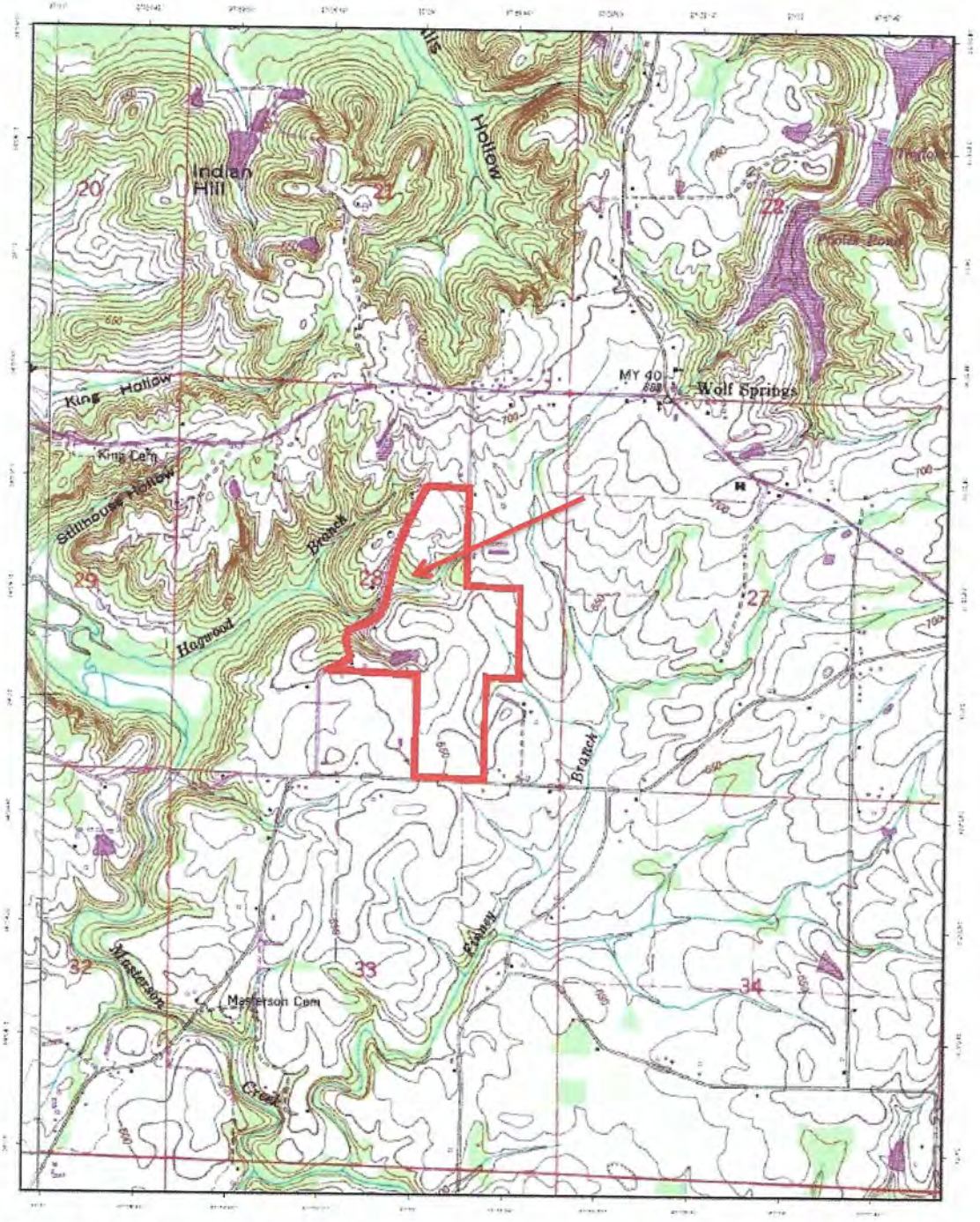


Figure A-2: Production Facility Topography with tank locations referenced in Table 1.2

APPENDIX B: Tank Truck Unloading Procedures

Unloading Tank Truck

Make sure the vehicle tank is properly vented before starting to unload. If you are not certain that the trailer is properly vented, you must contact your supervisor and request permission to open the trailer dome before starting to unload.

To Unload from Tank Truck Storage Tank

- Use wheel chocks or other similar barrier to prevent premature departure.
- Hook up load hose and open all appropriate valves from trailer to storage tank entry.
- Disengage clutch and place pump in load position.
- Release clutch slowly.
- Adjust throttle to proper engine RPM.
- When tank is loaded to appropriate level, slow engine speed.
- Close valve to trailer tank.
- Ensure that drips from the hose drain into the spill bucket at the loading area.
- Disconnect unloading hose completely, close load valve, plug and fasten securely.
- Close belly valve on trailer.
- Promptly clean up any spilled oil.
- Inspect lowermost drains and valves of the vehicle for discharges/leaks and ensure that they are tightened, adjusted, or replaced as needed to prevent discharges while vehicle is in transit.

APPENDIX C: Monthly Inspection Checklist

Further description and comments, if needed, should be provided on a separate sheet of paper and attached to this sheet. Any item answered "YES" needs to be promptly reported, repaired, or replaced, as it may result in non-compliance with regulatory requirements. Records are maintained with the SPCC Plan at the Ridgeview field office.

Date: _____ Signature: _____

	Yes	No	Description & Comments (Note tank/equipment ID)
Storage tanks			
Tank surfaces show signs of leakage			
Tanks show signs of damage, rust, or deterioration			
Bolts, rivets or seams are damaged			
Aboveground tank supports are deteriorated or buckled			
Aboveground tank foundations have eroded or settled			
Gaskets are leaking			
Level gauges or alarms are inoperative			
Vents are obstructed			
Containment berm shows discoloration or stains			
Berm is breached or eroded or has vegetation			
Berm drainage valves are open/broken			
Tank area clear of trash and vegetation			
Equipment protectors, labels, or signs are missing			
Piping and Related Equipment			
Valve seals or gaskets are leaking.			
Pipelines or supports are damaged or deteriorated.			
Pipelines are buried.			
Transfer equipment			
Loading/unloading lines are damaged or deteriorated.			
Connections are not capped or blank-flanged			
Secondary containment is damaged or stained			
Response Kit Inventory			
Discharge response material is missing or damaged or needs replacement			

Additional Remarks (attach sheet as needed):

APPENDIX D: Record of Berm Drainage

This record must be completed when rainwater from bermed areas is drained into a storm drain or into an open watercourse, lake, or pond, and bypasses the water treatment system. The bypass valve must normally be sealed in closed position and opened and resealed following drainage under responsible supervision. Records are maintained with the SPCC Plan at the Buena, New Jersey main office.

Date	Area	Presence of Oil	Time Started	Time Finished	Signature

APPENDIX E: Discharge Prevention Briefing Log

Date	Type of Briefing	Instructor(s)

APPENDIX F: Discharge Notification Procedures

Circumstances, instructions, and phone numbers for reporting a discharge to the National Response Center and other federal, state, and local agencies, and to other affected parties, are provided below. They are also posted at the facility in the storage shed containing the discharge response equipment. Note that any discharge to water must be reported immediately to the National Response Center.

Chief Operating Officer, John Christmas (24 hours) (404) 502-9375

Local Emergency (fire, explosion, or other hazards) 911

Agency / Organization	Agency Contact	Circumstances	When to Notify
Federal Agencies			
National Response Center	1-800-424-8802	Discharge reaching navigable waters.	**Immediately (verbal)**
EPA Region IV (Hotline)	1-404-562-8700		**Immediately (verbal)**
EPA Region IV Regional Administrator	Sam Nunn Federal Center 61 Forsyth Street, SW Atlanta, GA 30303 404-562-9900	Discharge 1,000 gallons or more; or second discharge of 42 gallons or more over a 12-month period.	Written notification within 60 days (see Section 2.1 of this Plan)
State Agencies			
Alabama Emergency Management Agency	800-843-0699	1) Injury requiring hospitalization or fatality. 2) Fire, explosion, or other impact that could affect public safety. 3) Release exceeding 24-hour reportable quantity. 4) Impact to areas beyond the facility's confines.	**Immediately (verbal)** Written notification to be made within 5 days.
Alabama Department of Environmental Management Decatur Branch Office	256-353-1713	Discharges that pose emergency conditions, regardless of the volume discharged.	**Within 1 hour** of discovery (verbal). Written notification within 5 working days.
Alabama Department of Environmental Management	334-271-7700	Discharges that do not pose emergency conditions.	Within 24 hours of discovery (verbal). Written notification within 5 working days.

Agency / Organization	Agency Contact	Circumstances	When to Notify
Local Agencies			
Lawrence County Emergency Management Agency	555 Walnut Street, Moulton, Alabama 35650 256-974-7641	Discharges that pose emergency conditions and non-emergency conditions, regardless of the volume discharged.	**Immediately (verbal)** Written notification within 5 days.
Town Creek Police Department	256-685-3200	Discharges that pose emergency conditions and non-emergency conditions, regardless of the volume discharged.	**Immediately (verbal)** Written notification within 5 days.
Others			
Response/cleanup contractors	PM Environmental 4050 Helton Drive Florence, AL 35631 (256) 476-6252	Any discharge that exceeds the capacity of facility personnel to respond and cleanup.	As needed

The person reporting the discharge must provide the following information:

- Name, location, organization, and telephone number;
- Name and address of the owner/operator;
- Date and time of the incident;
- Location of the incident;
- Source and cause of discharge;
- Types of material(s) discharged;
- Total quantity of materials discharged;
- Quantity discharged in harmful quantity (to navigable waters or adjoining shorelines);
- Danger or threat posed by the release or discharge;
- Description of all affected media (e.g., water, soil);
- Number and types of injuries (if any) and damaged caused;
- Weather conditions;
- Actions used to stop, remove, and mitigate effects of the discharge;
- Whether an evacuation is needed;
- Name of individuals and/or organizations contacted; and
- Any other information that may help emergency personnel respond to the incident.

Whenever the facility discharges more than 1,000 gallons of oil in a single event, or discharges more than 42 gallons of oil in each of two discharge incidents within a 12-month period, the Manager of Field Operations must provide the following information to the U.S. Environmental Protection Agency's Regional Administrator within 60 days:

- Name of the facility;
- Name of the owner or operator;
- Location of the facility;

- Maximum storage or handling capacity and normal daily throughput;
- Corrective actions and countermeasures taken, including a description of equipment repairs and replacements;
- Description of facility, including maps, flow diagrams, and topographical maps;
- Cause of the discharge(s) to navigable waters, including a failure analysis of the system and subsystems in which the failure occurred;
- Additional preventive measures taken or contemplated to minimize possibility of recurrence; and
- Other pertinent information requested by the Regional Administrator.

Discharge Notification Form

*** Notification must not be delayed if information or individuals are not available.

Facility: MS Industries II, LLC
Masterson Mine and Plant
2228 County Road 135, Town Creek, Alabama 35672

Description of Discharge		
Date/time	Release date: Release time: Duration:	Discovery date: Discovery time:
Reporting Individual	Name: Tel. #:	
Location of discharge	Latitude: Longitude:	Description:
Equipment source	O piping O tank O mobile equipment O unknown	Description: Equipment ID:
Product	O crude oil O fuel oil O other*	* Describe other:
Appearance and description		
Environmental conditions	Wind direction: Wind speed:	Rainfall: Current:
Impacts		
Quantity	Released:	Recovered:
Receiving medium	O water** O land O other (describe):	O Release confined to company property. O Release outside company property. ** If water, indicate extent and body of water:
Describe circumstances of the release		
Assessment of impacts and remedial actions		
Disposal method for recovered material		
Action taken to prevent incident from reoccurring		
Safety issues	O Injuries O Fatalities O Evacuation	

Notifications		
Agency	**Name**	**Date/time reported & Comments**
Company Spill Response Coordinator		
National Response Center 1-800-424-8802		
Alabama Department of Environmental Management		
Lawrence County Emergency Management Agency		
Alabama State police		
Town Creek Police Department		
Oil spill removal organization/cleanup contractor		

APPENDIX G: Equipment Shut-off Procedures

Source	Action
Transfer pumps or hose failure	Shut in the oil to the tank, if appropriate. Immediately close the appropriate valve(s). Shut off transfer pumps.
Tank overflow	Shut in the pipe or hose supplying oil to the tank. Close appropriate valve(s)
Tank failure	Shut off all electric machinery in the vicinity of the storage tank.
Explosion or fire	Immediately evacuate personnel from the area until the danger is over. If the fire is small enough such that it is safe to do so, attempt to extinguish with fire extinguishers available on site.
Equipment failure	Immediately close the nearest valve to stop the flow of oil into the leaking area.

APPENDIX H: Written Commitment of Manpower, Equipment and Materials

In addition to implementing the preventive measures described in this Plan, MS Industries II, LLC will also specifically:

- In the event of a discharge:
    - Make available all trained field personnel to perform response actions.
    - Obtain assistance from additional employees from its main contractors.
    - Collaborate fully with local, state, and federal authorities on response and cleanup operations
- Maintain all on-site oil spill control equipment described in this Plan. The equipment is estimated to contain oil spills of up to 2,000 gallons.
- Maintain all communications equipment in operating condition at all times.
- Ensure that staging areas to be used in the event of a discharge are accessible by field vehicles.
- Review the adequacy of on-site and third-party response capacity with pre-established response/cleanup contractors on an annual basis and update response/cleanup contractor list as necessary.
- Maintain formal agreements/contracts with response and cleanup contractors who will provide assistance in responding to an oil discharge and/or completing cleanup (see contract agreements maintained separately at the Buena, New Jersey office and lists of associated equipment and response contractor personnel capabilities).

Authorized Facility Representative: John Christmas

Signature: John Christmas

Title: Chief Operating Officer

POLLUTION ABATEMENT PLAN (PAP)

For:

MASTERSON SITE v4

2228 County Road 135
Town Creek, Lawrence County, AL

Operator:

MS Industries II, LLC
101 N. Jackson Avenue
Russellville, AL 35653

Contact:

Mr. Steven D. Smith
Chief Executive Officer
101 N. Jackson Avenue
Russellville, AL 35653
256-383-6740

Prepared by:

Mr. Marvin R. Blethen, PE
Blethen Mine Consultants, LLC
217 West Commerce Street
Bridgeton, New Jersey 08302

Updated June 30, 2020
Updated July 31, 2025

The Pollution Abatement Plan has been developed in accordance with Part 111.C of the general permit and ADEM Admin Code 335-6-9-.03.

