



Alabama Department of Environmental Management  
adem.alabama.gov

December 10, 2019

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Montgomery, Alabama 36130-1463  
(334) 271-7700 ■ FAX (334) 271-7950

Stephen Yant  
Owner  
1054 McCorkle Mountain Road  
Scottsboro, AL 35769

RE: Draft Permit  
Tucker's Pit  
NPDES Permit No. AL0082937  
Marshall County (095)

Dear Mr. Yant:

Transmitted herein is a draft of the above referenced permit. Please review the enclosed draft permit carefully. 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 issue 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.

The Department utilizes a web-based electronic environmental (E2) reporting system for electronic DMR submittal. Please read Part I.D of the permit carefully and visit <https://e2.adem.alabama.gov/npdes>.

Should you have any questions concerning this matter, please contact Clint Dear by phone at (334) 274-4238 or by email at [clint.dear@adem.alabama.gov](mailto:clint.dear@adem.alabama.gov).

Sincerely,

Catherine A. McNeill, Chief  
Mining and Natural Resource Section  
Stormwater Management Branch  
Water Division

CAM/cdd File: DPER/46022

Enclosure

cc: Clint Dear, 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  
Alabama Department of Labor





# NATIONAL POLLUTANT DISCHARGE ELIMINATION SYSTEM INDIVIDUAL PERMIT

PERMITTEE: Stephen Yant  
1054 McCorkle Mountain Road  
Scottsboro, AL 35769

FACILITY LOCATION: Tucker's Pit  
30413 US Highway 431 South  
Grant, AL 35747  
Marshall County  
T7N, R2E, Section 1

PERMIT NUMBER: AL0082937

DSN RECEIVING STREAM  
001-1 Little Paint Rock Creek

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

ISSUANCE DATE:

EFFECTIVE DATE:

EXPIRATION DATE:

**\*\* DRAFT \*\***

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Alabama Department of Environmental Management

**MINING AND NATURAL RESOURCE SECTION**  
**NATIONAL POLLUTANT DISCHARGE ELIMINATION SYSTEM (NPDES) PERMIT**

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## 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 <sup>1</sup>
pH 00400	6.0 s.u.	-----	9.0 s.u.	Grab	2/Month
Solids, Total Suspended 00530	-----	35.0 mg/L	70.0 mg/L	Grab	2/Month
Flow, In Conduit or Thru Treatment Plant <sup>2</sup> 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 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.

<sup>1</sup> See Part I.C.2. for further measurement frequency requirements.

<sup>2</sup> Flow must be determined at the time of sample collection by direct measurement, calculation, or other method acceptable to the Department.

- 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. If required by the Director, 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 28<sup>th</sup> day of the month following the quarterly reporting period (i.e., on the 28<sup>th</sup> day of January, April, July, and October of each year).
- b. The Department utilizes a web-based electronic environmental (E2) 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 E2 reporting system.** The E2 reporting system Permittee Participation Package may be downloaded online at <https://e2.adem.alabama.gov/npdes>.

- c. If the electronic environmental (E2) 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 E2 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 E2 system resuming operation, the Permittee shall enter the data into the E2 reporting system unless an alternate timeframe is approved by the Department. An attachment should be included with the E2 DMR submittal verifying the original submittal date (date of the fax, copy of 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.j.
- 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. The Permittee shall report "No Discharge During Quarterly Monitoring Period" on the appropriate DMR Form for each point source receiving pumped discharges pursuant to Part I.C.1.b. provided that no discharge has occurred at any time during the entire quarterly (three month) monitoring period.
- h. 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.
- i. 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."

- j. All DMRs, reports, and forms required to be submitted by this Permit, the AWPCA and the Department's rules and regulations, 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

- k. 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.
- l. 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. Requirements for Outfall Certification Summary Submittal**

The Permittee shall submit as an attachment to the certification required by Part I.B.1, an Outfall Certification Summary in a format approved or provided by the Department. The Outfall Certification Summary shall indicate whether each outfall identified on Page 1 of this Permit has been certified and, if so, it shall include the date for each certification as well as the latitude and longitude of the certified outfall. If any outfall identified on Page 1 of this Permit has received written approval from the Department pursuant to Part IV.C. of this Permit stating that the Permittee may utilize the Post-Mining Discharge Limitations specified in Part I.A.3., then the list of outfalls shall include the date of the Post-Mining Discharge Limitations approval. If any outfall identified on Page 1 of this Permit has been released from monitoring requirements as provided in Part I.D.4. of this Permit, then the list of outfalls shall include the date of the monitoring requirement release.

**3. 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.3.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.3.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. Any written report required to be submitted to the Director in accordance with Parts I.D.3.a. and b. shall be submitted using a Noncompliance Notification Form (ADEM Form 421) available on the Department's website (<http://adem.alabama.gov/DeptForms/Form421.pdf>) and include the following information:
  - (1) A description of the discharge and cause of noncompliance;
  - (2) The period of noncompliance, including exact dates and times, or if not corrected, the anticipated time the noncompliance is expected to continue; and
  - (3) A description of the steps taken and/or being taken to reduce or eliminate the noncomplying discharge and to prevent its recurrence.

#### **1. 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**

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, the information indicated in ADEM Admin. Code r. 335-6-9-.03 and ADEM Admin. Code ch. 335-6-9 Appendices A and 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).

#### **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 required by applicable state (ADEM Admin. Code r. 335-6-6-.12(r)) and federal (40 C.F.R. §§112.1-.7)

regulations. The Permittee shall implement appropriate structural and/or non-structural spill prevention, control, and/or management 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. Careful consideration should be applied for tanks or containers located near treatment ponds, water bodies, or high traffic areas. In most situations this would require construction of a containment system if the cumulative storage capacity of petroleum products or other pollutants at the facility is greater than 1320 gallons. 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 applicant shall maintain onsite or have readily available flotation booms to contain, and sufficient material to 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 an approved manner.

- 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. Except as provided in Parts II.B.2.b. and c., a discharge which results from an upset need not meet the applicable discharge limitations specified in Part I.A. of this Permit if:
  - (1) No later than 24-hours after becoming aware of the occurrence of the upset, the Permittee orally reports the occurrence and circumstances of the upset to the Director; and
  - (2) No later than five (5) days after becoming aware of the occurrence of the upset, the Permittee furnishes the Director with evidence, including properly signed, contemporaneous operating logs, 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.

- b. Notwithstanding the provisions of Part II.B.2.a., 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 exempted from the discharge limitations specified in Part I.A. of this Permit 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.
- c. The Permittee has the burden of establishing that each of the conditions of Parts II.B.2.a. and b. have been met to qualify for an exemption from the discharge limitations specified in Part I.A. of this Permit.

## **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.
- 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. Crushed stone mine - means an area on or beneath land which is mined, quarried, or otherwise disturbed in activity related to the extraction, removal, or recovery of stone from natural or artificial deposits, including active mining, reclamation, and mineral storage areas, for production of crushed stone.
10. 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.
11. Daily maximum - means the highest value of any individual sample result obtained during a day.
12. Daily minimum - means the lowest value of any individual sample result obtained during a day.
13. Day - means any consecutive 24-hour period.
14. Department - means the Alabama Department of Environmental Management.
15. Director - means the Director of the Department or his authorized representative or designee.
16. 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).
17. Discharge monitoring report (DMR) - means the form approved by the Director to accomplish monitoring report requirements of an NPDES Permit.
18. DO - means dissolved oxygen.
19. E. coli – means the pollutant parameter Escherichia coli.
20. 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.
- 21. EPA - means the United States Environmental Protection Agency.
  - 22. Federal Water Pollution Control Act (FWPCA) - means 33 U.S.C. §§1251 et. seq., as amended.
  - 23. Flow – means the total volume of discharge in a 24-hour period.
  - 24. 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).
  - 25. 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.
  - 26. 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.
  - 27. 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.
  - 28. mg/L - means milligrams per liter of discharge.
  - 29. MGD - means million gallons per day.
  - 30. 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.)
  - 31. 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.
  - 32. 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.
33. NH<sub>3</sub>-N - means the pollutant parameter ammonia, measured as nitrogen.
34. 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.
35. Permit application - means forms and additional information that are required by ADEM Admin. Code r. 335-6-6-.08 and applicable permit fees.
36. 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).
37. 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.
38. Pollutant of Concern - means those pollutants for which a water body is listed as impaired or which contribute to the listed impairment.
39. 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
40. 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.
41. 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.
42. 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".
43. 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.
44. Receiving Stream - means the "waters" receiving a "discharge" from a "point source".

45. 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.
46. 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.
47. TKN - means the pollutant parameter Total Kjeldahl Nitrogen.
48. TON - means the pollutant parameter Total Organic Nitrogen.
49. TRC - means Total Residual Chlorine.
50. TSS – means the pollutant parameter Total Suspended Solids
51. 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.
52. 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.
53. 24-hour precipitation event - means that amount of precipitation which occurs within any 24-hour period.
54. 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.
55. 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.
56. 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.

57. Week - means the period beginning at twelve midnight Saturday and ending at twelve midnight the following Saturday.
58. 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 ACTIVITIES 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:** Stephen Yant  
**Facility Name:** Tucker's Pit  
**County:** Marshall  
**Permit Number:** AL0082937  
**Prepared by:** Clint Dear  
**Date:** July 1, 2019  
**Receiving Waters:** Little Paint Rock Creek  
**Permit Coverage:** Dirt and/or Chert Mine, Dry Preparation, Transportation and Storage, and Associated Areas  
**SIC Code:** 1499

The Department has made a tentative determination that the available information is adequate to support initial issuance of this permit.

This proposed permit covers dirt and/or chert mine, dry preparation, transportation and storage, and associated areas which discharge to surface waters of the state.

The proposed permit authorizes treated discharges into a stream segment, other State Water, or local watershed that currently has the 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.

Currently there is no subpart for dirt/chert mineral mining and processing within EPA's 40 CFR Part 436 and Technology Based Effluent Limits (TBELs) for dirt/chert mining have not yet been promulgated. Discharges from a facility of this type, however, are expected to be similar to discharges from facilities mining and processing sand and gravel for use in construction. Therefore, the permit was prepared considering the TBELs in 40 CFR 436 Subpart C.

The instream WQS for pH, for streams classified as Fish and Wildlife, are 6.0 - 8.5 s.u per ADEM Admin Code r. 335-6-10-.09; however, because discharges from Outfall 001-1 are expected only in response to rain events, it is the opinion of the Department that discharges with an allowable pH daily maximum of 9.0 will not adversely affect the instream pH based on the low discharge/stream flow ratio. The discharge limitations for pH of 6.0 – 9.0 s.u. for Outfall 001-1 are identical to the existing point source TBELs found in 40 CFR 436 Subpart C.

The TBELs for 40 CFR 436 Subpart C do not include limitations for Total Suspended Solids (TSS). TSS is classified as a conventional pollutant in 40 CFR 401.16 and is expected to be discharged from this type of facility. Therefore, monthly average and daily maximum effluent limitations for TSS were prepared using Best Professional Judgment (BPJ) with consideration given to the NSPS for TSS in 40 CFR 434.35.

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.

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 proposed permit authorizes treated discharges into Little Paint Rock Creek (AL/06030002-100\_01), a watershed with an approved Total Maximum Daily Loads (TMDLs) for siltation, low dissolved oxygen, and organic loading. The TMDL for low dissolved oxygen and organic loading excludes point sources which occur as a result of storm events as they do not occur during low flow conditions. The TMDL for siltation indicates that present calculations do not show a need for reduction for point source discharges.