TABLE OF CONTENTS

Section 1.0 Site Information and Location

1.1 Project Name:

Masterson Site v4

1.2 Project Address and Directions:

2228 County Road 135
Town Creek, Alabama 35672-6235

From Highway 157, proceed south on County Road 235 approximately 1.5 miles to the intersection of County Road 236, then right for approximately 0.5-mile and turn left onto County Road 135. Continue south on County Road 135 approximately 0.9-mile and gate will be on the left side of road.

1.3 Office/Mailing Address:

101 N. Jackson Avenue
Russellville, Alabama 35653

1.4 Telephone:

256-383-6740

1.5 Coordinates in Latitude/Longitude: (degrees, minutes, seconds)

At entrance from County Road 135:

N34° 35' 04.96"
W87° 29' 11.37"

At mine site:

N34° 35' 04.85"
W87° 28' 53.72"

Note: Coordinates were obtained from USGS 7.5 Minute Series Topographic Quadrangle Map

1.6 Legal Description:

The mine site is located on MS Industries property as shown on the attached topographical map, with the site being more particularly described as:

A Part of Section 28, Township 5 South, Range 9 West, Huntsville Meridian, Lawrence County, Alabama, being more particularly described as follows: Beginning at a capped iron pin found at the Northwest Corner of the Northeast Quarter of the Southeast Quarter of said Section 28; Thence run South 53°56’35" West to the point of beginning of the permitted tract; Thence run with the State Plane Grid South 87°38’03" East for a distance of 720.79 feet; Thence run South 00°22'19" West for a distance of 1,256.43 feet; Thence run North 88°54’23" West for a distance of 440.90 feet; Thence run South 01°01'39" West for a distance of 1,316.49 feet; Thence run North 87°11'25" West for a distance of 840.39 feet; Thence run North 01°14’04" East for a distance of 1,299.16 feet; Thence run North 88°45'56" West for a distance of 1,347.58 feet; Thence run North 38°13'23" East for a distance of 67.18 feet; Thence run North 62°05'57" East for a distance of 143.59 feet; Thence run North 68°47’52" East for a distance of 180.80 feet; Thence run North 45°57’43" East for a distance of 43.64 feet; Thence run North 09°26’48" East for a distance of 71.26 feet; Thence run North 18°47’03" West for a distance of 162.97 feet ; Thence run North 02°40’06" West for a distance of 78.31 feet; Thence run North 24°37’50" East for a distance of 102.14 feet; Thence run North 49°27’00" East for a distance of 66.90 feet; Thence run North 61°33’41" East for a distance of 239.63 feet; Thence run North 46°42’58" East for a distance of 123.11 feet; Thence run North 22°30’17" East for a distance of 300.48 feet; Thence run North 12°06’59" East for a distance of 420.52 feet; Thence run North 16°02’20" East for a distance of 387.84 feet; Thence run North 22°11’53" East for a distance of 114.16 feet; Thence run North 28°27’26" East for a distance of 213.74 feet; Thence run North 22°45’10" East for a distance of 424.76 feet; Thence run North 89°36’28" East for a distance of 594.52 feet; Thence run South 00°51’54" West for a distance of 1,379.47 feet to the Point of Beginning, containing 114.01 Acres, more or less.

Section 2.0 Contact Information and Responsible Parties

2.1 Operator:

MS Industries II, LLC
101 N. Jackson Avenue
Russellville, Alabama 35653
256-383-6740

2.2 Responsible Officials:

Mr. Steven D. Smith
Chief Executive Officer
MS Industries II, LLC
101 N. Jackson Avenue
Russellville, Alabama 35653
256-383-6740

Mr. John Christmas
Chief Operations Officer
MS Industries II, LLC
101 N. Jackson Avenue
Russellville, Alabama 35653
256-383-6740

2.3 Project Manager/Site Supervisor

Mr. Mike Floersch
Supervisor
MS Industries II, LLC
2228 County Road 135
Town Creek, Alabama 35672-6235
208-819-7248

2.4 24-Hour Emergency Contact:

Mr. Mike Floersch
208-819-7248

3.0 General Information

3.1 Name of Company:

MS Industries II, LLC
101 N. Jackson Avenue
Russellville, Alabama 35653
256-383-6740

3.2 Expected Number of Employees at Mine:

10

3.3 Hours of Operation:

7:00 am - 6:00 pm

3.4 Controlled Access:

A gate and fencing are installed at the site entrance on County Road 135 to prevent trespass

3.5 Products to be Mined:

Non-fuel clays, sands, ores and other minerals

3.6 Site Characteristics:

A. Shop and Future Preparation Area: +/-15 Acres

B. Mine Site: +/-99.01 Acres

1. Mine Pit (elevation 603): +/-32 Acres

2. Processing Plants: +/-6 Acres

3. Wetland/Streams Buffers: +/- 11.1

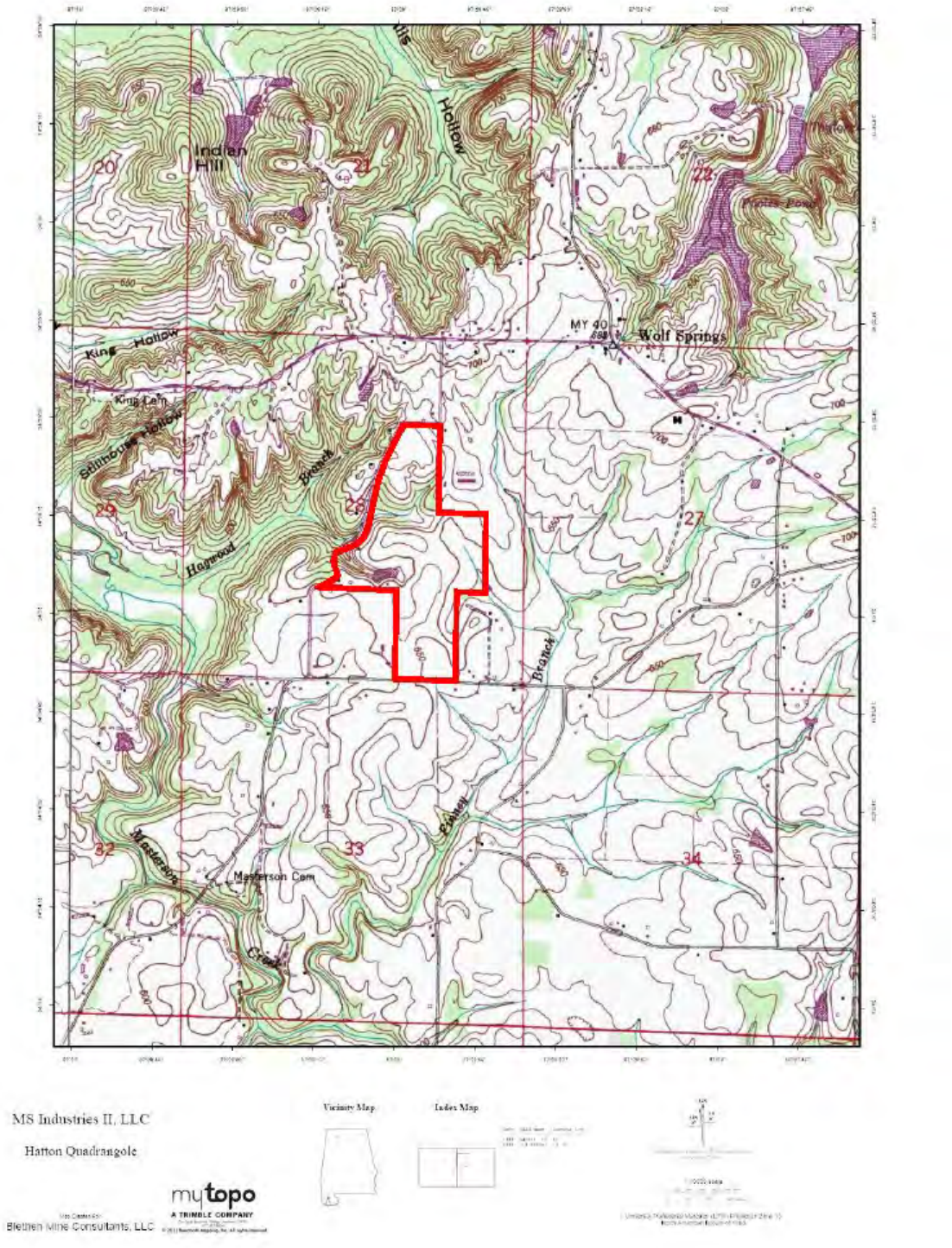
4. Remaining Area: +/-49.91 Acres

Total Area: +/-114.01 Acres as legally described in Section 1.6 of this Plan

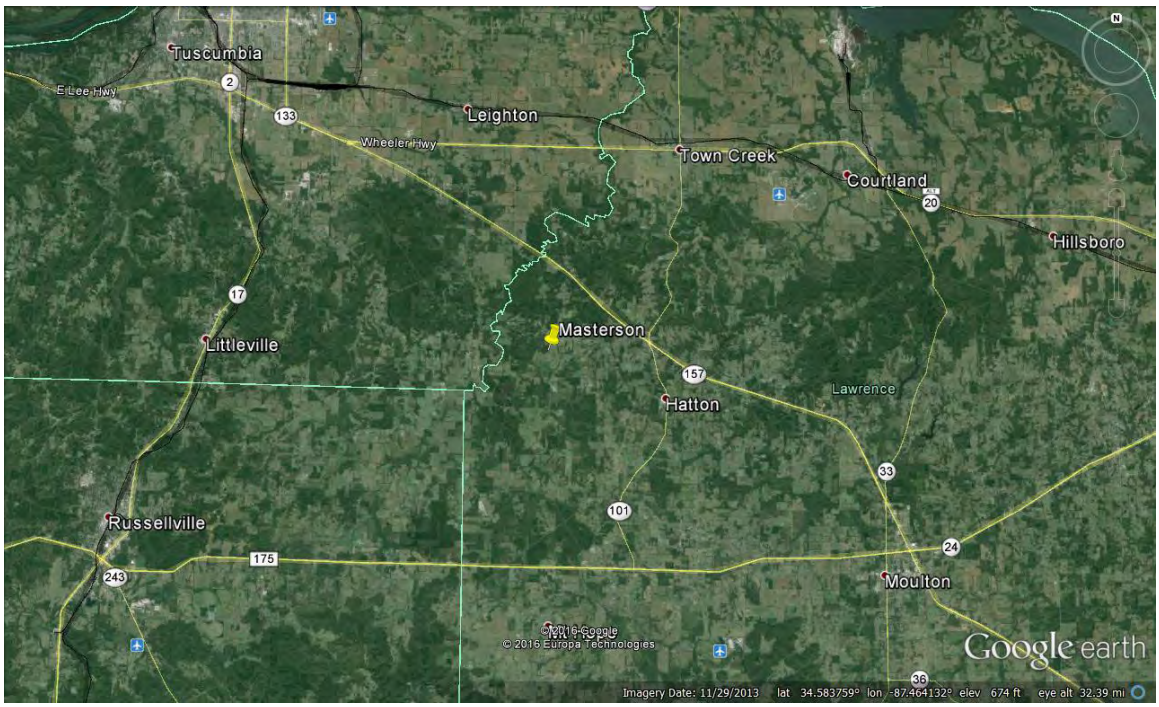
(99.01 Acres permitted and bonded with ADOL under Permit #014274 - File #42-MS-3).

4.0 Maps

4.1 USGS 7.5 Minute Series Topographic Map



4.2 Location Map



5.0 Nature of Activities

5.1 General Scope of Work

The surface mine site (+/-99 acres) and shop/ preparation area (+/-15 acres) encompasses a total area of +/-104 acres with the mine pits themselves occupying approximately 32 acres at elevation 603 feet (see Section 3.6 Site Characteristics). The purpose of the mine pit is for the removal of non-fuel sands, clays, ores and other minerals through the open pit method. The extracted materials are hauled to a crusher at the south end of the mine facility for dry processing. The crushed material is wet processed, sized and fed into a dryer for further processing off site or sold in bulk from silos. Additional future processing (upon appropriate modification to this PAP and Individual Permit) is anticipated on the south end of the site.

Descriptive information contained in this discussion of the Pollution Abatement Plan is intended to generally describe the activities to be performed in the operation of the Masterson Site. Specific depictions of the existing activities are included in the Attachments to this plan, more particularly the drawings and specifications. All should be taken together in their entirety, as no document is intended to be used on a stand-alone basis.

5.2 Sequence of Mining and Processing Activities

Overburden is removed from the mine area mechanically using excavators and trucks that transport the materials to the property boundaries and used to build a buffer mound approximately 6 feet high with a 10-foot wide top and side slopes of 3 to 1. Once the overburden is removed, the sands, clays, ores and other minerals are mined using excavators, bulldozers and front-end loaders using benches and/or slopes near vertical based on the competency of the sandstone. The mined materials are loaded into trucks for transport to the crusher, which are located adjacent to the south end of the mine pit. The mined strata are crushed and sized according to market needs and stockpiled for sale or further processing.

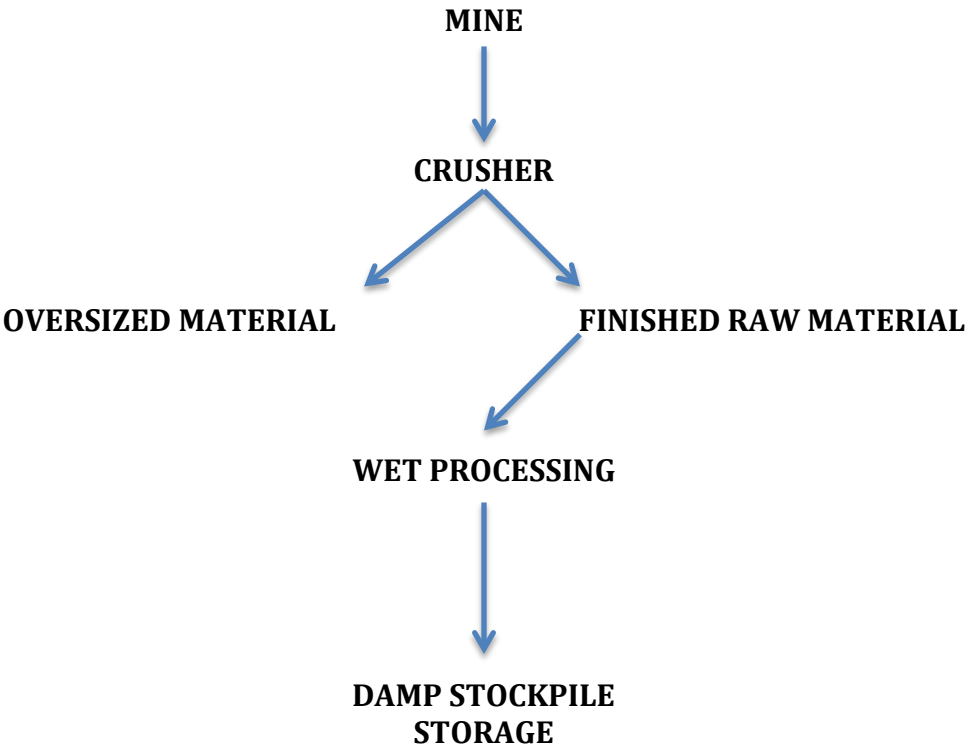
The stockpiled sand from the crusher is fed into a wet separation plant for hydraulic sizing into several different specifications. The water for the wet plant is taken from the ponds on site and re-circulated within the system to eliminate the runoff potential as well as the need to drill multiple wells for groundwater.

The wet sized materials are sold as final products or further processed by utilizing an industrial dryer to drive off the mechanically bound water. The dry processing equipment is off-site and not part of the tract. This dry

material will be further sized by screening and stored in multiple silos. The dry sand products are sold in bulk or shipped off site for further processing.

Reclamation will be contemporaneous using the stockpile overburden as source material.

A flow-chart depicting the sequence of mining and processing is:



5.3 Post-treatment Characteristics of Discharges

All discharges from the mining area consist of low-volume discharges from the sediment basin (003E) to an unnamed tributary of Hagwood Branch. The overland flow directed to the sediment basins through grading, berms and open rock-line ditches that produce sufficient holding time to allow particulates and solids to settle out and accommodate any necessary monitoring of effluent before discharge occurs from the mine site. The flow of discharge is monitored through a weir or similar apparatus, and concentrations of iron are also monitored through grab samples at the points of discharge. Concentrations of total suspended solids shall not exceed 30 mg/L and pH will be monitored to ensure discharges are between 6 and 8.5 standard units. Iron and Aluminum concentrations are also monitored and treated within the confines of the Discharge Limitations of the Individual Permit to ensure acceptable discharges.

Permanent and temporary stabilization controls are used on the north 15-acres adjacent to the mine site consistent with previously permitted land disturbance activities. This site was cleared and graded for future anticipated use and, at an appropriate time, additional structural controls may be added in conjunction with a modification to this PAP and Individual Permit. Consistent with the aforementioned sediment basins, this stabilized swale conveys overland flow to an unnamed tributary of Hagwood Branch.

The pits will be dug to capture any stormwater flowing within the site and will be used in the process and or pumped to sediment basin 003E.

6.0 Site Characteristics

6.1 Soils

According the USDA Soil Survey of Lawrence County, Alabama, the soils on the site are within the Tilsit Series and more particularly the Tilsit silt loam, which formed from fine-grained sandstone, siltstone and shale.

6.2 Slopes

The general area is described as gently rolling to undulating terrain though the mine site is within a relatively flat area with slopes of 2%-5%.

6.3 Vegetation

The area encompassing the mine facility consists of pastoral fields, cutover timber stands and to a lesser extent lands in row-crop cultivation.

6.4 Roads

Roads will be cut along the mine pit at intervals suitable for mining activities to provide equipment and trucks access to and from the pit and crusher. These roads will be temporary and reclaimed as mining activities progress.

An existing farm road provides ingress/egress from County Road 135 to the mine site. This farm road will be improved to serve as a haul road for end-users of mined materials. Consistent with the existing topography, this farm road is flat with little to no dips or grades and will be maintained as such through said improvements. No stream or creek crossings will be encountered during improvements to this access road.

Another existing road connects the mine pit to the shop area and additional preparation area, which is located on 15 acres at the north end of the site.

There is plans for another access from the south side of the property in the future and is depicted on the plans.

6.5 Drainage Patterns

The mine site is located atop a knoll or ridge oriented north to south and east to west with steeper gradients falling to the north, west and south. Overland flow is conveyed through sheet flow across these gradients and will be captured in the pits and or the existing ponds. A gentle gradient is to the east. Discharge from the basin shall be via primary discharge pipes and overflow spillways to an unnamed tributary branch of Hagwood Branch.

6.6 Receiving Waters

Unnamed tributary branches drain west to Hagwood Branch and are the receiving waters from a triad of outfalls from the sediment basin (Outfall 003) and the stabilized swale at the north end of the site (Outfall 004). Hagwood Branch is a tributary of Masterson Creek and ultimately Town Creek at the Colbert-Lawrence County line.

Hagwood Branch is not listed as impaired on the Alabama Department of Environmental Management's Clean Water Act 303(d) List and has a use classification of Fish and Wildlife. The receiving waters have not been assigned Total Maximum Daily Loads (TMDLs).

The state waters are currently marked with stakes and flagging to delineate the 50-foot setback. The state waters are also currently being protected by sediment barriers/silt fences along with permanent stability practices to limit, if not eliminate, any sediments from traversing to the state waters.

6.7 Water Sources

No water wells exist at the mine site. An existing farm pond will serve as an alternate water source for dust suppression and controls within the mine pit, along roads and at the operational area at the crusher. If additional waters are needed for such dust suppression and controls, the permittee may install a water well at the mine site that would likely have a 4"-6" riser and be constructed by a licensed well driller in the State of Alabama. The water well would not be used for potable water or domestic water supply.

No injection of waters or other liquids are associated with the mine facility operations. Hence, no hydraulic fracturing or injection wells will be utilized or present at the facility.

6.8 Storm Sewer Systems and Inlets

A single storm sewer is under the operations area to direct flow onto the site to one of the sediment basins. Inlets and outlets shall be protected with hay bales as necessary to reduce velocities and provide an upstream method of silt containment.

6.9 Public Water Supply

The mine is within the watershed of Wilson Reservoir of the Tennessee River, which is designated as an impoundment used as Public Water Supply. This impoundment is located approximately 15-miles to the north with Town Creek being a direct tributary. The mine does not discharge directly to Town Creek as described above in Section 6.6.

6.10 Potential Sources of Pollution

6.10.1 Sediment

The potential sources of pollution from the mining activities would be associated with erosion and subsequent sedimentation from:

- Run-off from the raw material stockpile
- Run-off from transport or hauling of excavated materials to the crusher
- Run-off from the crushed materials
- Run-off from haul roads

All stormwater run-off from the mine site will be directed to one (1) sediment basin through site grading, berms and open rock-lined ditches. Overland flow from the shop and future preparation area will be conveyed through a stabilized swale using permanent and temporary BMPs to ensure minimization of sediment transport from this area of the facility.

6.10.2 Other Potential Pollutants

Other potential sources of pollution other than sediment to stormwater run-off would include:

- Transportation-related lubricants and fuel storage on trucks and equipment
- Fuel transfer activities between tanker and trucks/equipment
- Drips or leaks from antifreeze, lubricants and fuels in trucks and equipment

There will be no bulk storage of fuels, chemicals or other similar substances at the mining site in fixed storage tanks. Any fuel storage will be transportation-related and delivered on a contract basis as needed. Temporary storage of fuels and lubricants in a tanker truck may occur as needed but the tanker truck will not remain on-site for long durations of time.

7.0 Erosion and Sediment Controls

7.1 General Description

All stormwater runoff from mining activities will be directed to one sediment basin through site grading, berms, pits and open rock-lined ditches. These latter conveyances will utilize riprap rock and check dams to abate high-velocity flows and control the volume/velocity of the discharges. Silt fencing will be placed around the periphery of the site where appropriate and in areas of higher sediment transport; metal wiring and hay bales will be used as required in conjunction with the silt fence to help control or mitigate 'knock-downs' or 'blow-outs' often resulting from higher precipitation events in areas if significant velocities. The potential pollutants to stormwater run-off from the mine site are described in Section 6.10 of this Plan.

7.2 Sediment Basins

One sediment basin is constructed as structural sediment control management practices at the mine site. As necessary, fill areas were constructed in 12" lifts with compaction to a 95% standard proctor. The embankment of the basin is maintained at a slope of 3: 1 and constructed in 12" lifts with a compaction of 95% standard proctor. The sides and periphery of the sediment basin were seeded with grass and/or further stabilized with riprap rock as necessary to prevent erosion and sediment transport. The dam is graded and maintained at a slope not to exceed 3: 1 and seeded to establish permanent vegetative cover.

The basin is maintained and cleaned out when 60% of its design capacity is reached. The sediments are transported to the overburden stockpile, compacted and seeded to establish vegetative cover and reduce potential erosion. No sediments are transported off-site. The life expectancy of the basins will exceed that of mining activities (5-years).

7.3 Outfalls

The outfall from the sediment basin (003) is stabilized to prevent scour or high volume/high velocity discharges through energy dissipation systems. Rip-rap rock is placed at the outfalls and grass seeding; hay bales and check dams are used as needed to stabilize the underlying soils and prevent sediment transport.

The outfall at the north end of the site (004) which is consistent with previously permitted land-disturbance activities (clearing, grubbing, grading) will be maintained through permanent and temporary Best Management Practices (BMPs) that include rock check dams, silt fencing and staked hay bales. These BMPs are maintained and stabilized.

7.4 Roads

The mine facility was constructed and maintains two types of roads, one for transport of mined materials from the pit and another for a haul road to the paved county road.

7.4.1 Mine Roads

Roads into the mine pit are constructed using no less than 4 inches of crushed rock on slopes not to exceed 10% along contours with transitional slopes of at least 2:1. An existing farm pond is used as a water source for dust abatement to prevent sediment dust transport.

7.4.2 Haul Road

The existing farm road from the mine site to County Road 135 were constructed in 8" lifts, compacted and covered with no less than 24" of base gravel. The existing topography along this road corridor is relatively flat and a similar flat grade will result from improvements. The side slopes of the road do not exceed 3: 1 and silt fencing is used as non-structural controls along this road to prevent erosion and subsequent sedimentation. Hay bales will be added if necessary to provide additional containment in areas of increased runoff. Offsite tracking of sediment onto roads is minimized using dust control spraying and maintained to prevent tracking of base gravel onto County Road 135. As necessary, the intersection of the haul road and County Road 135 will be swept to clean away debris.

7.5 Overburden Stockpile (buffer mounds)

The overburden stockpile (buffer mounds) is placed at the location shown, with all material compacted, covered in mulch and seeded to provide

vegetative cover. The side slopes are maintained at slopes not to exceed 3:1 and covered in mulch and seeded.

8.0 House Keeping Best Management Practices

8.1 Equipment and Truck Inspections

All equipment and trucks at the mine site are inspected daily to identify points of potential leaks, drips, etc. The inspections shall note any areas on the chassis, under carriage, and engine to ensure no fuels or lubricants are or have been leaking and will identify any connections, fittings, or hoses that could be potential sources of leaks or drips from failure or rupture. All fittings will be checked daily to ensure tight connections and all hoses, especially hydraulic hoses, will be inspected for signs of bulging, wear, rot or chaffing that may lead to a rupture and subsequent release. Maintenance on any areas so noted will be addressed immediately or prior to putting the equipment truck back into service.

8.2 Fuel Transfers

An over the road tanker truck supplies fuels and lubricants to the mine site for trucks and equipment. Spill buckets and absorbent drip pads are employed underneath each hose connection prior to fuel transfer activities and will remain until the fuel transfer is complete and the hose disconnected. Any residual fuel in the hose is drained back into the tanker truck or collected in the spill bucket. The equipment truck operator monitors the transfer into the tank to ensure unintended over-fills do not occur. In the event an overfill or spill occurs, the necessary equipment and materials are readily available to contain any free product through trenching and berming.

8.3 Solid Waste

All employees ensure trash is picked up to prevent wind-blown items and disposed of in a designated trashcan for proper disposal.

8.4 Sanitary Waste

A porta-potty is provided on a contract-basis by a third-party vendor for use by employees. The vendor provides regular maintenance and clean-out services. No septic tanks or similar appurtenances are used on-site.

9.0 Reclamation

A copy of the Reclamation Plan is attached to this PAP as Attachment 1.

9.1 Contemporaneous Reclamation

The reclamation process consists of the mechanical replacement of stockpiled overburden back into the mine pit to eliminate sheer walls and re-create the previous topography to the extent possible utilizing the overburden stockpile material quantity. The soils are replaced in lifts of no more than 12 inches with slopes no greater than 3: 1 and graded to allow natural drainage. Mulch and grass seeding is spread to cover the disturbed areas as reclamation continues and establishes a permanent vegetative cover.

9.2 Sediment Basins

Abandonment of the sediment basin(s) will consist of mechanically replacing any excavated soils to restore the natural contours and drainage patterns to pre-mine conditions. If applicable, the sediment basins may be converted into woodland ponds to further capture any sediment from run-off should groundwater elevations prevent replacement of excavated soil.

9.4 Haul Road

The haul road from the mine site to the paved county road (Co Rd 135) will remain in place at cessation of mining activities and be maintained as an existing access road consistent with the present-day farm road.

ATTACHMENT 1

Comprehensive Reclamation Plan

COMPREHENSIVE RECLAMATION PLAN
FOR

MASTERSON SITE

ADOL File Number 42-MS-3
ADOL Permit No 014274
Legal Description:
114.01 Acres in Section 28-T5S-R9W
USGS Topographic Map Attached

This plan will be followed to carry out reclamation as mining progresses, as well as the final closeout of the above-referenced site by:

MS Industries II, LLC

(Operator's Name and Address)

101 N. Jackson Avenue, Russellville, AL 35653

I. Reclamation Practices During Mining

1. All disturbed acreage will be re-vegetated upon cessation of mining or related land disturbance activities in a manner prescribed by the Alabama Department of Labor in accordance with the Alabama Surface Mining Act of 1969 (Act 99- 579). Reclamation shall proceed in a contemporaneous manner, i.e., in accompaniment to normal mining activities and in conjunction with site grading. Appropriate control procedures shall include:

    a. Backfilling, regarding and stabilizing exposed high walls in inactive pits to a slope of 3:1 or flatter with appropriate drainage control.

    b. When appropriate, the conversion of inactive pits to ponds, i.e., where the groundwater level does not lie significantly below a pit's highest rim.

    c. Re-vegetating all disturbed areas by applying lime and fertilizer as recommended by a comprehensive soil analysis, in conjunction with mulching and seeding using permanent native grasses or legumes in order to achieve no less than 75% vegetative ground cover.

d. In addition, trees shall be planted on affected land with native commercial species on a spacing of 10 feet, approximately 435 trees per acre, and planting methods shall be governed by good planting practices approved by a registered forester.

2. A minimum 50-foot, undisturbed buffer setback from adjacent properties, public roads, streams, lakes, residences, and all other features, which may be adversely affected by mining activities, shall be maintained during the operational life of the mine. Lateral support for this setback shall be graded to a slope of 3:1or flatter, and vegetated with permanent native grasses.