The applicant is proposing discharges of pollutants to an ADEM identified Tier 1 water. If the requirements of the proposed permit and pollution abatement plan are fully implemented, there is reasonable assurance that discharges from the facility will not contain pollutants of concern contributing to the Tier 1 condition, pollutants causing or contributing to the Tier 1 condition will not be present in the discharge at significant levels, and/or the facility will not discharge pollutants at levels that will cause or contribute to a violation of applicable State WQS in the Tier 1 water.

**ALABAMA DEPARTMENT OF ENVIRONMENTAL MANAGEMENT (ADEM)  
OUTFALL CERTIFICATION SUMMARY**

PERMITTEE NAME: Stephen Yant  
FACILITY NAME: Tucker's Pit  
NPDES PERMIT NO: AL0082937  
ADOL PERMIT NO:  
COUNTY: Marshall County

Outfall Number	Is Outfall Certified?	Date of Certification	Outfall Latitude and Longitude	Date of ADEM Monitoring Release
001-1	<input type="checkbox"/> YES <input type="checkbox"/> NO			

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.

\_\_\_\_\_  
Name and Title (Print)

\_\_\_\_\_  
Signature

\_\_\_\_\_  
Date

☐ Responsible Official

☐ Duly Authorized Representative

**ALABAMA DEPARTMENT OF ENVIRONMENTAL MANAGEMENT (ADEM)  
NPDES INDIVIDUAL PERMIT APPLICATION**

**SURFACE & UNDERGROUND MINERAL & ORE OR MINERAL PRODUCT MINING, QUARRYING, EXCAVATION,  
BORROWING, HYDRAULIC MINING, STORAGE, PROCESSING, PREPARATION, RECOVERY, HANDLING,  
LOADING, STORING, OR DISPOSING ACTIVITIES AND ASSOCIATED AREAS INCLUDING PRE-MINING SITE  
DEVELOPMENT, CONSTRUCTION, EXCAVATION, CLEARING, DISTURBANCE, RECLAMATION, AND  
ASSOCIATED AREAS**

INSTRUCTIONS: PLEASE READ THE ACCOMPANYING INSTRUCTIONS CAREFULLY BEFORE COMPLETING THIS FORM. COMPLETE ALL QUESTIONS. RESPOND WITH "N/A" AS APPROPRIATE. INCOMPLETE OR INCORRECT ANSWERS OR MISSING SIGNATURES WILL DELAY PROCESSING. ATTACH ADDITIONAL COMMENTS OR INFORMATION AS NEEDED. IF SPACE IS INSUFFICIENT, CONTINUE ON AN ATTACHED SHEET(S) AS NECESSARY. COMMENCEMENT OF ACTIVITIES APPLIED FOR AS DETAILED IN THIS APPLICATION ARE NOT AUTHORIZED UNTIL PERMIT COVERAGE HAS BEEN ISSUED BY THE DEPARTMENT.

PLEASE TYPE OR PRINT IN INK ONLY.

**PURPOSE OF THIS APPLICATION**

- ☒ Initial Permit Application for New Facility    ☐ Initial Permit Application for Existing Facility (e.g. facility previously permitted less than 5 acres)  
☐ Modification of Existing Permit    ☐ Reissuance of Existing Permit    ☐ Reissuance & Modification of Existing Permit  
☐ Reissuance & Transfer of Existing Permit    ☐ Revocation and Reissuance of Existing Permit    ☐ Other \_\_\_\_\_

**I. GENERAL INFORMATION**

NPDES Permit Number (Not applicable if initial permit application): <b>AL 0082937</b>	County(s) in which Facility is Located: <b>Marshall</b>
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**RECEIVED**

**JUN 27 2019**

Company/Permittee Name: <b>Stephen Yant</b>			Facility Name (e.g., Mine Name, Pit Name, etc.): <b>Tucker's Pit</b>		
Mailing Address of Company/Permittee: <b>1054 McCorkle Mountain Road</b>			Physical Address of Facility (as near as possible to entrance): <b>30413 U.S. Highway 431 South</b>		
City: <b>Scottsboro</b>	State: <b>AL</b>	Zip: <b>35769</b>	City: <b>Grant</b>	State: <b>AL</b>	Zip: <b>35747</b>
Permittee Phone Number: <b>256-558-0654</b>		Permittee Fax Number: <b>N/A</b>		Latitude and Longitude of entrance: <b>N34° 28' 1.76", W-86° 22' 0.48"</b>	

Responsible Official (as described on page 13 of this application): <b>Stephen Yant</b>			Responsible Official Title: <b>Owner</b>		
Mailing Address of Responsible Official: <b>1054 McCorkle Mountain Road</b>			Physical Address of Responsible Official: <b>1054 McCorkle Mountain Road</b>		
City: <b>Scottsboro</b>	State: <b>AL</b>	Zip: <b>35769</b>	City: <b>Scottsboro</b>	State: <b>AL</b>	Zip: <b>35769</b>
Phone Number of Responsible Official: <b>256-558-0654</b>		Fax Number of Responsible Official: <b>N/A</b>		Email Address of Responsible Official: <b>tucker.marcia@gmail.com</b>	

Facility Contact: <b>Billy Tucker</b>			Facility Contact Title: <b>Manager</b>		
Physical Address of Facility Contact: <b>30413 U.S. Highway 431 South</b>			Phone Number of Facility Contact: <b>256-293-8980</b>		Fax Number of Facility Contact: <b>N/A</b>
City: <b>Grant</b>	State: <b>AL</b>	Zip: <b>35747</b>	Email Address of Facility Contact: <b>tucker.marcia@gmail.com</b>		

## II. MEMBER INFORMATION

- A. Identify the name, title/position, and unless waived in writing by the Department, the residence address of every officer, 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:

Name:	Title/Position:	Physical Address of Residence (P.O. Box is Not Acceptable)
_____	_____	_____
_____	_____	_____
_____	_____	_____

- B. Other than the "Company/Permittee" listed in Part I., identify the name of each corporation, partnership, association, and single proprietorship for which any individual identified in Part II.A. 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:

Name of Corporation, Partnership, Association, or Single Proprietorship:	Name of Individual from Part II.A.:	Title/Position in Corporation, Partnership, Association, or Single Proprietorship:
_____	_____	_____
_____	_____	_____
_____	_____	_____

## III. LEGAL STRUCTURE OF APPLICANT

- A. Indicate the legal structure of the "Company/Permittee" listed in Part I:

☐ Corporation   
 ☐ Association   
 ☒ Individual   
 ☐ Single Proprietorship   
 ☐ Partnership   
 ☐ LLP   
 ☐ LLC  
☐ Government Agency: \_\_\_\_\_ ☐ Other: \_\_\_\_\_

- B. If not an individual or single proprietorship, is the "Company/Permittee" listed in Part I. properly registered and in good standing with the Alabama Secretary of State's Office? (If the answer is "No," attach a letter of explanation.) ☐ Yes ☐ No

- C. Parent Corporation and Subsidiary Corporations of Applicant, if any: \_\_\_\_\_

- D. Land Owner(s): Stephen Yant

- E. Mining Sub-contractor(s)/Operator(s), if known: \_\_\_\_\_

## IV. COMPLIANCE HISTORY

- A. Has the applicant ever had any of the following:

	Yes	No
(1) An Alabama NPDES, SID, or UIC permit suspended or terminated?	<input type="checkbox"/>	<input checked="" type="checkbox"/>
(2) An Alabama license to mine suspended or revoked?	<input type="checkbox"/>	<input checked="" type="checkbox"/>
(3) An Alabama or federal mining permit suspended or terminated?	<input type="checkbox"/>	<input checked="" type="checkbox"/>
(4) A reclamation bond, or similar security deposited in lieu of a bond, or portion thereof, forfeited?	<input type="checkbox"/>	<input checked="" type="checkbox"/>
(5) A bond or similar security deposited in lieu of a bond, or portion thereof, the purpose of which was to secure compliance with any requirement of the Alabama Water Improvement Commission or Alabama Department of Environmental Management, forfeited?	<input type="checkbox"/>	<input checked="" type="checkbox"/>

(If the response to any item of Part IV.A. is "Yes," attach a letter of explanation.)

- B. Identify every Warning Letter, Notice of Violation (NOV), Administrative Action, or litigation issued to the applicant, parent corporation, subsidiary, general partner, LLP partner, or LLC member and filed by ADEM or EPA during the three year (36 months) period preceding the date on which this form is signed. Indicate the date of issuance, briefly describe alleged violations, list actions (if any) to abate alleged violations, and indicate date of final resolution:

_____
_____
_____
_____

# V. OTHER PERMITS/AUTHORIZATIONS

A. 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 Surface Mining Commission (ASMC), Alabama Department of Industrial Relations (ADIR), or other agency, to the applicant, parent corporation, subsidiary, or LLC member for this facility whether presently effective, expired, suspended, revoked, or terminated:

B. 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, or ADIR, to the applicant, parent corporation, subsidiary, or LLC member for other facilities whether presently effective, expired, suspended, revoked, or terminated:

# VI. PROPOSED SCHEDULE

Anticipated Activity Commencement Date: March 2015 Anticipated Activity Completion Date: 2025

# VII. ACTIVITY DESCRIPTION & INFORMATION

A. Proposed Total Area of the Permitted Site: 40.0 acres Proposed Total Disturbed Area of the Permitted Site: 25 acres

B. Township(s), Range(s), Section(s): T7N, R2E, Section 1

C. Detailed Directions to Site: From Guntersville, take US Highway 431 North. The site entrance is 0.6 mile past the intersection with Bishop Mountain Road on the left.

D. Is/ will this facility:

(1) an existing facility which currently results in discharges to State waters?

Yes No

☐ ☒

(2) a proposed facility which will result in a discharge to State waters?

☒ ☐

(3) be located within any 100-year flood plain?

☐ ☒

(4) discharge to Municipal Separate Storm Sewer?

☐ ☒

(5) discharge to waters of or be located in the Coastal Zone?

☐ ☒

(6) need/have ADEM UIC permit coverage?

☐ ☒

(7) be located on Indian/ historically significant lands?

☐ ☒

(8) need/have ADEM SID permit coverage?

☐ ☒

(9) need/have ASMC permit coverage?

☐ ☒

(10) need/have ADIR permit coverage?

☐ ☒

(11) generate, treat, store, or dispose of hazardous or toxic waste ? (If "Yes," attach a detailed explanation.)

☐ ☒

(12) be located in or discharge to a Public Water Supply (PWS) watershed or be located within 1/2 mile of any PWS well?

☐ ☒

# VIII. MATERIAL TO BE REMOVED, PROCESSED, OR TRANSLOADED

List relative percentages of the mineral(s) or mineral product(s) that are proposed to be and/or are currently mined, quarried, recovered, prepared, processed, handled, transloaded, or disposed at the facility. If more than one mineral is to be mined, list the relative percentages of each mineral by tonnage for the life of the mine.

☒ Dirt &/or Chert ☐ Sand &/or Gravel ☐ Chalk ☐ Talc ☐ Crushed rock (other)

☐ Bentonite ☐ Industrial Sand ☐ Marble ☐ Shale &/or Common Clay ☐ Sandstone

☐ Coal ☐ Kaolin ☐ Coal fines/refuse recovery ☐ Coal product, coke ☐ Slag, Red Rock

☐ Fire clay ☐ Iron ore ☐ Dimension stone ☐ Phosphate rock ☐ Granite

☐ Bauxitic Clay ☐ Bauxite Ore ☐ Limestone, crushed limestone and dolomite

☐ Gold, other trace minerals: ☐ Other:

☐ Other: ☐ Other:

☐ Other: ☐ Other:

# IX. PROPOSED ACTIVITY TO BE CONDUCTED

A. Type(s) of activity presently conducted at applicant's existing facility or proposed to be conducted at facility (check all that apply):

<input type="checkbox"/> Surface mining	<input type="checkbox"/> Underground mining	<input type="checkbox"/> Quarrying	<input type="checkbox"/> Auger mining	<input type="checkbox"/> Hydraulic mining
<input type="checkbox"/> Within-bank mining	<input type="checkbox"/> Solution mining	<input checked="" type="checkbox"/> Mineral storing	<input type="checkbox"/> Lime production	<input type="checkbox"/> Cement production
<input type="checkbox"/> Synthetic fuel production	<input type="checkbox"/> Alternative fuels operation	<input checked="" type="checkbox"/> Mineral dry processing (crushing & screening)	<input type="checkbox"/> Mineral wet preparation	
<input type="checkbox"/> Other beneficiation & manufacturing operations	<input checked="" type="checkbox"/> Mineral loading	<input type="checkbox"/> Chemical processing or leaching		
<input checked="" type="checkbox"/> Construction related temporary borrow pits/areas	<input checked="" type="checkbox"/> Mineral transportation <input type="checkbox"/> rail <input type="checkbox"/> barge <input checked="" type="checkbox"/> truck			
<input type="checkbox"/> Preparation plant waste recovery	<input type="checkbox"/> Hydraulic mining, dredging, instream or between stream-bank mining			
<input type="checkbox"/> Grading, clearing, grubbing, etc.	<input type="checkbox"/> Pre-construction ponded water removal		<input type="checkbox"/> Excavation	
<input type="checkbox"/> Pre-mining logging or land clearing	<input type="checkbox"/> Waterbody relocation or other alteration		<input type="checkbox"/> Creek/stream crossings	
<input type="checkbox"/> Onsite construction debris or equipment storage/disposal	<input type="checkbox"/> Onsite mining debris or equipment storage/disposal			
<input type="checkbox"/> Reclamation of disturbed areas	<input type="checkbox"/> Chemicals used in process or wastewater treatment (coagulant, biocide, etc.)			
<input type="checkbox"/> Adjacent/associated asphalt/concrete plant(s)	<input type="checkbox"/> Low volume sewage treatment package plant			
<input type="checkbox"/> Other: _____				

B. Primary SIC Code: 1499 Description: Miscellaneous Nonmetallic mining

Secondary SIC Code(s): \_\_\_\_\_ Description: \_\_\_\_\_

C. Narrative Description of the Activity: Dirt borrow pit for local contractors; manager will operate a trackhoe to load trucks from borrow areas

# X. FUEL - CHEMICAL HANDLING, STORAGE & SPILL PREVENTION CONTROL & COUNTERMEASURES (SPCC) PLAN

A. Will fuels, chemicals, compounds, or liquid waste be used or stored onsite? ☐ Yes ☒ No

B. If "Yes," identify the fuel, chemicals, compounds, or liquid waste and indicate the volume of each:

Volume	Contents	Volume	Contents	Volume	Contents
_____ gallons	_____	_____ gallons	_____	_____ gallons	_____
_____ gallons	_____	_____ gallons	_____	_____ gallons	_____

C. If "Yes," a detailed SPCC Plan with acceptable format and content, including diagrams, must be attached to application in accordance with ADEM Admin. Code R. 335-6-6-.12(r). Unless waived in writing by the Department on a programmatic, categorical, or individual compound/chemical basis, Material Safety Data Sheets (MSDS) for chemicals/compounds used or proposed to be used at the facility must be included in the SPCC Plan submittal.

# XI. POLLUTION ABATEMENT & PREVENTION (PAP) PLAN

A. For non-coal mining facilities, a PAP Plan in accordance with ADEM Admin. Code r. 335-6-9-.03 has been completed and is attached as part of this application. ☒ Yes ☐ No

B. For coal mining facilities, a detailed PAP Plan has been submitted to ASMC according to submittal procedures for ASMC regulated facilities. ☐ Yes ☐ No

(1) If "Yes" to Part XLB., provide the date that the PAP Plan was submitted to ASMC: \_\_\_\_\_

(2) If "No" to Part XLB., provide the anticipated date that the PAP Plan will be submitted to ASMC: \_\_\_\_\_

# XII. TOPOGRAPHIC MAP SUBMITTAL

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 is located. Unless approved in advance by the Department, the topographic or equivalent map(s), at a minimum, must show:

- |   |   |
|---|---|
| (a) An outline of legal boundary of entire property (property lines and lease boundaries) | (j) All surrounding unimproved/improved roads                           |
| (b) An outline of the facility  | (k) High-tension power lines and railroad tracks                        |
| (c) All existing and proposed disturbed areas   | (l) Buildings and structures, including fuel/water tanks                |
| (d) Location of discharge areas   | (m) Contour lines, township-range-section lines                         |
| (e) Proposed and existing discharge points  | (n) Drainage patterns, swales, washes                                   |
| (f) Perennial, intermittent, and ephemeral streams  | (o) All drainage conveyance/treatment structures (ditches, berms, etc.) |
| (g) Lakes, springs, water wells, wetlands   | (p) Any other pertinent or significant feature                          |
| (h) All known facility dirt/improved access/haul roads                                    |   |

**XIII. DETAILED FACILITY MAP SUBMITTAL**

Attach to this application a 1:500 scale or better, detailed auto-CAD 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 facility. The facility map(s) must include a caption indicating the name of the facility, name of the applicant, facility name, county, and township, range, & section(s) where the facility is located. Unless approved in advance by the Department, the facility or equivalent map(s), at a minimum, must show:

(a) Information listed in Item XII (a) – (o) above	(e) Location of mining or pond cleanout waste storage/disposal areas
(b) If noncoal, detailed, planned mining progression	(f) Other information relevant to facility or operation
(c) If noncoal, location of topsoil storage areas	(g) Location of facility sign showing Permittee name, facility name, and NPDES Number
(d) Location of ASMC bonded increments (if applicable)	

List the requested permit action for each outfall (issue, reissue, add, delete, move, etc.), outfall designation including denoting "E" for existing and "P" for proposed outfalls, name of receiving water(s), whether or not the stream is included in a TMDL, latitude and longitude (to seconds) of location(s) of each discharge point, distance of receiving water from outfall in feet, number of disturbed acres, the number of drainage acres which will drain through each treatment system, outfall, or BMP, and if the outfall discharges to an ADEM listed CWA Section 303(d) waterbody segment at the time of application submittal.

[illegible]

ADEM Form 315 11/12 m3

A. Modified EPA Form 2C Submittal

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

☐ No, the applicant does not request a waiver and a complete modified EPA Form 2C is attached.

[illegible][illegible]

The applicant is required to supply outfall number(s) as it appears on the map(s) required by this application [if this application is for a modification to an existing permit do not change the numbering sequence of the permitted outfalls], describe each, (e.g., pipe, spillway, channel, tunnel, conduit, well, discrete fissure, or container), and identify the origin of pollutants. The response must be precise for each outfall. If the discharge of pollutants from any outfall is the result of commingling of waste streams from different origins, each origin must be completely described.

Origin of Pollutants – typical examples: (1) Discharge of drainage from the underground workings of an underground coal mine, (2) Discharge of drainage from a coal surface mine, (3) Discharge of drainage from a coal preparation plant and associated areas, (4) Discharge of process wastewater from a gravel-washing plant, (5) Discharge of wastewater from an existing source coal preparation plant, (6) Discharge of drainage from a sand and gravel pit, (7) Pumped discharge from a limestone quarry, (8) Controlled surface mine drainage (pumped or siphoned), (9) Discharge of drainage from mine reclamation, (10) Other:

**XVII. PROPOSED NEW OR INCREASED DISCHARGES**

A. Pursuant to ADEM Admin. Code Chapter 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.

☒ Yes. New/increased discharges of pollutant(s) or discharge locations to Tier 2 waters are proposed.

☐ No. New/increased discharges of pollutants(s) or discharge locations to Tier 2 waters are not proposed.

B. If "Yes," complete this Part (XVII.B.), Part XVIII, and XIX. Attach additional sheets/documentation and supporting information as needed.

(1) What environmental or public health problem will the discharge be correcting?

none

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

2 operators will be located on the site when hauling is occurring and truck drivers will deliver excavated fill soil to nearby construction projects.

(3) How much reduction in employment will the discharger be avoiding?

None

(4) How much additional state or local taxes will the discharger be paying?

None

(5) What public service to the community will the discharger be providing?

There are no other nearby borrow pits for this area. Local contractors and private individuals could use this for borrow for new projects.

(6) What economic or social benefit will the discharger be providing to the community?

The property will be utilized as a soil borrow pit to be used by local contractors for fill placement for nearby projects.

**XVIII. ALTERNATIVES ANALYSIS – ADEM Form 311 3/02**

Pursuant to ADEM Admin. Code Chapter 335-6-10, an evaluation of the discharge alternatives identified below has been completed and the following conclusions were reached. All proposed new or expanded discharges of pollutant(s) covered by the Individual NPDES permitting program are subject to the provisions of the antidegradation policy. As part of the permit application review process, the Department is required to determine, based on the applicant's demonstration, that 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. As a part of this demonstration, a registered professional engineer (PE) licensed to practice in the State of Alabama must complete an evaluation of the discharge alternatives, to include calculation of total annualized project costs (Item XIX) for each technically feasible alternative. Technically feasible alternatives with total annualized pollution control project costs that are less than 110% of the preferred alternative total annualized pollution control project costs for the Tier 2 new or increased discharge proposal are considered viable alternatives. Supporting documentation is attached, referenced, or otherwise handled as appropriate.

Alternative	Viable	Non-Viable	Reason/Rationale For Indicating Non-Viable
1) Treatment/Discharge Proposed In This Application	X		
2) Land Application		X	Land application will increase runoff
3) Pretreatment/Discharge to POTW By SID Permit		X	No POTW near site
4) Relocation of Discharge		X	Dictated by contours of site
5) Reuse/Recycle – Pollution Prevention		X	Not feasible
6) Other Process/Treatment Alternatives		X	Mechanical treatment is not feasible
7) Underground Injection By UIC Permit		X	Will contaminate groundwater
8) Other Project Specific Alternative(s) Identified By the Applicant Or The ADEM		X	None
9) Other Project Specific Alternative(s) Identified By the Applicant Or The ADEM		X	None

COMMENTS: Due to the topography of the site and the fact that the issue is sediment from erosion and runoff of the borrow pit, the most practical treatment is a detention pond with a floating weir.

**XIX. CALCULATION OF TOTAL ANNUALIZED PROJECT COSTS FOR PRIVATE SECTOR PROJECTS - ADEM Form 313 8/02**  
(ADEM Form 312 3/02 - Public Sector Project is available upon request)

This item must be completed for each technically feasible alternative evaluated in Item XVIII. Copy, complete, and attach additional blocks/sheets and supporting information as needed.