3. All reclamation activities will be initiated at the earliest practicable time. Where overburden is used to eliminate sheer walls, the placement of overburden against any section of sheer wall will begin as soon as practical after mining operations have ceased along that section, but no longer than six months after overburden becomes available and mining operations are complete. Contouring of the overburden will be completed no later than six months after the overburden has been placed.

4. Re-vegetation activities will be initiated as soon as practical and completed no later than one year after the final contours are established in an area and re-vegetation activities would not interfere with mining operations.

5. If mining operations cease, for whatever reason, for more than two years at the site, then all of the requirements of the Alabama Surface Mining Act of 1969 will be met. This period may be extended for a maximum of two years when the cessation of mining is caused by governmental action during the review of environmental permit applications. However, we will complete those reclamation activities necessary to protect the public health and safety.

6. Reclamation activities will be consistent with all applicable local government ordinances, which are at least as stringent as the minimum standards of the Alabama Surface Mining Act of 1969.

7. Reclamation will achieve the stormwater drainage, wetlands, and other surface and groundwater management requirements of the Alabama Department of Environmental Management and other agencies.

8. Safety provisions for persons, wildlife, and adjoining property will be provided during mining and reclamation.

II. Final Reclamation

The site manager will ensure completion of the following steps during the mine's final reclamation, within two (2) years of the expiration date of the ADOL surface mining permit period:

1. All mining and processing equipment (mobile or stationary) will be removed from the site.

2. The contents of all fuel/lubricant storage vessels will be pumped for subsequent transportation off-site and the vessels themselves will be removed.

3. All man-made structures will be removed or demolished; any remains of such structures will be disposed of or recycled off-site, except where permission is received from the Alabama Department of Labor, Alabama Department of Environmental Management, or other permitting authorities to refrain from doing so.

4. Any remaining stockpiles of material will be transported elsewhere for sale or utilized in the mine's reclamation via backfilling of pits.

5. The site will be graded to a 3:1 or flatter slope where necessary to minimize future erosion of topsoil, to direct surface runoff flow to retention ponds, and to prevent bodies of standing water other than reclaimed pits or settling ponds from forming.

6. Disturbed acreage will be re-vegetated by means of seeding and/or planting, using the methods described above.

7. Existing extraction pits will be converted into ponds as appropriate; above-water portions of ponds shall be vegetated as described above.

8. Gullies and washouts will be repaired by backfilling with soil or Type 3 riprap, and stabilized with vegetative cover where appropriate.

9. All lands shall be reclaimed to a neat, clean condition by removing or adequately burying, where allowed by law, all visible debris, litter, junk, worn- out or unusable equipment or materials, as well as all poles, pilings, and cables.

10. In addition to providing soil for re-vegetation purposes, overburden will be utilized to reduce the occurrence of slopes steeper than three horizontal feet for each vertical foot. Long, continuous slopes will be avoided.

11. Best management practices will be utilized to minimize erosion.

12. Native topsoil will be used, especially in areas reclaimed for aquatic or wildlife habitats, and where topsoil is not available, a soil or growing medium including amendments suitable for the type of vegetative communities planned.

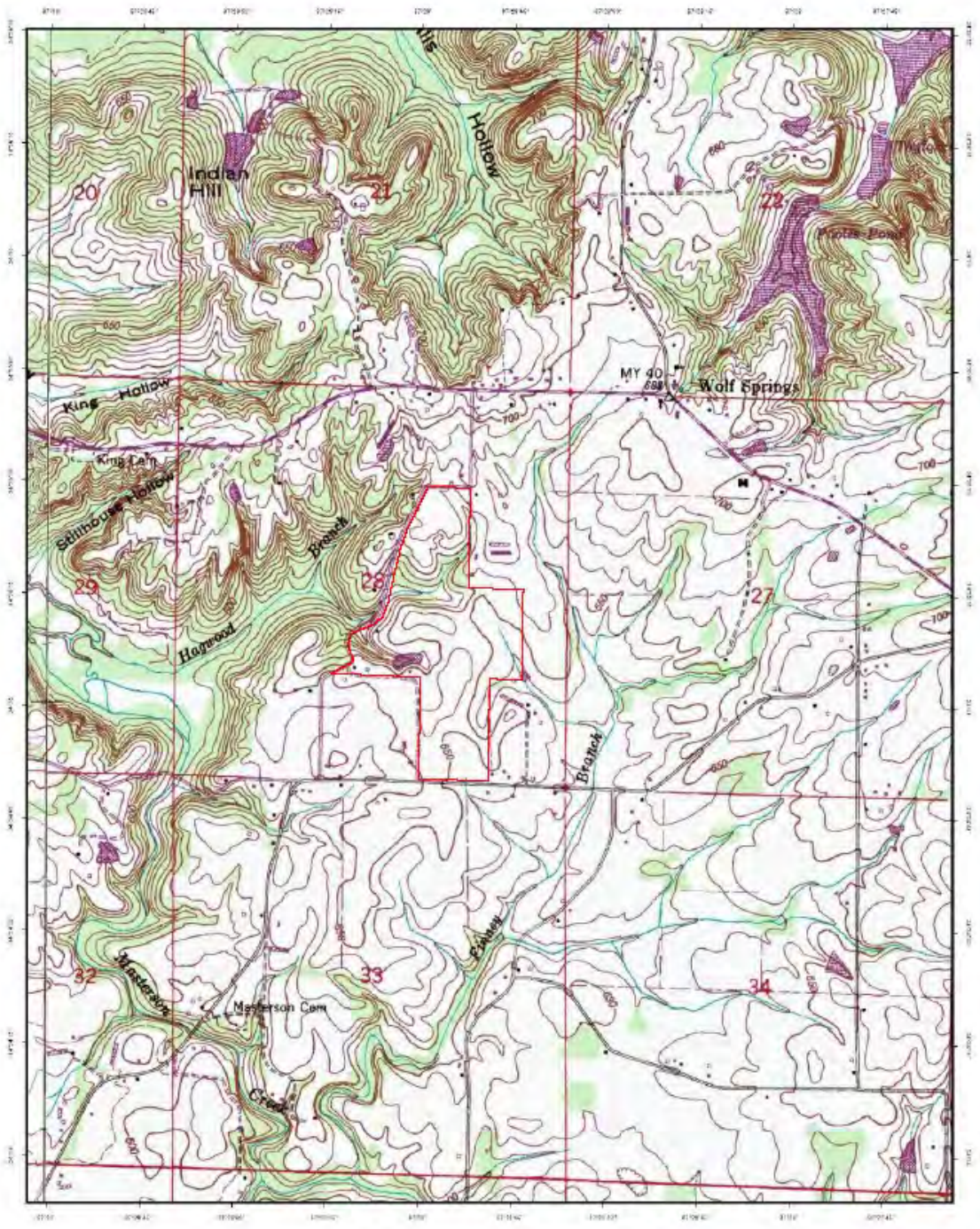
13. A suitable berm or back sloping will be employed along the tops of sheer walls above all benches to prevent uncontrolled surface runoff over the sheer wall.

14. A re-vegetation plan will be developed, including the species of grasses, shrubs, trees, and aquatic and wetland vegetation to be planted, spacing of vegetation, and, where necessary, soil amendments necessary to prepare them for re-vegetation.

Ill. Submitted by:

_____ _____

Operator (or authorized representative) Date



MS Industries II, LLC

Hatton Quadrangole

Vicinity Map

Index Map

mytopo
A TRIMBLE COMPANY

Blethen Mine Consultants, LLC

ATTACHMENT 2

Design Drawings

ATTACHMENT 3

Specifications

TECHNICAL SPECIFICATIONS
MASTERSON SITE
TOWN CREEK, LAWRENCE CO., ALABAMA

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TECHNICAL SPECIFICATIONS
MASTERSON SITE
TOWN CREEK, LAWRENCE CO., ALABAMA

CLEARING AND GRUBBING

PART 1 - GENERAL

1.1 SCOPE OF WORK

Work under this item shall consist of the removal and satisfactory disposal of all trees and stumps, roots, vegetation, rubbish, or any other material within the construction limits; filling depressions resulting from grubbing operations; the removal of all structures and/or obstructions shown on the plans or encountered during construction which interfere with construction; and the protection of designated trees, shrubs or plants; all in accordance with the plans and specifications.

1.2 PROTECTION OF UTILITIES

Prior to starting work, the location of all utilities shall be determined by the Contractor. Locations of existing utilities shown on the drawings are based on above ground structures and available record drawings. Existing utilities shall not be removed from service without Engineers approval. Any damage occurring to any utility will be replaced at the expense of the Contractor.

1.3 UTILITY RELOCATION

Relocation of the following utilities (where required) will be completed by the owner unless noted otherwise on the drawings:

- Sanitary Sewer Mains and Service Lines
- Water Mains and Valves, Service Lines and Meter Settings (Valve boxes will be reset by the Contractor.)
- Fire Hydrants

The Contractor shall arrange the removal and/or resetting of electrical lines, telephone lines, gas mains, services and appurtenances with the appropriate utility. The Owner will pay all costs for relocation.

1.4 PROTECTION OF PUBLIC AND PRIVATE PROPERTY

Excavations shall be suitably barricaded and posted with warning signs for the safety of persons. Structures, utilities, sidewalks, pavements, and other facilities immediately adjacent to excavations shall be protected against damage, including settlement, lateral movement, undermining, and washout.

1.5 PROTECTION OF MONUMENTS

The Contractor shall prevent the destruction of baseline monuments, benchmarks, control points, property comers, and all other survey points established by the Engineer. The Engineer shall not accomplish removal of all monuments without prior approval.

PART 2 - EXECUTION

2.1 CLEARING

All the surfaces within the construction limits or right-of-way lines shall be completely cleared of perishable or objectionable vegetable matter and other obstruction, as herein defined, except such trees and shrubs which are designated to remain. All trees, brush and stumps within the limits of the project area to be cut, shall be cut sufficiently close to the ground to facilitate future mowing, except such trees and stumps that are to be grubbed, which may be cut to a convenient height for grubbing by bulldozer.

The contractor shall supply the location and assume all responsibility for the disposition of all cleared non-perishable debris.

2.2 GRUBBING

Within the area of the construction lines where excavation is to be made or embankment is to placed, all trees, stumps, roots and other objectionable matter shall be grubbed out or otherwise completely removed and disposed of as hereinbefore indicated. When so directed, areas outside the construction lines in marshes or swampy sections shall be cleared of trees and the stumps cut off flush with the ground or at water level. Except in areas to be excavated, stumps, holes, and depressions caused by the grubbing operations shall be back-filled to the level of the original ground, with suitable material, and thoroughly compacted to the satisfaction of the Engineer.

2.3 OBSTRUCTIONS

The Contractor shall preserve and protect all structures, fences, and improvements, above or below the ground, within the construction limits, which are to remain.

The Contractor shall raze, remove and satisfactorily dispose of all buildings, structures, old curbs and gutter, sidewalks, fences, or other obstructions any portion of which is within the clearing and grubbing or right-of-way limits, except those items hereinbefore indicated. Unless otherwise specifically directed, the substructure of a bridge and all culverts and minor structures shall be razed to the level of the adjacent ground or low water level. All material, which has a salvage

value, shall be removed, without unnecessary damage, in sections or pieces, which may be readily transported, and shall be piled by the Contractor at such places as may be designated. Disposition of unusable material shall be made in accordance with the disposal of debris, under Clearing.

TECHNICAL SPECIFICATIONS
MASTERSON SITE
TOWN CREEK, LAWRENCE CO., ALABAMA

EXCAVATION AND EMBANKMENT

PART 1 - GENERAL

1.1 SCOPE OF WORK

Work under this item shall consist of the excavation of all materials encountered within the limits of the work and the disposal of excavated materials by hauling to embankment or waste. Excavation shall be completed to the lines, grades, and elevations shown on the plans. Excavation and backfill for storm sewers, drainage structures, lines, and utilities are not included in this specification.

1.2 CLASSIFICATION OF EXCAVATION

Excavation specified under this section may be classified by any of the following classes:

- Common Excavation - Common Excavation will consist of the excavation and placement of suitable material at the density shown on the drawings and contained in these specifications.

- Undercut Excavation - Undercut Excavation will consist of excavating unsuitable material within the property boundary which is unsuitable for that required for embankments and which can not be satisfactorily used or disposed of within the right-of-way.

- Select Backfill - Select Backfill will consist of borrow material that conforms to the unified soil classification SM, SP, or GM, natural or processed, to produce a uniform mixture, complying with the requirements of these specifications. The material shall be obtained from approved sources outside the property boundary. Contractor shall provide all testing required to having source material approved. Select Backfill Material containing organic matter or other foreign substances will not be accepted.

- Waste Excavation - Waste Excavation will consist of excavating unsuitable material within the property boundary, which is unsuitable for that required for embankments and which cannot be satisfactorily used or disposed of within the right-of-way.

- Shot Rock Excavation and Backfill - Shot Rock Excavation and Backfill will consist of excavating the existing shot rock to allow for

installation of the sheet pile wall system and driving of loading pad h-piles. The shot rock shall be excavated, stored on-site and as required reused for concrete wall foundation pads and for backfill around inside and outside of sheet pile wall and concrete wall.

1.3 REQUIREMENTS

The area shall be cleared and grubbed prior to the start of excavation. The Contractor shall inform himself as to the proper movements of haul and disposal of materials.

Suitable materials excavated shall be used in the formation of embankments and backfill as directed. Prior to acceptance, then entire area shall be machined and bladed for proper drainage.

The rough excavation shall be carried to such depth that sufficient material remains to achieve the required compaction. Sufficient material shall be placed above the designated subgrade in embankment construction to allow for both compaction and settlement. Over-excavation shall be backfilled and compacted in accordance with these specifications at the Contractor's expense

1.4 DRAINAGE

Grading in the vicinity of the work shall be performed such that water does not enter into excavated areas. No water shall accumulate in graded areas in advance of construction, with temporary ditches constructed as required to divert surface water.

Placement of embankment shall be performed such that positive drainage away from the construction area is maintained. Acceptable dewatering methods shall be employed as required.

PART 2 - EXCAVATION

2.1 STRIPPING SOIL

Topsoil, where present, shall be stripped in cut and fill areas and stored for later use in seeding and planting.

Heavy growths of grass and other vegetation, roots, debris, stones, objects larger than 2 inches in any dimension, and other unsuitable materials shall be removed from the surface of areas to be stripped by mowing, grubbing, raking, or other suitable methods as required.

Topsoil shall be stripped from the surface of cut areas and areas indicated to receive fills or embankments. Topsoil shall mean the average top 4 to 6 inches, or deeper pockets if found, of natural, friable, dark sandy loam surface soil possessing the characteristics of representative soils on the site and in vicinities that produce heavy growths of crops, grass, or other vegetation. The topsoil shall be reasonably free from subsoil, clay lumps, brush, and objectionable weeds; from stones, stumps, and other objects larger than 2 inches in diameter; from roots and toxic substances; and from any other material or substances that might be harmful to plant growth or be a hindrance to fine grading, planting, and maintenance operations.