Capital Costs of pollution control project to be expended or financed by applicant (Supplied by applicant)	\$ 30,000 (1)	* While actual payback schedules may differ across projects and companies, assume equal annual payments over a 10-year period for consistency in comparing projects.
Interest Rate for Financing (Expressed as a decimal)	0.05 (i)	
Time Period of Financing (Assume 10 years *)	10 years (n)	
Annualization Factor ** = $\frac{i}{(1+i)^n - 1}$ i = Interest Rate	0.1295 (2)	** Or refer to Appendix B (application information) for calculated annualization factors.
Annualized Capital Cost [Calculate: (1) x (2) ]	\$ 3,885.14 (3)	
Annual Cost of Operation & Maintenance (including but not limited to monitoring, inspection, permitting fees, waste disposal charges, repair, administration & replacement) ***	\$ 15,000 (4)	*** For recurring costs that occur less frequently than once a year, pro rate the cost over the relevant number of years (e.g., for pumps replaced once every three years, include one-third of the cost in each year).
Total Annual Cost of Pollution Control Project [ (3) + (4) ]	\$ 18,885.14 (5)	

Outfall(s): 001

Y	N	N/A	
X			Runoff from all areas of disturbance is controlled
X			Drainage from pit area, stockpiles, and spoil areas directed to a sedimentation pond
X			Sedimentation basin at least 0.25 acre/feet for every acre of disturbed drainage
X			Sedimentation basin cleaned out when sediment accumulation is 60% of design capacity
X			Trees, boulders, and other obstructions removed from pond during initial construction
X			Width of top of dam greater than 12'
X			Side slopes of dam no steeper than 3:1
X			Cutoff trench at least 8' wide
X			Side slopes of cutoff trench no less than 1:1
X			Cutoff trench located along the centerline of the dam
X			Cutoff trench extends at least 2' into bedrock or impervious soil
X			Cutoff trench filled with impervious material
		X	Embankments and cutoff trench 95% compaction standard proctor ASTM
		X	Embankment free of roots, tree debris, stones >6" diameter, etc.
		X	Embankment constructed in lifts no greater than 12"
		X	Spillpipe sized to carry peak flow from a one year storm event
		X	Spillpipe will not chemically react with effluent
		X	Subsurface withdrawal
		X	Anti-seep collars extend radially at least 2' from each joint in spillpipe
		X	Splashpad at the end of the spillpipe
X			Emergency Spillway sized for peak flow from 25-yr 24-hr event if discharge not into PWS classified stream
X			Emergency spillway sized for peak flow from 50-yr 24-hr event if discharge is into PWS classified stream
X			Emergency overflow at least 20' long
X			Side slopes of emergency spillway no steeper than 2:1
X			Emergency spillway lined with riprap or concrete
X			Minimum of 1.5' of freeboard between normal overflow and emergency overflow
X			Minimum of 1.5' of freeboard between max. design flow of emergency spillway and top of dam
X			All emergency overflows are sized to handle entire drainage area for ponds in series
X			Dam stabilized with permanent vegetation
X			Sustained grade of haul road <10%
X			Maximum grade of haul road <15% for no more than 300'
X			Outer slopes of haul road no steeper than 2:1
X			Outer slopes of haul road vegetated or otherwise stabilized
		X	Detail drawings supplied for all stream crossings
X			Short-Term Stabilization/Grading And Temporary Vegetative Cover Plans
X			Long-Term Stabilization/Grading And Permanent Reclamation or Water Quality Remediation Plans

Y	The applicant has completed the surface water discharge alternatives analysis and has supporting documentation, including annualized costs for each technically feasible alternative available for review upon request
---	--

**IDENTIFY AND PROVIDE DETAILED EXPLANATION FOR ANY "N" OR "N/A" RESPONSE(S):**

There will be no stream crossings.

# XXI. POLLUTION ABATEMENT PLAN (PAP) REVIEW CHECKLIST

Y	N	N/A	
X			PE Seal with License #
X			Name and Address of Operator
	X		Legal Description of Facility
			<b>General Information:</b>
X			Name of Company
X			Number of Employees
X			Products to be Mined
	X		Hours of Operation
		X	Water Supply and Disposition
			<b>Topographic Map:</b>
X			Mine Location
		X	Location of Prep Plant
X			Location of Treatment Basins
X			Location of Discharge Points
X			Location of Adjacent Streams
			<b>1"- 500' or Equivalent Facility Map:</b>
X			Drainage Patterns
X			Mining Details
X			All Roads, Structures Detailed
X			All Treatment Structures Detailed
			<b>Detailed Design Diagrams:</b>
X			Plan Views
		X	Cross-section Views
X			Method of Diverting Runoff to Treatment Basins
			<b>Narrative of Operations:</b>
X			Raw Materials Defined
X			Processes Defined
X			Products Defined
			<b>Schematic Diagram:</b>
		X	Points of Waste Origin
		X	Collection System
		X	Disposal System
			<b>Post Treatment Quantity and Quality of Effluent:</b>
		X	Flow
		X	Suspended Solids
		X	Iron Concentration
		X	pH
			<b>Description of Waste Treatment Facility:</b>
		X	Pre-Treatment Measures
		X	Recovery System
		X	Expected Life of Treatment Basin
		X	Schedule of Cleaning and/or abandonment
			<b>Other:</b>
	X		Precipitation/Volume Calculations/Diagram Attached
X			BMP Plan for Haul Roads
X			Measures for Minimizing Impacts to Adjacent Stream i.e., Buffer Strips, Berms, etc.
X			Methods for Minimizing Nonpoint Source Discharges
X			Facility Closure Plans
X			PE Rationale(s) For Alternate Standards, Designs or Plans

## IDENTIFY AND PROVIDE DETAILED EXPLANATION FOR ANY "N" OR "N/A" RESPONSE(S):

Legal description of property was unavailable at time of application preparation. Work hours will be intermittent and the
facility will only be in operation when soil is being borrowed from the site.

XXII. INFORMATION

**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.

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 NPDES Permit prior to commencement of any land disturbance. Such 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 Industrial Relations (ADIR) 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; and
- (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. Send the completed form, supporting documentation, and the appropriate fees to:

Water Division  
Alabama Department of Environmental Management  
Post Office Box 301463  
Montgomery, Alabama 36130-1463  
Phone: (334) 271-7823  
Fax: (334) 279-3051  
h2omail@adem.state.al.us  
www.adem.alabama.gov

### XXIII. PROFESSIONAL ENGINEER (PE) CERTIFICATION

A detailed, comprehensive Pollution Abatement/Prevention Plan (PAP) must be prepared, signed, and certified by a professional engineer (PE), registered in the State of Alabama as follows:

"I certify on behalf of the applicant, that I have completed an evaluation of discharge alternatives (Item XVIII) for any proposed new or increased discharges of pollutant(s) to Tier 2 waters and reached the conclusions indicated. I certify under penalty of law that technical information and data contained in this application, and a comprehensive 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 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."

Address 224 Broad Street, Suite 201, Gadsden, AL PE Registration # 17318  
Name and Title (type or print) James G. Chitwood, P.E. Phone Number 256-891-3458  
Signature [Signature] Date Signed 6/27/19

### XXIV. RESPONSIBLE OFFICIAL SIGNATURE

This application must be signed 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."

Name (type or print) Stephen Yant Official Title Owner  
Signature [Signature] Date Signed 6-20-19

\*335-6-6-.09 Signatories to Permit Applications and Reports.

(1) The application for an NPDES permit shall be signed by a responsible official, as indicated below:

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

# **FACILITY CLOSURE PLAN**

This Closure Plan is provided for future site closure activities at the time operations are to cease on the site currently used as a borrow pit. The owner is responsible for rehabilitating the site back to functional agricultural land at the time of closure.

## **SITE INFORMATION**

### **Name, Address, and Phone Number of Site Owner:**

Tucker's Pit  
30413 U.S. Highway 431 South  
Grant, Marshall County, Alabama 35747  
Owner: Stephen Yant  
Owner Phone Number: (256) 558-0654

### **Emergency Contacts:**

The owner should designate emergency contact(s). This person(s) should have a general knowledge of the site, its operation and organization.

Name: Billy Tucker, Site Manager  
Phone: 931-703-3802

### **General Operation:**

The existing facility is a topsoil and fill soil borrow pit located on a 40-acre parcel. Daily operations include excavation of soils and loading trucks for transport offsite. The facility has two site exits located near the northwest corner onto U.S. Highway 431 South and a drive used for employee access at the southeastern corner of the facility.

### **General Site Information:**

**Size of Site:** 40 acres; 25 Acres Disturbed  
**Receiving Waters:** Little Paint Rock Creek to the north  
**Directions to the site:** From Guntersville, take U.S. Highway 431 North. The site entrance is on the left 0.6 miles past the intersection with Bishop Mountain Road.

## Closure Requirements

### Key Objectives of Closure

The closure management objectives take into account the existing environment, environmental impacts, and the expectations at closure. The closure objectives are:

- To create a post mining environment that eliminates unacceptable health hazards and ensures public safety.
- To leave the site in a stable, non-polluting and tidy condition with no remaining equipment or infrastructure that is not required for post mining operational use.
- To minimize or eliminate the downstream environmental impacts
- To establish a stable post-mining land surface which has been rehabilitated back to functional agricultural land.

### Timing

The closure and rehabilitation activities are to be implemented immediately at the cessation of the extraction of topsoil and fill dirt from the borrow pit.

### Rehabilitation

The disturbed area is to be properly profiled and the slopes graded to be sufficient for grass establishment. The cut slope faces will be required to be cut or backfilled with existing fill dirt and topsoil to achieve the proper grade. Any disturbed areas not located on slopes should be covered with topsoil and grass seed and straw cover placed to establish cover.

When the borrow pit is suspended, cancelled or abandoned any access roads constructed by the owner shall be removed and/or rehabilitated to the satisfaction of the owner. A gate should be installed at the primary site entrance to restrict site access following closure of the site.

On completion of operations, all buildings on the site shall be removed. Additionally, all waste material of any description, including receptacles, scrap, and rubble will be removed entirely from the site and disposed of at a registered waste disposal facility. It will not be permitted to bury or burn waste on the site.

The detention pond located at the northwestern corner will remain in place as a permanent feature of the site.

### **Long Term Management and Maintenance After Closure**

No long-term management or maintenance are anticipated for the site following completion of the prescribed closure activities.

### **Conclusion**

The Closure Plan serves to provide details of the closure activities to be undertaken based on the anticipated mode of operation of the borrow pit. It is expected that adequate implementation of the closure activities will minimize the negative impacts of the borrow pit on the environment and enable a functional agricultural area to be re-established. If during the operation any unanticipated aspects occur, these should be assessed immediately, and adequate mitigation measures implemented to minimize their affect at and after closure.

# **POLLUTION ABATEMENT PLAN**

**Tucker's Borrow Pit  
30413 U.S. Highway 431 South  
Grant, Alabama 35747**

**Operator:  
Stephen Yant  
1054 McCorkle Mountain Road  
Scottsboro, Alabama 35769  
(256) 558-0654**

## **PAP Contacts/QCP:**

**James G. Chitwood, P.E.  
224 Broad Street, Suite 201  
Gadsden, Alabama 35901  
(256) 543-9431**



**Engineering. Environmental. Answers.**

**Project Start Date: May 2015**

**PAP Date: July 25, 2019**

### DESIGN QCP CERTIFICATION OF COMPLETION

I certify under penalty of law that this Pollution Abatement Plan (PAP) 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 and associated regulated areas/activities. The PAP meets the requirements of this permit and if properly implemented and maintained by the permittee, discharges of pollutants in stormwater runoff can be reasonably expected to be effectively minimized to the maximum extent practicable according to the requirements of ADEM Administrative Code Chapter 335-6-9 and this permit. The permittee has been advised that pollution abatement/prevention practices detailed in the PAP must be fully implemented and regularly maintained as needed at the facility in accordance with south sediment, erosion, and other pollution control practices, permit requirements, and other ADEM requirements to ensure protection of groundwater and surface water quality.

Name: James G. Chitwood

Title: Senior Project Manager

QCP Designation/Description: P.E.

Registration/Certification: AL 17318

Address: 224 Broad Street, Suite 201  
Gadsden, Alabama 35901

Phone Number: 256.543.9431

  
\_\_\_\_\_  
Signature

Date: 7/25/19

For Tucker's Borrow Pit, Grant, Alabama

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### **SITE DIAGRAM and MAPS**

Figure 1 – Vicinity Map

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### **APPENDIX A – Best Management Practices Details**

Sediment Barriers

Ditch Checks

Temporary Seeding

Permanent Seeding

### **EMERGENCY NUMBERS / ADDRESSES**

## **1.0 SITE INFORMATION**

### **1.1 Name, Address, and Phone Number of Permittee:**

Stephen Yant, Owner  
1054 McCorkle Mountain Road  
Scottsboro, Alabama 35769  
(256) 558-0654

### **1.2 Name and Location of Project:**

Tucker's Borrow Pit  
30413 U.S. Highway 431  
Grant, Marshall County, Alabama 35747

### **1.3 Name and Phone Number of Person Responsible for PAP:**

The prevention of pollution should be assigned to an individual at the site that understands the organization and methods involved in the operation of the site.

Name: Billy Tucker, Operator  
Phone: (256) 293-8980

### **1.4 General Operation:**

Site operations includes two employees that operate trackhoes and bulldozers for borrow pit excavation, loading, and stockpiling of topsoil and dirt for site construction activities. Topsoil and dirt are loaded into dump trucks on-site for delivery to construction projects or stockpiled. The general hours of operation are 8am to 5pm Monday through Friday. There is one building located on the site near the entrance.

### **1.5 General Site Information:**

<b>Project Location:</b>	Refer to Site Vicinity Map
<b>Size of Site:</b>	41 acres; 25 Acres Disturbed
<b>Receiving Waters:</b>	Rock Creek

### **1.6 Location of Streams Adjacent to Construction Site:**

The site will drain to ditch lines along U.S. Highway 431 to Little Paint Rock Creek, which is listed on the current EPA 303d list for Carbonaceous and Nitrogenous Biochemical Oxygen Demand and siltation. This plan includes a reproduction of a USGS 7.5-minute quadrangle, Figure 1-Site Location Map, showing the adjacent streams.

### **1.6.1 Setbacks**

No construction or site disturbance will occur within 50 feet of nearby streams or tributaries thereof. Little Paint Rock Creek is the nearest stream and is located approximately 350 feet northwest of the property where surface mining will occur.

## **1.7 Legal Description of Property**

A TRACT OR PARCEL OF LAND CONTAINING 41.95 ACRES LOCATED IN THE NORTHEASTERN PORTION OF SECTION 1, TOWNSHIP 7 SOUTH, RANGE 2 EAST, HUNTSVILLE MERIDIAN, MARSHALL COUNTY, ALABAMA, AND MORE PARTICULARLY DESCRIBED AS FOLLOWS:

COMMENCE AT A 5/8 INCH DIAMETER STEEL ROD WITH RED PLASTIC CAP IN PAVEMENT OF POARCH HOLLOW ROAD, THE NORTHEAST CORNER OF SAID SECTION 1; (COORDINATES: N.1443705.011, E.496665.8100) (THE POSITIONS OF CORNERS AND DIRECTIONS OF LINES ARE REFERRED TO THE NAD 1983(86) ALABAMA (EAST) STATE PLANE COORDINATE SYSTEM); THENCE ALONG SECTION LINE S01°24'35"W 1,323.99 FEET TO AN IRON SET (THIS IRON AND ALL IRONS HEREFTER REFERRED TO AS "SET" ARE 5/8 INCH DIAMETER STEEL RODS WITH RED PLASTIC CAP STAMPED AL. GEO. INC. CA-0223-LS) ON THE SOUTHWEST RIGHT-OF-WAY LIMIT OF US 431, THE POINT OF BEGINNING; THENCE CONTINUE ALONG SECTION LINE S01°24'35"W 45.79 FEET TO AN IRON SET; THENCE S89°45'07"W 210.17 FEET (RECORD 209.18 FEET) TO A 1-INCH DIAMETER PIPE; THENCE S88°29'50"W 1,134.44 FEET TO A LARGE ROCK PILE WITH FLAGGING; THENCE N86°29'14"W 657.28 FEET TO A 2-INCH X 2-INCH BRASS PLATE STAMPED US-TVA 123 IN TOP OF LARGE BOULDER AT THE SOUTHEAST CORNER OF AMOS ROBERTSON'S RESERVATION; THENCE N08°55'05"E 1,404.37 FEET (RECORD N08°45'E 1,398 FEET) TO TVA CONCRETE MONUMENT 6-147; THENCE N08°28'28"E 339.71 FEET TO AN IRON SET ON THE RIGHT-OF-WAY LIMIT OF US 431, A STATE HIGHWAY OF VARYING WIDTH; THENCE ALONG SAID RIGHT-OF-WAY LIMIT S32°13'10" 113.32 FEET TO AN IRON SET AT A POINT OF TANGENCY (STA. 184+83.62); THENCE SOUTHEASTERLY ALONG SAID RIGHT-OF-WAY LIMIT AND A 7,759.44 FOOT RADIUS CURVE A CHORD BEARING AND DISTANCE OF S35°57'08"W 998.44 FEET RESPECTIVELY TO AN IRON SET; THENCE ALONG SAID RIGHT-OF-WAY LIMIT S18°34'20"E 109.41 FEET TO AN IRON SET; THENCE SOUTHEASTERLY ALONG SAID RIGHT-OF-WAY LIMIT AND A 7,799.44 RADIUS CURVE A CHORD BEARING AND DISTANCE OF S43°45'59"E 918.39 FEET RESPECTIVELY TO AN IRON SET; THENCE ALONG SAID RIGHT-OF-WAY LIMIT S55°43'29"E 308.11 FEET TO AN IRON SET; THENCE SOUTHEASTERLY ALONG SAID RIGHT-OF-WAY LIMIT AND A 7,759.44 FOOT RADIUS CURVE A CHORD BEARING AND DISTANCE OF S49°59'14"E 161.30 FEET RESPECTIVELY TO THE POINT OF BEGINNING.

## **2.0 SITE MANAGEMENT PRACTICES**

The site is an active dirt borrow pit and perimeter and site controls have been installed or are proposed for installation in this PAP. Grading and drainage for the site is designed to direct surface water to the north edge of the site to constructed detention basins prior to discharging into the ditch line along U.S. Highway 431.

### **2.1 Best Management Practices**

The following Best Management Practices (BMPs) will be utilized to divert surface water runoff from active disturbance areas and stockpiles to the detention ponds located along the northeastern edge of the property. Additional details for the listed BMPs are provided in Appendix A.

Sediment Barriers – silt fence sediment barriers will be installed along the northwestern, northeastern, and southeastern property boundaries to prevent sediment loss onto adjacent properties. Any barriers that decompose or become ineffective during disturbance should be replaced promptly. Sediment deposits should be removed when deposits reach ½ the height of the barrier.

Earthen Berms – berms have been constructed on the site to reduce sheet flow runoff on slope areas and direct surface water to detention ponds on the site. The berms shall be a minimum of 36 inches in height with seed and mulch placed following construction.

Rip rap ditch checks – existing ditch lines will have rip rap ditch checks installed to reduce sediment loss to detention basins.

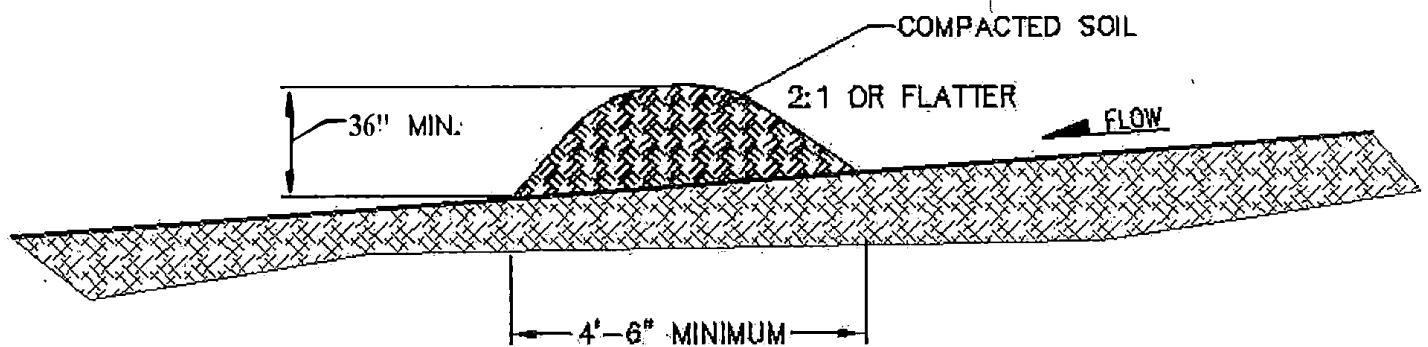
Haul Road - There is one primary site entrance that serves as the haul road for dump trucks entering and leaving the site. The haul road meets the criteria outlined in Appendix B of ADEM Regulation 335-6-9 for haul roads. No slopes on the haul road are greater than 10%. Ditches are located to either side of the haul road and direct surface water to the detention basins. Gravel has been installed on the haul road a minimum of 100 feet from the intersection with U.S. Highway 431. The gravel reduces tracking onto the highway and is replaced when tracking is observed, or the gravel becomes filled and no longer removes dirt from the truck tires.

Sediment Basin – An existing sediment basin was previously constructed at the northwestern corner of the site. The existing basin measures approximately 0.13 acres in size. Sediment basin and dam construction will meet the requirements outlined in ADEM Regulation 335-6-9, Appendix A as listed below:

- The basin is required to be able to store 0.25 acre feet/acre of disturbed area in the drainage area. The sediment basin has been designed to be 6 acres in total area to meet the capacity criteria for 25 acres of disturbed area. The existing basin will be expanded to the southeast to meet these criteria.