Excavated topsoil shall be transported to, and stockpiled in, designated topsoil storage areas on project site. Storage piles of suitable topsoil shall be located away from other soil material storage piles to prevent the intermingling of materials. Storage piles shall be not less than 4 feet high and constructed so that surface water will drain freely.

Where trees are designated to remain, stripping shall be stopped a sufficient distance from such trees to prevent damage to the main root system. In no case shall operations enter within the drip line of trees designated to remain.

2.2 EXCAVATION

All excavation necessary for successful completion of the work shall be performed to the lines, grades and elevations as shown on the plans or as otherwise directed. Surplus suitable excavation shall be stockpiled to the lines and grades as indicated on the plans. Material encountered which is considered unsuitable by the Engineer for use in the work shall be removed and disposed of as surplus excavation. Surplus excavation shall be placed so that it is well drained and presents a neat appearance. Spoils from ditch excavation shall be spread and leveled to blend with the ground contours and so as to present a well- drained, pleasing appearance.

The exposed subgrade in areas that are to receive additional structural fill and dense grade stone layer build-up shall be proof-rolled using a heavily loaded dump truck, prior to any additional materials placement. Any materials judged to deflect excessively under the wheel loads, which continued moisture- conditioning and compaction cannot adequately stabilize, shall be undercut to more stable underlying soils or bridged with a geo-grid stabilization material as directed by the Engineer.

Excavation for structures shall be performed in a manner to allow for proper space for erecting and removing forms from structures. Undercutting will be backfilled with medium crushed stone. All bracing, sheeting, or shoring necessary to perform and protect the excavation and structure shall be completed as required for safety and in accordance with OSHA requirements. All bracing, sheeting, and shoring shall be removed after completion of the structure unless otherwise directed.

2.3 BACKFILL AROUND STRUCTURES

Backfill around structures shall be placed in 12" minimum layers, with a moisture content maintained such that 90% Standard Proctor Density may be obtained. Each layer shall be compacted by hand tampers or other approved methods, with care taken to prevent damage to the constructed structure. Materials for backfill shall consist of the excavated material, borrow material, or other approved materials, and shall be free from roots or other organic materials, trash, frozen materials, and stones greater than 4".

2.4 EMBANKMENTS

Embankments shall be constructed of satisfactory material free of organic or frozen material and rocks with maximum dimensions no greater than 3 inches.

Areas on which embankment is to be placed shall be sufficiently disked to a minimum depth of 4". No embankment is to be placed on frozen ground. Embankments constructed are to be placed in horizontal layers of not more than 12" in compacted lifts to 95% Standard Proctor density within -2 to +3 percent of optimum moisture content for the soil type, unless indicated otherwise on the plans. Fill areas on existing slopes shall be benched, prior to fill placement, to prevent lateral movement. Placement and compaction shall be performed such that the final grade after compaction and shrinkage shall conform to the plan lines, grades, and cross-sections to within +/- 0.10'.

2.5 SUB-GRADE PREPARATION FOR ROADWAYS AND PARKING

The top portion of the sub-grade for all roadways and parking areas shall be crowned correctly, with the top 12" compacted to at least 95% Standard Proctor density within -2 to +3 percent of optimum moisture content unless otherwise directed on the plans. All irregularities or depressions experienced during compaction shall be repaired by scarifying and adding, removing, or replacing material until the surface is smooth and uniform. Soft or yielding material, which does not readily compact, shall be replaced with suitable material.

Rolling and compaction of the entire area shall be done with equipment, which will attain maximum results. Sheep foot, rubber-tired, or flat rollers shall be used, as conditions require. Any portion of the area, which is not accessible to a roller, shall be compacted to the required density by other approved means.

During all compacting operations, the water content of the material shall be constantly adjusted, if necessary, by sprinkling or loosening and subsequent evaporation to within the specified range of the optimum moisture content.

At all times the top of the sub-grade shall be kept in such condition that it will drain readily and effectively. The Contractor shall protect the sub-grade from damage, and

in no case will vehicles be allowed to travel in a single track. If ruts are formed, the sub-grade shall be reshaped and rolled.

Any irregularities or depressions that develop under rolling shall be corrected by loosening the material at those places and adding, removing, or replacing material until the surface is smooth and uniform. All soft and yielding material, which will not compact readily when rolled or tamped shall be removed as directed by the Engineers and replaced with suitable material.

Material encountered that will not permit satisfactory compaction shall be excavated, disposed, and replaced, and will be considered incidental to sub-grade preparation. No additional pay will be allowed for this item.

2.6 HAUL

All materials shall be hauled from the original position to embankment or waste as indicated on the plans and directed by the Engineer.

2.7 FINISH GRADE

All disturbed areas, embankments, and excavations shall be graded smooth to meet the elevations shown on the plans. All roots, lumber, earth, clods, or rocks larger than 3" shall be removed prior to seeding and project completion.

In borrow areas; slopes shall be completed to 3 horizontal 1 vertical slopes, unless otherwise indicated on the plans. Borrow areas shall receive topsoil and seeded and mulched as described herein and in accordance with the technical specifications.

2.8 TOPSOIL

Topsoil shall be placed in the top 4 inches of the areas to be seeded or areas where spot sod and strip sod are to be planted as shown on the drawings. All areas to receive topsoil, including cut and fill areas, shall be shaped to provide a minimum of 4 inches. The topsoil shall be uniformly distributed and evenly spread to any average thickness of 4 inches. The spreading shall be performed in such a manner that planting can proceed with little additional soil preparation or tillage, and the area shall be left smooth and suitable for lawns. Irregularities in the surface from topsoiling or other operations shall be corrected so as to prevent the formation of depressions where water will stand. Topsoil shall not be hauled and placed when wet or when the sub-grade is frozen, excessively wet, extremely dry, or in a condition otherwise detrimental to the proposed planting or to proper grading. Topsoil shall be spread uniformly and stabilized using small rolling compaction devices. Where any portion of the surface becomes gullied or otherwise damaged, the affected area shall be repaired to establish the condition and grade prior to topsoiling, and then shall be re-topsoiled as approved.

TECHNICAL SPECIFICATIONS
MASTERSON SITE
TOWN CREEK, LAWRENCE CO., ALABAMA

GRANULAR MATERIALS

PART 1 - GENERAL

1.1 SCOPE

Work for this item consists of consists of providing selected borrow material, washed gravel, clay gravel, and crushed stone for incorporation into the work. Material provided under this section may be from onsite sources.

PART 2 - AGGREGATE TYPES

2.1 WASHED GRAVEL

Washed gravel shall be composed of hard, tough, durable particles reasonable free of injurious or deleterious substances, with the percentage of wear not exceeding 50%.

The gradation of the washed gravel shall be as follows:

Sieve Size	Percent Passing (by weight)
2 inch	100
1 1/2 inch	90-100
1 inch	80-100
3/4 inch	50-100
1/2 inch	35-80
3/8 inch	12-65
No. 4	5-30
No. 10	0-8

2.2 CLAY GRAVEL

Clay Gravel shall be composed of natural or artificial mixtures of aggregates and soil binder having satisfactory cementing qualities to meet all the requirements as specified.

The coarse aggregate (material retained on the No. 10 sieve) shall be composed of gravel, stone, slag, or combinations thereof, and shall consist of hard, durable particles reasonably free of vegetable or other deleterious substances. Coarse aggregates shall have a percentage of wear not to exceed 50%.

The fine aggregate (material passing the No. 10 sieve) shall be composed of a natural or artificial mixture of soil binder and granulate material. The soil binder shall be clay or silt or other materials, or combinations thereof, having satisfactory cementing qualities, homogeneous in character, and reasonably free of vegetable matter, clay balls, or other deleterious substances that cannot be classified as serviceable. The granular portion shall be composed of sand, stone, or slag screenings, and shall be hard and durable and preferably sharp.

2.3 CRUSHED STONE

Crushed Stone shall consist of fragments of sound, durable stone, free from disintegrated stone, salt, alkali, vegetable matter, or adherent coatings and other deleterious substances; and shall be reasonably free from thin or elongated pieces. The percentage of wear shall not exceed 50%.

The gradation of the crushed stone shall be as follows:

TYPE	**FINE**	**MEDIUM**	**COARSE**	**CRUSHER RUN**
Square Opening Sieves	Percent Passing, (by weight)			
3 inch			100	
2 inch			60-70	
1 1/2 inch		100		100
1 1/4 inch			5-40	
1 inch		80-100	0-10	90-100
3/4 inch	100			
1/2 inch	95-100	25-60		
3/8 inch	45-90			45-85
No. 4	0-15	0-10		30-65
No. 16	0-3			
No. 40				15-30
No. 200				4-15

TECHNICAL SPECIFICATIONS
MASTERSON SITE
TOWN CREEK, LAWRENCE CO., ALABAMA

CRUSHED STONE

PART 1 - GENERAL

1.1 SCOPE OF WORK

Work for this item shall consist of constructing a dense graded crushed stone base on a prepared sub- grade in accordance with the requirements of these specifications and in conformance with the lines, grades and elevations shown on the plans or established by the Engineer.

1.2 MATERIALS

Crushed stone shall conform to Crusher Run Stone as specified in the "Granular Materials" specifications.

1.3 EQUIPMENT

Hauling equipment shall be pneumatic tired vehicles having dump bodies suitable for discharging material into the spreading machines.

The spreader unit shall be mounted on crawler tracks to avoid undesirable deformations. The screed or strike-off assembly shall effectively produce a finished surface to required evenness and texture without tearing or gouging the mixture.

Steel wheel rollers shall be 8-10 ton tandem rollers. Rollers shall be equipped with adjustable scrapers.

Vibratory rollers shall be drum type units not less than 3 feet in width, capable of achieving the desired compaction.

Sprinkling equipment shall consist of tank trucks, pressure distributors or other approved equipment designed to apply a uniform amount of water and controlled quantities to variable widths.

Motor graders rated at not less than 10 tons shall be power driven and equipped as deemed necessary with power controls, wheel base width and blade length to meet the capacity and efficiency requirements of the work.

PART 2 - EXECUTION

2.1 SUB-GRADE PREPARATION

The top portion of the sub-grade, both cut and fill sections, shall be shaped correctly and brought to a firm, unyielding layer. The top 6 inches shall be compacted to at least 95% Standard Proctor Method density at optimum moisture content.

Rolling and compaction of the entire area shall be done with equipment, which will attain maximum results. Sheep's foot, rubber-tired, or flat rollers shall be used, as, in the opinion of the Engineer's, conditions require. Any portion of the area, which is not accessible to a roller, shall be compacted to the required density by other approved means.

Any irregularities or depressions that develop under rolling shall be corrected by loosening the material at those places and adding, or replacing material until the surface is smooth and uniform. All soft and yielding material, which will not compact readily when rolled or tamped shall be removed as directed by the Engineer and replaced with suitable material.

During all compaction operations, the water content of the material shall be constantly adjusted, if necessary, by sprinkling or loosening and subsequent evaporating to within 2% by weight of the optimum moisture content.

At all times the top of the sub-grade shall be kept in such condition that it will drain readily and effectively. The Contractor shall project the sub-grade from damage, and in no case will vehicles be allowed to travel in a single track. If ruts are formed, the sub-grade shall be reshaped and rolled.

The top of the sub-grade shall be of such smoothness that when tested, it shall not show any deviation in excess of 1/2 inch nor shall it be more than 0.05 foot from the true established grade.

Where material is encountered that will not permit satisfactory compaction for sub-grade, excavation, disposal and replacement for this material will be required and will be considered as incidental to sub- grade preparation. No extra pay will be allowed for this item.

2.2 CONSTRUCTION

Crushed stone base course shall be constructed in layers not to exceed 6 inches in compacted thickness. The first layer shall be constructed upon an approved underlying course. In constructing any required subsequent layer of the stone base the previously laid layer(s) shall have been constructed in accordance with these specifications and shall have been maintained free of all ruts or irregularities and loose material and at the proper moisture content.

The Contractor shall avoid cutting into the underlying competed course or layer at any time, and by any method. He shall be responsible for maintaining the proper moisture content in the material including the vertical faces of half width spreads of construction. To facilitate the bond between layers of the crushed stone base, subsequent layer(s) shall be placed upon previously placed layers as soon as practicable.

After each layer of the stone is placed and the rolling nears completion, the course and the adjoining one shall be rolled together with special effort being exercised at the point where the joint occurs.

The surface course shall be constructed in approximately equal layers each of which is not to exceed 4 inches in compacted thickness. The Contractor shall be responsible for spreading loose material so as to minimize segregation and degradation, and in such amounts as to yield the required compacted thickness and grades.

Compacting shall begin promptly after satisfactory spreading of the material and while moisture content is at optimum. Unless otherwise directed by the Engineer, compacting operations shall proceed initially with steel wheel rollers(s), followed by Vibratory roller(s), and pneumatic tired roller(s).

Pneumatic tired roller(s) shall be operated in straight paths in both forward and reverse motion, with essential turning made at slow speeds to avoid displacement of the materials.

A motor grader may be used in conjunction with compacting operations to correct the distribution of materials however; special care will be necessary to prevent segregation or degradation of the material.

The density of the completed portions of each layer of the base course shall be 100% Standard Proctor Density.

2.3 LIMITATIONS

No stone shall be placed upon an underlying course, or layer, when such course is or layer is frozen, rutted, or otherwise deformed, nor when it is not to the required grade and cross section and does not have the proper moisture content and required density.

No stone shall be placed when the temperature is below 35 degrees F., or when the latest weather bulletin indicates the probability of freezing temperatures within 12 hours in the area in which the project is located.

No stone shall be placed when over 10 percent of the stone placed in the previous day's operation fails to meet specified requirements for surface finish or density until the Contractor has made such adjustments or changes in equipment, operating procedure, and methods as are necessary to assure the securing or required results.

Water will not be measured for separate payment.

TECHNICAL SPECIFICATIONS
MASTERSON SITE
TOWN CREEK, LAWRENCE CO., ALABAMA

EROSION CONTROL

PART 1 - GENERAL

1.1 SCOPE OF WORK

This item provides for the planting and establishment of vegetation for the purpose of controlling erosion and for enhancing the aesthetic value and functional usefulness of the completed project. After acceptance of the finish grading, the entire new soil surfaces, abraded or disturbed areas shall be prepared, fertilized, seeded and mulched with vegetative material or solid sodded excepting areas otherwise noted on plans.