- The dam for the sediment basin will be built with the following criteria:
  - (a) The top of the dam shall be at least 12 feet wide
  - (b) The slope on either side of the dam shall be no steeper than 3:1
  - (c) A cutoff trench 8 feet wide shall be constructed at the dam centerline and of sufficient depth (minimum 2 feet) to extend into relatively impervious materials or bedrock and backfilled with relatively impervious material from which the core of the dam will be constructed.
  - (d) The entire embankment and cutoff trench shall be compacted to 95% density, based on standard proctor as outlined in ASTM 698.
  - (e) The material placed in the embankment shall be free of sod, roots, stones over 6 inches in diameter and other objectionable materials. The fill material should be placed in layers not exceeding 12 inches in thickness.
  - (f) The spill pipe will be sized to adequately carry the expected peak flow from a one-year frequency storm event.
  - (g) A skimmer will be installed in the sediment basin and connected to the spill pipe to regulate water flow.
  - (h) Rip rap will be placed below the spill pipe discharge point to prevent erosion.
  - (i) An emergency spillway will be installed to carry the expected peak flow from a 25-year, 24 hour storm event. The spillway slope cannot exceed 3%, with a control section at least 20 feet in length with side slopes no steeper than 2:1 and have riprap or concrete as the bottom.
  - (j) 1 ½ feet of freeboard between the normal overflow and emergency overflow is required. Also 1 ½ feet of freeboard between the maximum design flow elevation in the emergency overflow and the top of the top is required.

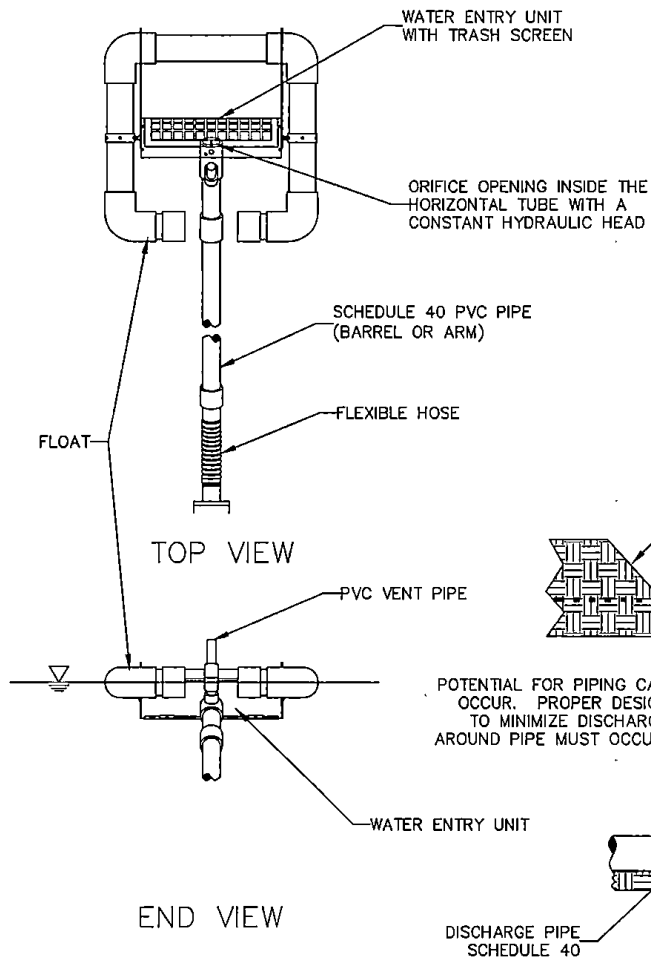
## **SITE DIAGRAMS and MAPS**



### BERM DETAILS

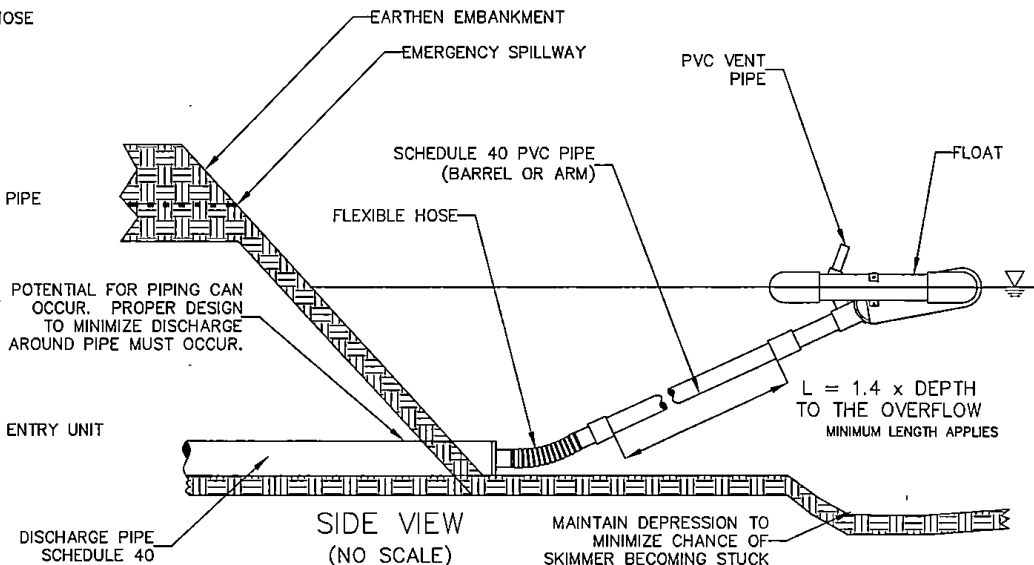
#### NOTES:

1. BERMS SHALL HAVE A HEIGHT OF 36 INCHES, SIDE SLOPES OF 2:1 OR FLATTER AND A MINIMUM BASE WIDTH OF 4.5 FEET.
2. BERMS SHALL BE USED TO INTERCEPT AND DIVERT DRAINAGE TO A DESIGNATED OUTLET.
3. BERMS SHALL NOT BE USED WHERE DRAINAGE AREA EXCEEDS 10 ACRES.



#### GENERAL NOTES:

1. PROPER DESIGN MUST BE COMPLETED TO MINIMIZE PIPING AROUND DISCHARGE PIPE.
2. PROPER ORIFICE OPENING MUST BE SELECTED TO ENSURE POND DRAINS IN CORRECT AMOUNT OF TIME. MODIFICATIONS MAY BE REQUIRED IF FIELD CONDITIONS WARRANT A CHANGE.
3. EMBANKMENT MUST BE COMPACTED TO DESIGN SPECIFICATIONS.
4. EMERGENCY SPILLWAY MUST BE CORRECTLY SIZED AND EROSION PROTECTION INSTALLED.
5. EROSION PROTECTION MUST BE INSTALLED ALONG THE EMBANKMENT AND AT THE DISCHARGE END OF THE PIPE.
6. INSPECT SYSTEM REGULARLY TO ENSURE IT IS FUNCTIONING IN A CORRECT MANNER.
7. EIGHT SIZES OF SKIMMERS ARE AVAILABLE, REFER TO THE FLOW SHEET, CUT SHEET, AND INSTRUCTIONS ON WEB SITE FOR EACH SIZE.



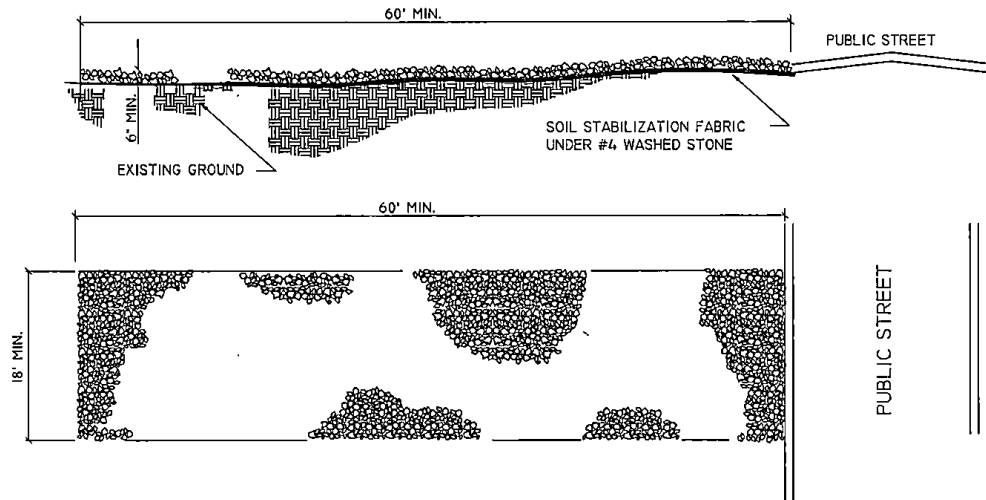
DRAWN BY T. R. EVANS 10/10

FAIRCLOTH SKIMMER® DISCHARGE SYSTEM WITH EMBANKMENT

J. W. FAIRCLOTH & SON INC.  
WWW.FAIRCLOTHSKIMMER.COM  
TELEPHONE: (919) 732-1244  
FAX: (919) 732-1266  
EMAIL: WARREN@FAIRCLOTHSKIMMER.COM

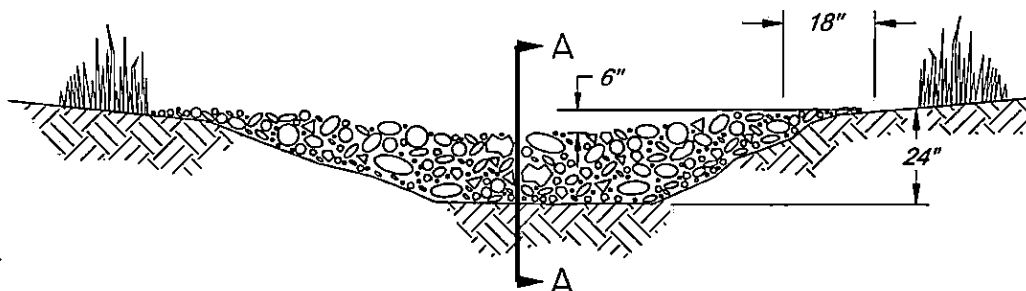
NOTES:

1. A STABILIZED ENTRANCE PAD OF #4 WASHED STONE OR RAIL ROAD BALLAST SHALL BE LOCATED WHERE TRAFFIC WILL ENTER OR LEAVE THE CONSTRUCTION SITE ONTO A PUBLIC STREET.
2. FILTER FABRIC OR COMPACTED CRUSHER RUN STONE SHALL BE USED AS A BASE FOR THE CONSTRUCTION ENTRANCE.
3. THE ENTRANCE SHALL BE MAINTAINED IN A CONDITION WHICH WILL PREVENT TRACKING OR FLOWING OF SEDIMENT ONTO PUBLIC STREETS OR EXISTING PAVEMENT. THIS MAY REQUIRE PERIODIC TOP DRESSING WITH ADDITIONAL STONE AS CONDITIONS WARRANT AND REPAIR OR CLEANOUT OF ANY MEASURES USED TO TRAP SEDIMENT.
4. ANY SEDIMENT SPILLED, DROPPED, WASHED, OR TRACKED ONTO PUBLIC STREETS MUST BE REMOVED DAILY.
5. WHEN APPROPRIATE, WHEELS MUST BE CLEANED TO REMOVE SEDIMENT PRIOR TO ENTERING A PUBLIC STREET. WHEN WASHING IS REQUIRED, IT SHALL BE DONE IN AN AREA STABILIZED WITH CRUSHED STONE WHICH DRAINS INTO AN APPROVED SEDIMENT BASIN.



WASHED GRAVEL CONSTRUCTION ENTRANCE

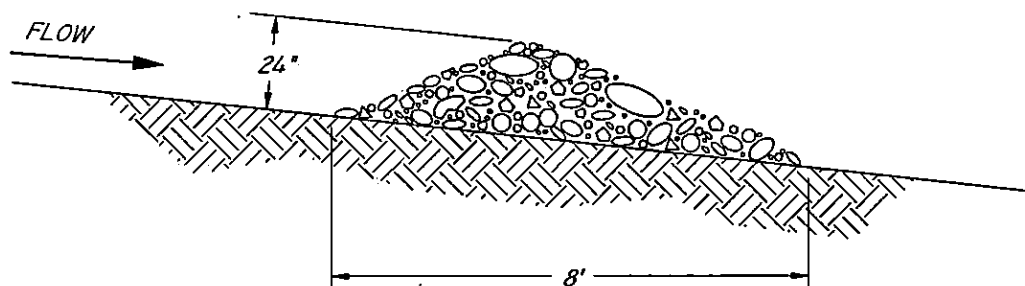
NOT TO SCALE



Note:

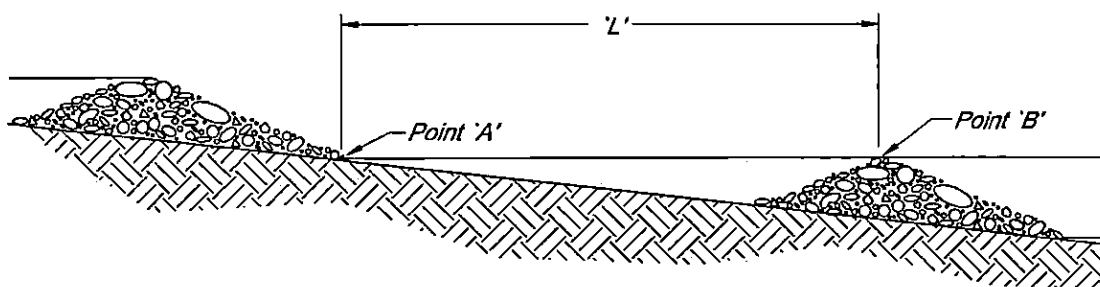
Key Stone Into Channel Banks And  
Extend It Beyond The Abutments A  
Minimum Of 18" To Prevent Flow  
Around Dam.

VIEW LOOKING UPSTREAM



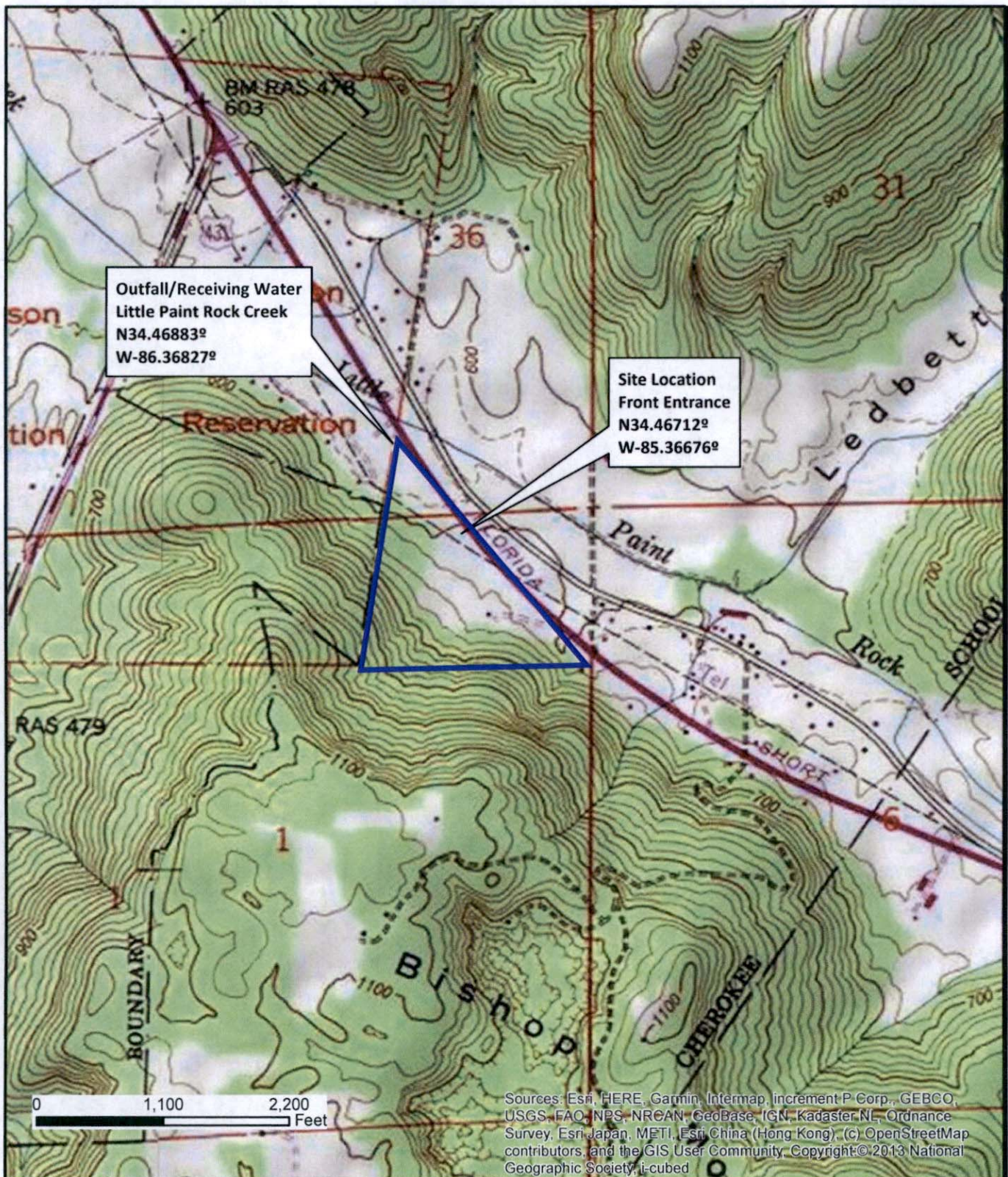
SECTION A-A

'L' = The Distance Such That Points 'A' And  
'B' Are Of Equal Elevation.



SPACING BETWEEN CHECK DAMS

ROCK CHECK DAM  
NOT TO SCALE

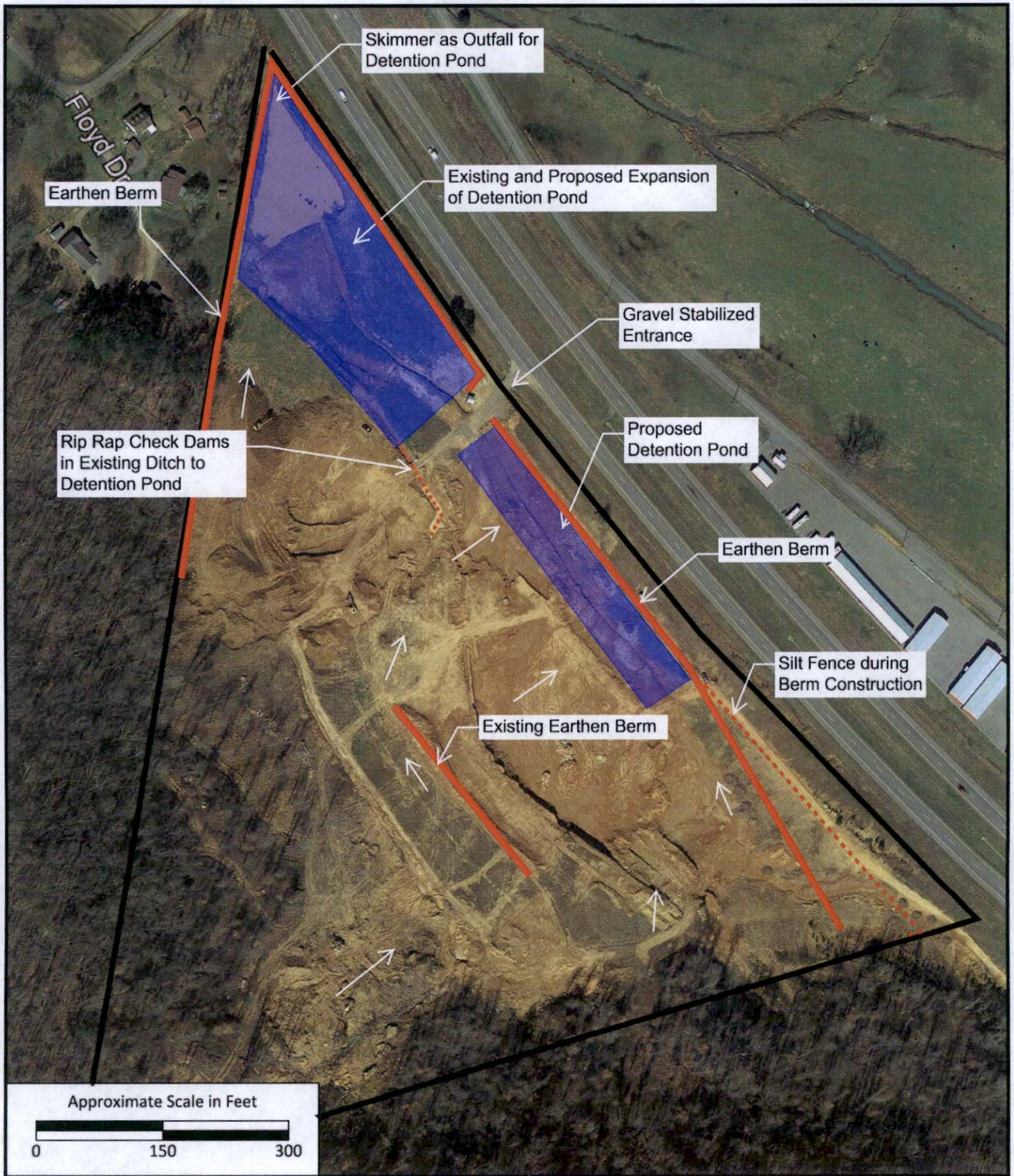


Engineering. Environmental. Answers.  
www.cdge.com

Site Location USGS Topographic Map

Yant Borrow Pit  
30413 U.S.Hwy 431 South  
Grant, Marshall County, Alabama





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Erosion Control Plan  
June 2019

Yant Borrow Pit  
30143 US Highway 431 South  
Grant, Marshall County, Alabama



## **Appendix A**

### **BMP Details**

Technical drawing of a wire mesh fence section. The drawing shows a central section of a fence with a grid pattern. A jagged line in the center represents a break in the fence. Dimensions and labels include:

- 10'-0" (TYP)**: Dimension across the top of the fence section.
- RING FASTENERS (TOP ONLY) Ø APPROXIMATELY 2"-Ø" D C**: Label pointing to the top edge of the fence.
- ANCHOR AT EACH END OF FENCE AS REQUIRED**: Label pointing to the vertical posts on either side.
- 32" MIN**: Dimension for the height of the fence section.
- 8'-0" MIN POSTS**: Dimension for the height of the vertical posts.
- GROUND LINE**: Label pointing to the dashed line representing the ground level.
- 2'-0"**: Dimension for the width of the fence section.
- WOVEN WIRE MESH COVERED WITH GEOTEXTILE**: Label pointing to the grid pattern.
- STUDDED METAL "1" POST OR FUNCTIONALLY EQUAL**: Label pointing to the vertical posts.
- 8' MIN**: Dimension for the height of the vertical posts.