It shall be understood that the term "plant establishment" means that work necessary to supplement and improve natural conditions to the end that fully established healthy vegetation is provided. It shall also include the preserving, protecting and replacing and such other work as may be necessary to keep the turf or sod in a satisfactory condition.

1.2 LIMITATIONS

Normal erosion control establishment items will only be performed between March 1 and November 15. Mixture No. 1 will be used during the spring and summer months, March 1 to August 31, and Mixture No. 2 will be used during the fall and winter months, September 1 to November 15. The Contractor is with this forewarned that these are neither arbitrary nor flexible dates and his adherence thereto is expected. At other times, temporary erosion control will be required.

PART 2 - MATERIALS

2.1 FERTILIZERS

Fertilizers shall comply with the applicable fertilizer laws of the State. Combination fertilizer shall be "standard commercial products" and shall contain not less than 13% each Nitrogen, Phosphorous P205, and Potash K20.

Agricultural limestone shall contain not less than 80% soluble of calcium and magnesium carbonate calculated as calcium carbonate on a oven dry basis. Agricultural limestone shall be of such fineness that at least 80% will pass a U.S. Standard No. 10 sieve and 40% will pass a U.S. Standard No. 40 sieve.

Ammonium Nitrate fertilizer shall be a 34-0-0 grade containing a minimum of 34% total nitrogen, of which 17% shall be nitrate nitrogen and 17% shall be ammoniacal nitrogen.

2.2 SEED

All seeds shall comply with the applicable seed laws of the State. The seeds shall be delivered in bags with certified tags or labels attached to each bag showing the name (kind and variety), percent of germination and purity of the seed and the percent of obnoxious weeds and inert matter.

The requirements for germination and purity shall be as set out in the table below:

GERMINATION AND PURITY REQUIREMENTS

Name (Kind)	Name (Variety)	% Germination	% Purity
<u>Normal Conditions</u>			
Bermudagrass	Common	90	95
White Clover	Dutch	85	98
Crimson Clover	Dixie, Chief, Tibbee, Autauga	85	98
Bahiagrass	Pensacola, Wilmington	85	85
Fescue	Kentucky 31	95	80
<u>Temporary Control</u>			
Wheat	Mixed	80	98

Approved grass seeds shall be treated with a disinfectant protectant containing active ingredient of not less than 50% Thiram (tetramethylthiuram disulfide). The use of other approved dry (dust) treatment type disinfectant protectant materials for grass seeds may be permitted when the Contractor has furnished satisfactory evidence that Thiram is not available. The treatment shall be performed at the rate specified and according to the directions shown on the container for treatment of grass seeds.

Approved legume seeds shall be treated with leguminous inoculant. The inoculants for treating leguminous seeds shall be standard pure culture of nitrogen fixing bacteria. The seed shall be treated at the rate specified and according to the directions shown on the container of the inoculants and before the expiration date for use of the inoculant as shown on the container.

2.3 WATER

All water used shall be free from injurious quantities of oil, acid, alkali or vegetable matter; reasonably clear; and shall not be brackish. If at any time water from any source shall become of unsatisfactory quality or of insufficient quantity, the Contractor shall provide satisfactory water from some other source.

2.4 MULCH

The vegetative materials for mulch shall be classed as follows:

Type I - Approved baled straw of wheat, oat, rye grain or rice; or broomsage of Bahia grass (without seed heads), which have reached maturity prior to cutting.

Type II - Approved baled hay produced from Bermuda, Bahia, Fescue, Dallis Grass, any of the Lespedezas, or combinations thereof.

All of the above materials shall have been cured properly prior to baling and shall be reasonably free from Johnson grass and other obnoxious grasses and weeds. Vegetative material shall be reasonably bright in color, dry, and shall not be musty, moldy or have otherwise low quality.

Type I shall be furnished and used unless written permission to use Type II is obtained.

2.5 SOLID SOD

Furnish, transport and plant approved grass sod so as to provide a complete cover of solid sod turf with satisfactory growth on all areas shown on the plans or designated to be sodded solid. This work shall also include the accomplishment of plant establishment as required to assure satisfactory growth of the solid sod.

Unless otherwise specified, solid sod shall be Bermudagrass (common), Bahia or other approved sod species and shall be live, fresh, growing grass with at least 11/2 inches of soil adhering firmly to the roots when placed. The sod shall be reasonably free from obnoxious weeds or other grasses, and shall not contain any matter deleterious to its growth, or which might affect its subsistence or hardiness when transplanted. The sod shall be in blocks at least 8"x 8" free from ragged edges.

The source of solid sod shall be inspected and approved prior to harvest for use on the project. After approval, the area from which the solid sod is to be harvested shall be closely mowed and raked it deemed necessary to remove excessive top growth debris.

2.6 EROSION CONTROL BLANKET

Furnish and install erosion control blankets as indicated on the plans for slope protection prior to establishment of permanent grass. Blankets shall be 100% straw fiber stitched to lightweight netting on both sides. Blankets shall be ContechSFB2, or approved equal.

PART 3 - EXECUTION

3.1 GROUND PREPARATION

The area to be seeded shall be plowed or disk-harrowed and thoroughly pulverized to a depth of 4" the areas immediately before the application of vegetative items. The prepared seedbed must be in reasonably close conformity with the established lines and grades without appreciable humps or depressions. Soil preparation while wet or in an otherwise nontillable condition will not be allowed. When the soil is too dry to allow proper tillage, water will be added to insure a tillable condition.

3.2 FERTILIZING

Equipment necessary to handle, store, uniformly spread and incorporate the specified application of fertilizers, including agricultural limestone, shall be provided. The amounts and types of fertilizers shall be applied and incorporated uniformly in accordance with the requirements for the various items of use. If the fertilizer is not spread in such a manner as to result in the specified amount, the Contractor shall be required to furnish and spread the original amount and type of fertilizer specified on deficient areas, at no additional cost to the Owner.

In the event fertilizer is to be applied to existing vegetated grass areas, incorporation, unless otherwise specified, shall be accomplished immediately after the fertilizer application by reducing the existing vegetation to a height of approximately 4 inches above the ground, in lieu of other methods of incorporation. Under such conditions, all fertilizer, except agricultural limestone, shall be applied without the use of slurry, hydro seeder or other wet methods and such fertilizers shall be of the granular or pellet type.

All fertilizer shall be incorporated as required within 24 hours following the approved spreading, or as directed.

3.3 SEEDING

Prepare and fertilize the soil prior to planting the seeds. Sow treated seed uniformly over the entire area. This may necessitate seeds of different size to be sown separately. No seeding will be permitted during windy weather or when the ground is frozen, extremely wet, or otherwise in a non-tillable condition. Cover all seeds

lightly with soil by raking, rolling or other approved methods, and compact the areas as directed.

3.4 MULCHING

Place mulch uniformly on designated areas within 24 hours following the planting of seeds. Begin placement on the windward side of areas and from top of slopes. In its final position, the mulch shall be loose enough to allow air to circulate but compact enough to shade the ground partially and reduce erosion.

Loosen and break the base material thoroughly before it is fed into the mulching machine to avoid placement of unbroken clumps. This machine shall be capable of maintaining a constant air stream, which will apply controlled quantities of asphalt-coated mulch in a uniform pattern.

The mulch may be anchored by either the use of a mulch stabilizer or by tacking with bituminous material. If asphalt is used, a jet or spray nozzle for applying uniform, controlled amounts of asphalt to the vegetative material as it is ejected shall be located at or near the discharge spout. Any property damage during this operation shall be the responsibility of the Contractor and he will repair or cause to be repaired any such damage at his expense.

If a mulch stabilizer is used, the mulch shall be punched into the soil for a minimum depth of one inch. Mulch stabilizers shall consist of dull blades or disks without camber. Where steep slopes or soil conditions are such that anchoring cannot be performed satisfactory with a mulch stabilizer the Engineer will require the bituminous material be applied at the time or immediately following the mulch placement. When mulch stabilizers are used, anchoring the mulch shall be performed along the contour of the ground surface.

The Contractor shall be responsible for maintaining and protecting mulched areas until final acceptance of the project. He shall prevent unnecessary foot and vehicular traffic and shall repair and restore immediately, without extra compensation, any displacement of mulch.

At the appropriate times, the Contractor shall mow all areas mulched, or otherwise remove or destroy all undesirable growth, to prevent competition with the desired planted materials and to prevent reseeding of all undesirable growth.

3.5 WATERING

Water shall be applied in the amounts and at the times necessary to establish growth. Watering of plant life shall be done at night, during late afternoon or during the early morning hours.

3.6 SOLID SOD PLACEMENT

Prior to ground preparation for solid sodding upon any area, all excavating, shaping and dressing shall have been completed in such a manner that the foundation for the sod will have the proper cross-section, line and grade and the sod, after placement, will be flush with or slightly below the adjacent final ground line.

Perform ground preparation after the area has been graded as required. Apply the specified amount of fertilizer uniformly and rake or harrow the surface lightly to incorporate it into the prepared soil. After acceptance of the prepared and fertilized area, sodding shall follow immediately.

Place the sod with the edges in close contact, starting at the lowest point and working upward. Fill cracks between blocks of sod with small pieces of fresh sod. Compact and water the entire sodding area.

On areas on which the solid sodding might slide due to the height and slope of the surface or nature of the soil, use wooden pegs to hold the sod in place.

3.7 EROSION CONTROL BLANKETS

Erosion control blankets shall be installed in strict accordance with contract drawings and manufacturer's recommendations. Blankets shall be stapled securely to soil immediately after positioning with 6" x 6" x 1" U-shaped steel staples, minimum 0.091" diameter (11 gauge). Blankets shall be installed only over properly prepared, fertilized and seeded areas as described elsewhere in these specifications.

Start installation of the blankets three feet over the crest of the slope, anchored with trenches or check slots. Blankets may be applied either horizontally or vertically with respect to the slope face. Ends and edges shall be butted snugly and stapled in place. Staple spacing shall not exceed six feet apart along the blanket length, with approximately 100 staples per blanket.

Staples shall be driven perpendicularly into the soil. Staple each blanket at every edge, with alternate spacing in the center of each blanket. Use a common row of staples at the seam formed by adjoining blankets. Use six (6) staples at the beginning and end of each blanket.

3.8 TEMPORARY EROSION CONTROL

When normal erosion control measures must be delayed due to planting season limitations, temporary erosion control measures shall be applied. These shall consist of ground preparation, seeding with wheat, fertilizing, mulching and watering as herein specified. No limestone will be required for temporary control methods.

When the normal planting season arrives, the temporary control plant growth shall be cut and removed, the remaining roots disc-harrowed and the area treated with normal ground preparation procedures as herein specified. After this work, normal erosion control procedures will be followed.

3.9 PLANT ESTABLISHMENT

The Contractor will be required to provide establishment on all areas where seeds or mixtures containing seeds for permanent vegetation is specified, until final acceptance of the project.

Plant establishment will be required for a minimum period of 90 calendar days after completion of seeding or sod placement. In the event satisfactory growth and coverage as specified below has not been provided in the above specified minimum period of time, plant establishment shall be continued, and final inspection will not be made until such specified growth and coverage is provided.

The Contractor shall water the grassed areas during such periods and as frequently as appropriate to promote maximum practicable growth.

The Contractor shall mow grassed areas as many times in such a manner as may be deemed necessary to control obnoxious vegetation which competes with or shades the desirable grass. Such mowing shall be performed in a manner that will not cause unnecessary damage to desirable vegetation.

Reseeding or re-sodding may be required at any time on areas or portions of such areas, which for any cause are deemed to be unsatisfactory. Except as otherwise specified or permitted, areas deemed to require reseeding shall be prepared, seeded, and all other items of work performed in accordance with the requirements of the contract as if such reseeding was the initial seeding. However, the type of fertilizer and the application rate of fertilizer to be furnished and applied by the Contractor shall be determined by soil tests or as otherwise established.

It shall be the Contractor's responsibility to provide satisfactory growth and coverage of the kinds of grasses or legumes, or a combination of both, produced from seeding as specified.

Growth and coverage on areas seeded as specified shall be considered to be in reasonably close conformity with the intent of the contract when the type of vegetation specified exclusive of that from seeds not expected to have germinated and shown growth at that time, has reached a point of maturity such that has produced stems or runners which overlap adjacent similar growth in each direction over the entire area.

Prior to final inspection, the Contractor shall mow the entire grassed area with suitable mowing equipment.

3.10 APPLICATION RATES

The application rates shown in the following table are to be considered as minimum rates and the Contractor may use his discretion as to the use of any addition quantities keeping in mind that sufficient growth and establishment must be obtained.

MINIMUM APPLICATION RATES

Normal Conditions	
Commercial Fertilizer (13:13:13)	1.0 tons per acre
Agricultural Limestone	2.0 tons per acre
Ammonium Nitrate	500 lbs. per acre
Vegetative Mulch	2 tons per acre
Asphalt Emulsion for Mulch (if used)	100 gal/ton Vegetative Mulch
Mixture No. 1 (March I-August 31)	
Bermudagrass Seed (Common)	15.0 lbs. per acre
White Clover Seed (Dutch)	20.0 lbs. per acre
Bahiagrass Seed (Pensacola, Wilmington)	30.0 lbs. per acre
Mixture No. 2 (September I-November 15)	
Bermudagrass Seed (Common)	15 lbs. per acre
Bahiagrass (Pensacola, Wilmington)	30 lbs. per acre
Crimson Clover (Dixie, Chief, Tibbee, Autauga)	15 lbs. per acre
Fescue (Kentucky 31)	40 lbs. per acre
Temporary Control	
Wheat Seed	180 lbs. per acre
Commercial Fertilizer (13:13:13)	0.5 ton per acre
Vegetative Mulch	2 tons per acre
Asphalt Emulsion for Mulch (if used)	100 gal/ton Vegetative Mulch

TECHNICAL SPECIFICATIONS
MASTERSON SITE
TOWN CREEK, LAWRENCE CO., ALABAMA

TEMPORARY EROSION CHECKS

PART 1 - GENERAL

1.1 SCOPE OF WORK

This work consists of furnishing, constructing, and maintaining baled hay or straw erosion checks for the retention of soil along the toe of fill slopes, swale areas, small ditches, and other areas as directed by the Engineer.

Measurement and payment for temporary erosion checks will be made only when ordered and a pay item is included in the bid schedule of the proposal. The quantity is estimated for bidding purposes only. The plan quantity of erosion checks is estimated for bidding purposes only, and will be dependent upon actual conditions that occur during construction of the project.

1.2 MATERIALS

The baled hay straw shall conform to the Erosion Control Specifications, Type I or Type II. The wooden stakes used in securing the baled material in place shall be approximately 2"x2"x34" and must be strong enough to adequately secure the bales.

PART 2 - EXECUTION

2.1 CONSTRUCTION

Erosion Checks shall be constructed at locations, and according to the requirements, shown on the plans or as directed by the Engineer. Erosion checks along fill slopes shall be constructed prior to grading operations at the site.

The soil shall be excavated a minimum of 3 inches in depth to embed the Baled material. Excavated material shall be placed around the erosion checks and compacted to prevent undermining.

The Contractor shall maintain the erosion checks and shall remove and dispose of the silt accumulations as directed by the Engineer during construction. The erosion checks will remain in place.

TECHNICAL SPECIFICATIONS
MASTERSON SITE
TOWN CREEK, LAWRENCE CO., ALABAMA

SILT FENCING

PART 1 - GENERAL

1.1 SCOPE OF WORK

This work consists of furnishing, constructing, maintaining, and removing a filter type fence for the purpose of removing suspended soil particles from the water passing through it.

It shall be understood that payment for temporary silt fence will be made only when ordered, and a pay item is included in the bid proposal. The plan quantities for temporary silt fences are estimated for bidding purposes only, and the quantity used will be dependent upon actual need during construction of the project. No temporary silt fence will be installed unless directed by the Engineer.

1.2 MATERIALS

Fabric
The fabric shall be sediment control type, woven or non-woven, with an apparent opening size (AOS) of 0.15 - 0.84 mm.

Posts
Either wood or steel posts may be used. Wood posts shall have a minimum diameter of three inches and length of five feet and shall be straight enough to provide a fence without noticeable misalignment. Steel tee posts shall be five feet long, approximate 1-3/8 inches deep and 1/8-inch-thick with a nominal weight of 11.33 pounds per foot prior to fabrication. The posts shall have projections, notches or holes for fastening the wire backing or fabric to the posts.

Securing Pins
Steel pins used for anchoring the fabric shall be three-sixteenth inch in diameter, minimum length of 15 inches, pointed at one end and fabricated with a head for retaining a steel washer. A minimum one and one-half washer shall be installed on each pin.

Staples
Staples shall be made of nine-gauge wire with a minimum length of one inch after bending.

PART 2 - EXECUTION

2.1 CONSTRUCTION

Silt fences shall be constructed as directed by the Engineer.

All posts shall be installed so that no more than three feet of the post shall protrude above the ground. Extra posts for bracing shall be installed as directed by the Engineer. The woven wire shall be securely fastened to wood posts with staples. When metal posts are used, the wire shall be fastened to the posts with wire or other approved means. The bottom edge of the fabric shall be buried 6" below ground surface to prevent undermining. When splicing of the fabric is necessary, two posts shall be installed approximately 18" apart and each piece of fabric shall be fastened to both posts.

At the time of or during installation, the fabric will be rejected if it has defects, rips, holes, flaws, deterioration or damage incurred during manufacturing, transportation, storage or installation.

Except as provided herein, silt fence shall be reinforced with a woven wire backing. The wire backing shall be at least 32 inches high and have no less than six horizontal wires. Vertical wires shall be spaced no more than 12 inches apart. The top and bottom wire shall be 10 gauge or larger. All other wire shall be no smaller than 12-1/2 gauge.

Type II fabric may be installed without the wire backing provided:

A. Post spacing is reduced to six feet or less.
B. The fabric has been approved by the Engineer and the manufacturer recommends its use without the wire backing.
C. The fence posts are inclined toward the runoff source but at an angle of not more than 20° from vertical.
D. The fabric shall be attached to the posts in such a manner that purpose intended is satisfied and maintained.

The manufacturer's recommendation shall be in writing or issued in a technical data sheet with copy furnished to the Engineer.

The Contractor shall maintain the silt fence and the fabric shall be removed and replaced when deteriorated to such extent that it is no longer effective. Excessive accumulations against the fence shall be removed and disposed of as directed by the Engineer.

Unless otherwise directed, all temporary silt fences shall be removed. Upon removal, the Contractor shall remove and dispose of excess silt accumulations, dress the area to give a pleasing appearance and vegetate all bare areas in accordance

with the contract requirements. The temporary fence materials will remain the property of the Contractor and may be used at other locations provided the materials are acceptable to the Engineer.

2.2 SHIPMENT AND STORAGE

During all periods of shipment and storage, the fabric shall be wrapped with a heavy duty protective covering which will protect the cloth from direct sunlight, mud, dirt, dust and debris. The fabric shall not be exposed to temperatures greater than 140°F.

2.3 MANUFACTURER'S CERTIFICATION

The Contractor shall furnish to the Engineer three copies of the manufacturer's certified test reports showing results of all required tests and certification that the material meets the specifications.

TECHNICAL SPECIFICATIONS
MASTERSON SITE
TOWN CREEK, LAWRENCE CO., ALABAMA

RIPRAP PLATING

PART 1 - GENERAL

1.1 SCOPE OF WORK

This work shall consist of furnishing and placing a protective covering of erosion resistant material including plastic filter fabric, riprap and slush grout where shown on the plans for slope or ditch protection. This work shall be in accordance with these specifications and in reasonably close conformity with the lines, grades, and dimensions shown on the plans or established by the Engineer.

PART 2 - SPECIFICATIONS

2.1 FILTER FABRIC

Geotextile fabrics shall generally be in accordance with the following:

Grab Strength (lbs.)	200 #
Elongation	50%
Seam Strength	180 #
Puncture Strength	80 #
Trapezoidal Tear	80 #
AOS	0.2 l-0.43mm

2.2 SLUSH GROUT

Grout shall be composed of Portland cement, water and sand mixed in the proportions of one part of Portland cement to 3 parts of sand with sufficient water to produce a workable mixture that can be poured into all voids in the rock to form a solid mass.

2.3 RIPRAP

Aggregate for loose riprap shall consist of fieldstone, broken concrete, or rough, unhewn quarry stone as nearly rectangular in section as is practicable. The stone shall be dense, free of clay or shale seams, resistant to the action of air and water, and suitable in all other respects for the purpose intended.

Stones for riprap, of the size specified, shall meet the requirements for size by weight of the mass specified in the following table (based on % larger than by weight):

	Size			
Rock Size	1/4 Ton	300 Lbs.	200 Lbs.	100 Lbs.
1/2 Ton	0	--	--	--
1/4 Ton	50	--	--	--
300 Lbs	--	0	--	--
200 Lbs	--	--	0	--
100 Lbs	--	--	--	0
75 Lbs	90	--	--	--
60 Lbs	--	80	--	--
40 Lbs	--	--	80	--
20 Lbs	--	90	--	80
10 Lbs	--	--	90	--
5 Lbs	--	--	--	90

PART 3 - EXECUTION

3.1 CONSTRUCTION DETAILS

The slopes or ground surface shall be shaped to the lines and grades indicated on the plans or directed, and shall be thoroughly compacted by the use of mechanical or hand tamps. Unless otherwise stipulated or directed, slopes shall not be steeper than the natural angle of repose of the material upon which riprap is to be constructed.

The outer edges and the top of the riprap where the construction terminates shall be formed so that the surface of the riprap will be embedded and even with the surface of the adjacent slope or ground, and the bottom of the riprap shall be placed at least two feet below the natural ground surface unless otherwise directed.

All riprap shall begin at the bottom of the slope and proceed upward.

3.2 INSTALLATION OF PLASTIC FILTER FABRIC

The filter fabric shall be placed on the manner and at the locations shown on the drawings. The surface to receive the fabric shall be prepared to a relatively smooth condition free of obstructions, depressions and debris. The fabric shall be placed with the long dimension perpendicular to the centerline of the channel and shall be laid loosely but without wrinkles or creases. The strips shall be placed to provide a minimum width of 18 inches of overlap for each joint. Securing pins with washers shall be inserted through both strips of overlapped fabric at not greater than two-foot intervals along a line through the midpoint of the overlap. Additional pins shall

be installed as necessary to prevent slippage of the filter fabric regardless of location. The fabric shall be placed so that the upstream strip of fabric will overlap the downstream strip and the higher strip will overlap the next lower strip. Each securing pin shall be pushed through the fabric until the washer bears against the fabric and secures it firmly to the foundation. The fabric shall be protected at all times during construction from contamination by surface runoff and any fabric so contaminated shall be removed and replaced with uncontaminated fabric at no expense to the Owner. All damage to the fabric during its installation or during placement of riprap shall be replaced by the Contractor at no cost to the Owner. Riprap and aggregate shall not be dropped on the fabric from a height greater that three feet.

3.3 SLUSH GROUT (if applicable)

Immediately after dumping the batch of grout, it shall be distributed over the surface of the strip by the use of brooms and the grout worked into place between stones with suitable spades, trowels, or vibrating equipment. As a final operation the grout shall be removed from the top surfaces of the upper stones and from pockets and depressions in the surface of the stone protection by use of a stiff broom. After completion of any ten-foot strip, no workman or any load shall be permitted on the grouted surface for a period of at least twenty-four hours. The grouted surface shall be protected from rain and flowing water.

3.4 LOOSE RIPRAP

The stones shall be placed on a slope not steeper than the natural angle of repose of the slope material. The stones shall be laid with close joints. The courses shall be laid from the bottom of the bank upward with the larger stones being placed in the lower courses. Interstices shall be filled with smaller stones and spalls.

TECHNICAL SPECIFICATIONS
MASTERSON SITE
TOWN CREEK, LAWRENCE CO., ALABAMA

PIPE CULVERTS AND STORM SEWERS

PART 1 - GENERAL

1.1 SCOPE

This item shall consist of furnishing and installing pipe culverts, arch pipe culverts and flared end sections for cross drains, side drains and storm sewers and manholes. These structures, of the types, sizes and dimensions as required on the plans, shall be furnished and installed at such places as designated by the Engineers, all in accordance with these specifications and in conformity with the lines and grades. This item shall included excavation, backfilling, trench required bracing (if required), and all fittings necessary to complete the pipelines. It shall also include the furnishing and installing of such joints and such connections to existing pipes, catch basins, headwalls, etc., as may be required to complete the work shown on the plans or as directed by the Engineers.

1.2 MATERIALS

Pipe used for Concrete Pipe Culverts shall conform to the requirements of standard specifications for reinforced concrete culvert pipes, ASTM Pipe Designation: C76, Wall B. Pipe classification shall be shown in the proposal.

Pipe used for High Density Polyethylene pipe (HDPE) Culverts shall be smooth interior, corrugated exterior HDPE sewer pipe and associated fittings shall conform to AASHTO M294, AASHTO M 252, ASTM F477, ASTM 1417 and ASTM D3212. All HDPE pipe, and fittings shall be watertight. HDPE pipe shall be N-12 WTIB as manufactured by ADS, or approved equal.

Storm drainage basins for HDPE storm sewer systems shall be PVC road and highway structures designed for H25 loading, as manufactured by Nyloplast, or approved equal. All grates shall be ductile iron.

Polyvinyl chloride pipe where specified for drainage shall be schedule 40 PVC meeting ASTM standards.

Pipe Arches shall conform to the requirements of ASTM Pipe Designation: C506, Class A-III. All concrete pipe arches shall be reinforced concrete.

Flared end sections shall conform to applicable portions of concrete pipe culvert reference specifications. Joints shall be sealed with either bituminous plastic sealer or preformed rubber-type.

Mortar for connections to other drainage structures shall be composed of one part Portland cement and two parts fine aggregate.

All approved laboratory test reports covering the pipe and other materials shall be furnished by the manufacturer.

Bituminous Coated Corrugated Metal Culvert Pipe and Pipe Arches shall conform to the requirements of the Standard Specifications for Corrugated Metal Culvert Pipe, AASHTO Designation: M-36 Type I, except the minimum gauge thickness shall be as shown on the plans, or contract documents, however, corrugated metal pipe manufactured from sheets thicker than that specified will be acceptable when approved by the Engineer. The internal diameter of corrugated metal pipe shall be determined by inside measurement between the crests of the corrugations. The corrugations shall be 2 3/4 " x 1/2".

In addition, the Corrugated Metal Pipe and Arches shall be galvanized, fiber bonded and completely coated inside and out with bituminous material in accordance with the requirements of Standard Specifications for Bituminous Coated Corrugated Metal Culvert Pipe and Pipe Arches, AASHTO Designation M-190 Type C, fully coated with paved invert. Connecting bands shall be 24" in length.

The pipe shall be coated uniformly to a minimum thickness of 0.05 inch, measured on the crest of the corrugations and the pavement shall have a minimum thickness of 1/8" above the crest of the corrugations.

PART 2 - EXECUTION

2.1 PIPE LAYING

Excavation shall be true to line and grade within 0.05 feet. Excavation carried below the grade shall be backfilled at the Contractor's expense with selected materials. Unsuitable materials excavated from the trenches shall not be used for backfill and shall be disposed of as directed by the Engineer. Any material encountered in way of pipe trenches, included buried drainage structures and obstructions, shall be excavated.

The trench width shall be not less than 12 inches greater than the outside diameter of the pipe. The Contractor shall do such trench bracing, de-watering, sheathing, or shoring necessary to perform and protect the excavation, and shall remove such material as backfill progresses.

The pipe shall be firmly and accurately set to line and grade so that the invert will be smooth and uniform, and any pipe which is not in true alignment, or which shows any settlement after laying, shall be taken up and re-laid without extra

compensation. Pipe shall be laid on a prepared bed which will provide a full bearing for the barrel and which is uniformly firm throughout its entire length.

The laying of concrete pipe shall begin at the downstream end, with the spigot or tongue end in the direction of flow and proceed toward the upstream end with the pipe joints abutting and closely joined, and so matched that they will form a culvert with a smooth and uniform invert. The joints of concrete pipe culverts shall be made with bituminous plastic sealer or preformed rubber-type gaskets.

Bituminous Coated Corrugated Metal Pipe shall be laid carefully with outside laps of circumferential joints pointing upstream. The longitudinal laps parallel to the centerline of the pipe culvert shall be placed on the sides of the culvert with the outside laps pointing down. The ends of the sections shall be fully and closely joined and true to the lines and grades established. Each section or joint of pipe shall be securely attached to the adjoining sections or joint of pipe with connecting bands, or other approved type of connector. The bands or other type of connector shall be tightly drawn or connected so as to form a rigid joint. Any metal in joints, which is not thoroughly protected by galvanizing shall be coated with approved bitumen. Any breaks in the bitumen shall be repaired with the type and kind of bitumen used originally in coating the pipe. Corrugated Metal Pipe of 42 inch or larger diameter shall be strutted as shown on the plans or as directed. The struts shall be placed before the embankment is placed and removed when so ordered. The ends of the pipe shall be rigidly supported to prevent any movement pending and during the construction of end supports.

Construction methods of Bituminous Corrugated Metal Pipe Arches shall conform reasonably close to the requirements for Bituminous Coated Corrugated Metal Pipe Culverts. Pipe Arches 58" x 36" and larger shall be braced prior to back-filling operations. The branches shall not be less than 4" x 4" timbers spaced five feet apart between upper and lower sills, which shall also be not less than 4" x 4" timbers.

All HDPE piping installations shall be in strict compliance with AASHTO Section 30, ASTM recommended practice D2321, and as recommended by the manufacturer.

2.2 BACKFILLING

The Engineers shall approve the backfill material. Great care shall be used to obtain thorough compaction under the haunches and along the sides to the top of the pipe. The backfill shall be placed in loose layers not exceeding 6" in depth and successive layers shall not be placed until thorough compassion is obtained. Trenches under areas to be paved shall be compacted to 95% Standard Proctor density.

2.3 CONNECTIONS

Where the plans call for connections to existing or proposed structures or lines, these connections shall be watertight and made so that a smooth uniform flow line will be obtained. The Contractor at no extra compensation shall make such connections.

The joints of all pipe culverts to other drainage structures shall be caulked and filled with mortar. Joints shall be thoroughly wet before applying mortar, and sufficient mortar shall be used to form a bead around the outside of the joint and to fill the whole joint to inside of the connection. The inside of the joint shall be wiped and finished smooth. After the initial set, the mortar on the outside shall be cured with a cover of thoroughly wetted earth or burlap.

2.4 MANHOLES

Manholes shall be poured-in-place concrete or precast concrete manholes as indicated on the construction drawings. Either type manhole may be selected. Storm draining basins for HDPE storm sewer systems shall be in accordance with Section 1.2.

Precast manhole sections shall conform to ASTM Specification C-478. Where required, the Contractor shall furnish laboratory test reports for precast sections used, showing that they conform to all requirements of these specifications.

Mortar for masonry in sewer structures shall be a 1:3 cement-lime mix, provided that hydrated lime may be substituted for not to exceed 10 per cent, by weight of the cement.

The standard frame and cover, designated as M.H. on the plans, shall be Bouchard #2010 or #2030 Standard Frame and Grate (or approved equal). The cover shall have two non-penetrating pick holes but shall not have vent holes. The casting shall be gray iron casting, free from defects affecting their strength and appearance. The clear opening shall be a minimum of 21 inches in diameter and the cover and ring shall be machined to fit snug and not rattle.

The manhole steps shall be made of injection molded copolymer polypropylene encapsulating a 1/2" diameter grade 60 steel reinforcing rod. The steps shall be of such cross-sectional area and configuration that they will withstand a single concentrated live load of 300 pounds. They shall be in conformance with ASTM Standard C-478. Manhole steps shall be as manufactured by M.A. Industries, Inc., Peachtree City, GA, Press Seal Gasket Corp., or equal.

Rubber gaskets shall be "O"-Ring or flat ring as manufactured by Press Seal Gasket Corp., Fort Wayne, IN; Hamilton-Kent Manufacturing Co., or equal, and shall conform

to the requirements of the latest edition of ASTM Designation C-443. Lubricants shall be as recommended by the gasket manufacturer.

Manhole pipe seal gaskets for precast manhole units shall be "Kor-N-Seal" as manufactured by Kor-N- Seal Co., Milford, NH; "PSX" by Press Seal Gasket Corp., or equal.

Preformed joint compound shall be "EZ Stik" as manufactured by Concrete Products Supply Co., Fort Wayne, IN; "Kent Seal No. 2'"; or equal. Primer, when required for use with the preformed joint compound, shall be as recommended by the manufacturer of the preformed joint compound. Install joint compound according to the manufacturer's instruction.

Sealer compound shall be "Drycon" as manufactured by IPA Systems, Inc., Philadelphia, PA; Tamm's "Tamoseal"; or equal. Sealer shall be field applied after construction.

Cold joint bonding agent shall be "Octoblen" as manufactured by IPA Systems, Inc., Philadelphia, PA; "Tamm' s Tammsbond"; or equal.

Patching material shall be "Octocrete" as manufactured by IPA Systems, Inc., Philadelphia, PA; “Tamm's Speed Crete Blue Line"; or equal.

2.5 MANHOLE CONSTRUCTION

The bottom concrete slab shall be poured first, and then after sufficient time has elapsed the walls shall be built. The Contractor shall lay brick and concrete blocks in manholes with joints completely filled with mortar. Horizontal joints shall not exceed 1/2 inch; vertical joints 1/4 inch or their interior face. In circular structures, lay all blocks, breaking joints between courses. Strike interior joints smooth with face of the wall.

Precast concrete sections shall be laid so that the axis of the manhole is vertical, and shall be constructed in accordance with the manufacturer's recommendations.

The standard sizes for manhole bottoms, as shown on the plans, are based on a soil bearing pressure of 2000 psf; should a more yielding soil be encountered, the base shall be stabilized with sufficient bedding of coarse crushed stone to obtain the required bearing.

Construct pre-cast manholes as shown on the plans of pre-cast units with a concrete bottom. Excavate hole and set bottom unit, leveling carefully. Make joints between sections using preformed joint compound. Joints shall be watertight. Fit manhole cover frames in place on an adequate grout or grout bed and brick riser. Joints in brick risers shall not exceed 5/8" in thickness. Plaster the brick exterior surface

with a coat of plaster not less than 1/2" thick. For pipe 30" in diameter and less make connection to manholes using manhole pipe seal gaskets.

Install the manhole steps at 16" on center vertically. The deepest step shall be located not more than 24" above the manhole invert.

Install the cast iron frames and covers to the grade shown on the plans, set in a grout bed. Lap grout up on ring vertical to 1" from the top. In streets, set the manhole covers to one inch (maximum) above the street grade parallel to the plane of the street.

Wherever concrete is applied to an existing concrete or masonry surface, apply a cold joint bonding agent between the surfaces according to the manufacturer's instructions.

Where necessary to fill voids, repair breaks, make patches, etc., clean and moisten the surfaces and use a suitable combination of patching agent and cold joint bonding agent with grout or concrete. The use of brick or chunks or concrete will not be permitted.

All visible leaks in manhole bottoms, barrels, and connections shall be stopped.

The cast iron rings and covers shall be set at the exact finish grade indicated on the drawings. Manholes in open fields shall extend to a minimum of 2 feet above the finished ground surface unless otherwise indicated on the plans. Steps shall be set inside the manholes at 16 inches on center.

The contractor shall construct the manhole flow channels of concrete, of semi-circular section conforming to the inside diameter of the connection sewers. The Contractor shall provide such channels for all connection sewers to each manhole. Drop inlets shall be constructed as an integral part of the manhole as construction progresses.

No backfilling of manhole excavation, above the top of the interior concrete fill, shall be performed until the waterproof coating has been cured for at least twenty-four hours and has been inspected and approved by the Engineer. All defective coverage and leaks shall be corrected and improved as directed prior to backfilling.

As the backfill material is placed around the manhole it shall be carefully tamped to prevent excessive settlement.

ATTACHMENT 4

Design Calculations

DATE 6/14/2015

Sediment Pond 3 — Rational Method — 1/2
1 year Storm Event

A - ~~15~~ 9.8 Acres
L = 650'
S = .01 FT/FT
n = .03
C = .40

$Q = VA$

$T_c = .93 \frac{L^{.6} n^{.6}}{I^{.4} S^{.3}}$

$T_c = .93 \frac{650^{(.6)} \cdot .03^{.6}}{I^{.4} \cdot .01^{.3}}$

$T_c = \frac{22.00}{I^{.4}}$

TRIAL #1
Assume 4.2 IN/HR
$T_c = \frac{22}{4.3^{.4}} = 12.39$

Try 12.39 IN/HR in IDF CURVE
$\therefore I = 4.4$ IN/HR > 4.2

TRIAL #2 Assume 4.4 IN/HR
$T_c = \frac{22}{4.4^{.4}} = 12.16$
Try 12.16 IN/HR in IDF CURVE
$I = 4.4$ IN/HR $= 4.4$ IN/HR

Use $I = 4.4$ IN/HR

6/10/2015

Sediment Pond 3 2/2

$Q = CIA$

$Q = .4 * 4.4\ ''/_{hr} * 9.8$ Acres

$Q = 17.248$ CFS

6/16/2015

Sediment Pond 3 — Rational Method — 1/1

-50 year storm event

$A = 9.8$ acres
$L = 650$ ft
$S = .01$ ft/ft
$n = .03$
$C = .4$

$Q = VA$

$T_c = .93 \frac{L^{.6} n^{.6}}{I^{.4} S^{.3}}$

$T_c = .93 \frac{650^{.6} \cdot .03^{.6}}{I^{.4} \cdot .01^{.3}}$

$T_c = \frac{22.00}{I^{.4}}$

TRIAL #1

Assume $I = 7.9$ in/hr

$T_c = \frac{22.01}{7.9^{.4}} = 9.626$

Try 9.626 in IDF curve

$\therefore I = 7.9$ in/hr $= 7.9$ in/hr

Use $I = 7.9$ in/hr

$Q = CIA$
$A = 9.8$
$C = .4$
$I = 7.9$

$Q = .4 * 7.9 * 9.8$

$= 31$ CFS

1/1

Pond 3 Spill Pipe Design

$Q_1 = 17.24$ S use 18 CFS

$V = Q/A$ ASSUME 8 FT/sec

$A = \frac{18 \text{ CFS}}{8 \text{ FT/sec}}$ $A = 2.25$ FT

$A_P = \pi r^2$

$r^2 = A/\pi = \frac{2.25}{3.15} = .71656$

$r = .846$

$d = 1.69$ = use 24"

Check Head Required For 24"

$h = \frac{Q^2}{C^2 \; a^2 \; 2g}$

$= \frac{18^2 \text{ CFS}}{.53^2 \; (3.14)^2 * 64.4}$

$= 1.81 < 4$

USE 24" CMP

$Q = 18$ CFS

$C = .53$ (TABLE 7 Pg 4-40 Civil Engs Hand Book)

$a = \pi r^2 = \pi (1)^2$

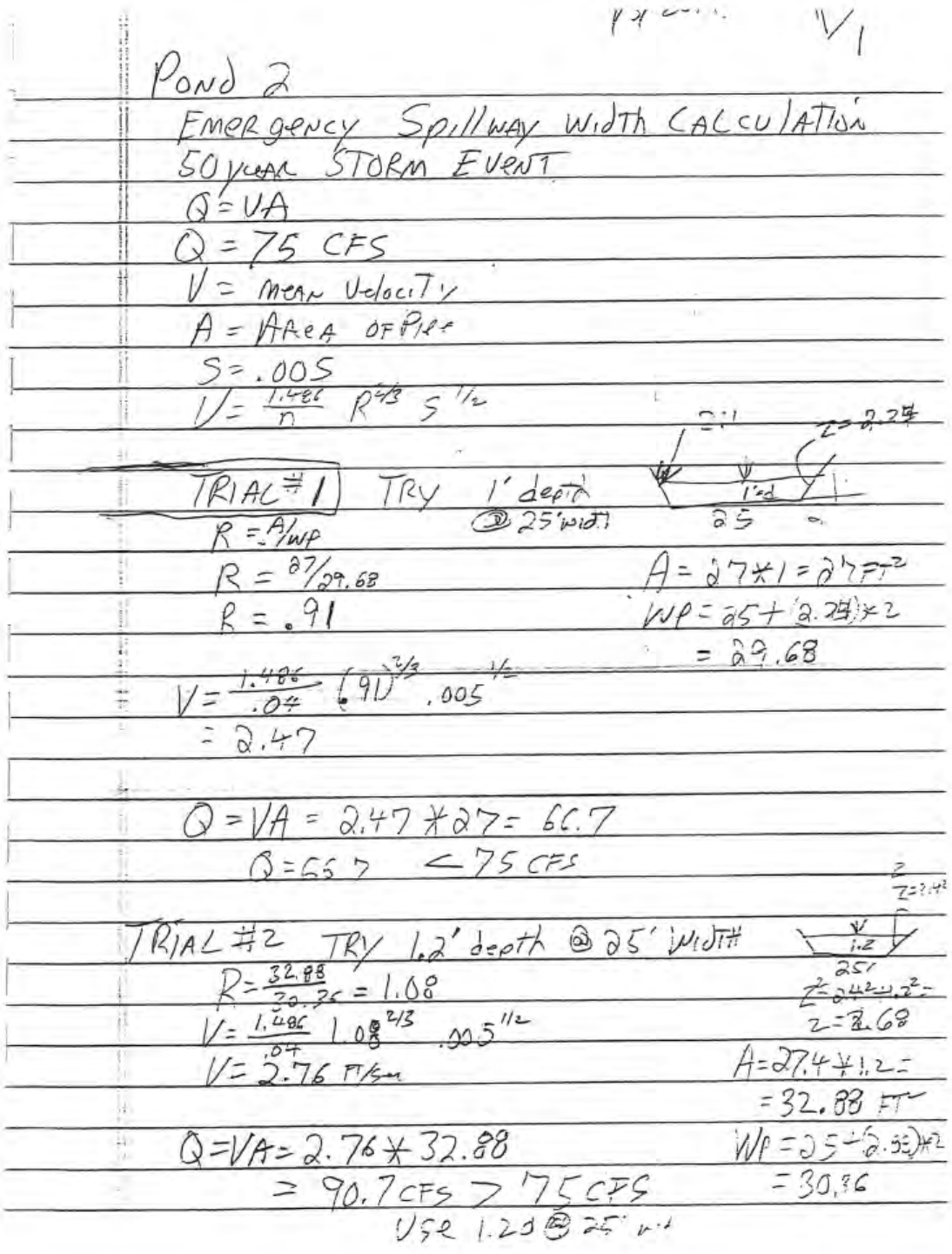
$a = 3.14$

1/1

Pond 3
Emergency Spillway Width Calculation
50 year STORM EVENT

Use Pond 2 Design

Use 25' width



NOTE: Pond 2 has been eliminated from the modified plan, only used for calculations for emergency spillway for Pond 3.

QUANTITY CALCULATIONS

Quantity calculations for both earthwork volumes and, in the case of sedimentation basins, containment volumes are accomplished through AutoCAD and Eagle Point software programs. These programs utilize survey and design information regarding the existing and proposed surfaces to develop triangulated irregular networks (TIN), which are then used to calculate quantities based on the prismoidal method for calculating volumes. Therefore, quantity calculations as historically furnished cannot be supplied; however, digital drawings can be provided if necessary, for outside confirmation of the quantities shown.

Design Calculations PAP -Masterson Site
Town Creek, Lawrence Co., AL
Dean McRae Engineering, Inc.
Tommy Dean, PE

ATTACHMENT 5

Topographic Survey with Permit Boundary