The diagram illustrates a tieback system for a retaining wall. It shows a vertical wall on the left with a horizontal ground line. A tieback cable is anchored into the wall and extends horizontally to the right, then angles downward to an anchor stake driven into the ground. A trench is shown at the end of the tieback, filled with soil and topped with geotextile. Labels include: POST, FLOW (indicated by an arrow), GROUND LINE, ANCHOR STAKE, TRENCH (APPROX 6' X 6') BACKFILL ON TOP OF GEOTEXTILE WITH SOIL, STOP GEOTEXTILE HERE, and BURY WOVEN WIRE FENCE APPROX 6'.

## METHOD II

### MECHANICAL INSTALLATION

SIDE VIEW

- 

### REQUIRED LAPPING

--SPECIFICATIONS--

CURRENT ALABAMA DEPARTMENT OF TRANSPORTATION

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California 91768 or 91-01-01 by R.S.A.
2. Harland Service S.S. 4, 5 and controls  
or 91-01-01 by A.F.T.
3. United States Brewing Co. from  
1001 E. 4th St. to E.H. 4th St. in  
the A.F.T. and J.M.S.



**ALABAMA DEPARTMENT  
OF TRANSPORTATION**  
1409 COLLEMAN BOULEVARD  
MONTGOMERY, AL 36103-2050

DESIGN BUREAU SPECIAL DRAWING

### DETAILS OF SILT FENCE INSTALLATION

DATE: 11/10/1981  
PAGE: 200

ESC-200-4

1161-C

NOT TO SCALE

## Mulching (MU)



### Practice Description

Mulching is the application of plant residues such as straw or other suitable materials to the soil surface. Mulch protects the soil surface from the erosive force of raindrop impact and reduces the velocity of overland flow. It helps seedlings germinate and grow by conserving moisture, protecting against temperature extremes and controlling weeds. Mulch also maintains the infiltration capacity of the soil. Mulch can be applied to seeded areas to help establish plant cover. It can also be used in unseeded areas to protect against erosion over the winter or until final grading and shaping can be accomplished except in areas with concentrated flow.

### Planning Considerations

Surface mulch is the most effective, practical means of controlling runoff and erosion on disturbed land prior to vegetation establishment. Mulch absorbs the energy associated with raindrops and thereby minimizes soil particle detachment, which is the initiation step of erosion.

Mulch also reduces soil moisture loss by evaporation, prevents crusting and sealing of the soil surface, moderates soil temperatures, and provides a suitable microclimate for seed germination.

Organic mulches such as straw, wood chips and shredded bark have been found to be very effective mulch materials. Materials containing weed and grass seeds which may compete with establishing vegetation should not be used. Also, decomposition of some wood products can tie up significant amounts of soil nitrogen, making it necessary to modify fertilization rates or add fertilizer with the mulch.

A variety of erosion control blankets have been developed in recent years for use as mulch, particularly in critical areas such as waterways and channels. Various types of netting materials are also available to anchor organic mulches.

The choice of materials for mulching should be based on soil conditions, season, type of vegetation to establish, and size of the area. Properly applied and tacked mulch is always beneficial. Mulching is especially important when conditions of germination are not optimum, such as midsummer and early winter, and on difficult sites such as cut slopes, fill slopes and droughty soils.

Straw is the most commonly used material in conjunction with seeding. Wheat straw is the mostly commonly used straw, and can be spread by hand or with a mulch blower. If the site is susceptible to blowing wind, the straw should be tacked down with a tackifier, a crimper or a disk to prevent loss. Some site developers always require that straw mulch be tacked by an approved method.

Wood chips are suitable for areas that will not be closely mowed, and around ornamental plantings. Chips do not require tacking. Because they decompose slowly they must be treated with 12 pounds of nitrogen per ton to prevent nutrient deficiency in plants. They can be an inexpensive mulch if the chips are obtained from trees cleared on the site.

Wood fiber refers to short cellulose fibers applied as a slurry in hydroseeding operations. Wood fiber hydroseeder slurries may be used to tack straw mulch on steep slopes, critical areas, and where harsh climatic conditions exist.

Compost, peanut hulls, and pine straw are organic materials that potentially make excellent mulches but may only be available locally or seasonally. Creative use of these materials may reduce costs.

Jute mesh or the various types of netting is very effective in holding mulch in place on waterways and slopes before grasses become established.

Erosion control blankets promote seedling growth in the same way as organic mulches and are suited for use in areas with concentrated flows (see Erosion Control Blanket practice).

## Design Criteria

### Site Preparation

Before mulching, complete the required site preparation. Site preparation includes grading, if needed, and seedbed preparation and fertilizing, liming and seeding if a planting is being made by means other than hydroseeding.

### Spreading the Mulch

Select a mulch material based on the site and practice requirements, availability of material, and availability of labor and equipment. Table MU-1 lists commonly used mulches.

Uniformly spread organic mulches by hand or with a mulch blower at a rate which provides about 75% ground cover. When spreading straw mulch by hand, divide the area to be mulched into sections of approximately 1000 sq. ft. and place 70-90 pounds of straw (1 ½ to 2 bales) in each section to facilitate uniform distribution. Caution, an over-application of wheat straw will reduce stand success – do not over-apply wheat straw when mulching a seeding!

When straw mulch is subject to be blown away by wind, it must be anchored immediately after spreading. It can be anchored with a mulch anchoring tool or a regular farm disk, by setting the disk to run straight and adding weight to the disk. The disk should not be sharp enough to cut the straw. Disks can generally not be used on land with steep slopes. Application of a commercial tackifier through a hydroseeder is most practical for steep slopes and can be effective on any site.

Table MU-1 Mulching Materials and Application Rates

Material	Rate Per Acre and (Per 1000 ft. <sup>2</sup> )	Notes
<b>Straw with Seed</b>	1 ½-2 tons (70 lbs-90 lbs)	Spread by hand or machine to attain 75% groundcover; anchor when subject to blowing.
<b>Straw Alone (no seed)</b>	2 ½-3 tons (115 lbs-160 lbs)	Spread by hand or machine; anchor when subject to blowing.
<b>Wood Chips</b>	5-6 tons (225 lbs-270 lbs)	Treat with 12 lbs. nitrogen/ton.
<b>Bark</b>	35 cubic yards (0.8 cubic yard)	Can apply with mulch blower.
<b>Pine Straw</b>	1-2 tons (45 lbs-90 lbs)	Spread by hand or machine; will not blow like straw.
<b>Peanut Hulls</b>	10-20 tons (450 lbs-900 lbs)	Will wash off slopes. Treat with 12 lbs. nitrogen/ton.

Liquid mulch binders can also be used to tack mulch subject to being blown away by wind. Applications of liquid mulch binders and tackifiers should be heaviest at the edges of areas and at crests of ridges and banks, to resist wind. Binders should be applied uniformly to the rest of the area. Binders may be applied after mulch is spread or may be sprayed into the mulch as it is being blown onto the soil. Applying straw and binder together is the most effective method. Liquid binders include asphalt and an array of commercially available synthetic binders.

Emulsified asphalt is the most commonly used mulch binder. Any type thin enough to be blown from spray equipment is satisfactory. Asphalt is classified according to the time it takes to cure. Rapid setting (RS or CRS designation) is formulated for curing in less than 24 hours, even during periods of high humidity; it is best used in spring and fall. Medium setting (MS or CMS) is formulated for curing within 24 to 48 hours, and slow setting (SS or CSS) is formulated for use during hot, dry weather, requiring 48 hours or more curing time.

Asphalt must not be used if significant precipitation is predicted within the optimum curing time for the specified emulsion.

Apply asphalt at 10 gallons per 1000 sq. ft. (500 gallons per acre). Heavier applications will cause straw to bridge over rills.

Straw mulch may also be anchored with lightweight plastic, cotton, jute, wire or paper netting which is stapled over the mulch. The manufacturer's recommendations on stapling netting should be followed.

### ***Maintenance***

Inspect all mulches periodically, and after rainstorms to check for rill erosion, dislocation, or failure. Where erosion is observed, apply additional mulch or if washout has occurred, repair the slope grade, reseed, and reinstall mulch. Continue inspections until vegetation is firmly established.

## Temporary Seeding (TS)



### Practice Description

Temporary seeding is the establishment of fast-growing annual vegetation from seed on disturbed areas. Temporary vegetation provides economical erosion control for up to a year and reduces the amount of sediment moving off the site.

This practice applies where short-lived vegetation can be established before final grading or in a season not suitable for planting the desired permanent species. It helps prevent costly maintenance operations on other practices such as sediment basins and sediment barriers. In addition, it reduces problems of mud and dust production from bare soil surfaces during construction. Temporary or permanent seeding is necessary to protect earthen structures such as dikes, diversions, grass-lined channels and the banks and dams of sediment basins.

### Planning Considerations

Temporary vegetative cover can provide significant short-term erosion and sediment reduction before establishing perennial vegetation.

Temporary vegetation will reduce the amount of maintenance associated with sediment basins.

Temporary vegetation is used to provide cover for no more than 1 year. Permanent vegetation should be established at the proper planting time for permanent vegetative cover.

Certain plants species used for temporary vegetation will produce large quantities of residue which can provide mulch for establishment of the permanent vegetation.

Proper seedbed preparation and selection of appropriate species are important with this practice. Failure to follow establishment guidelines and recommendations carefully may result in an inadequate or short-lived stand of vegetation that will not control erosion.

The selection of plants for temporary vegetation must be site specific. Factors that should be considered are type of soils, climate, establishment rate, and management requirements of the vegetation. Other factors that may be important are wear, mowing tolerance, and salt tolerance of vegetation.

Seeding properly carried out within the optimum dates has a higher probability of success. It is also possible to have satisfactory establishment when seeding outside these dates. However, as plantings are deviated from the optimum dates, the probability of failure increases rapidly. Seeding dates should be taken into account in scheduling land-disturbing activities.

Site quality impacts both short-term and long-term plant success. Sites that have compacted soils should be modified whenever practical to improve the potential for plant growth.

The operation of equipment is restricted on slopes steeper than 3:1, severely limiting the quality of the seedbed that can be prepared. Provisions for establishment of vegetation on steep slopes can be made during final grading. In construction of fill slopes, for example, the last 4-6" might not be compacted. A loose, rough seedbed with irregularities that hold seeds and fertilizer is essential for hydroseeding. Cut slopes should be roughened (see practice Land Grading).

Good mulching practices are critical to protect against erosion on steep slopes. When using straw, anchor with netting or asphalt. On slopes steeper than 2:1, jute, excelsior, or synthetic matting may be required to protect the slope.

The use of irrigation (temporary or permanent) will greatly improve the success of vegetation establishment.

## **Design Criteria**

### ***Plant Selection***

Select plants that can be expected to meet planting objectives. To simplify plant selection, use Table TS-1, Commonly Used Plants for Temporary Cover and Figure TS-1, Geographical Areas for Species Adaptation and Seeding Dates. Seeding mixtures commonly specified by the Alabama Department of Transportation are an appropriate alternative for plantings on rights-of-ways. Additional information related to plantings in Alabama is found in Chapter 2 in the section Non-woody Vegetation for Erosion and Sediment Control.

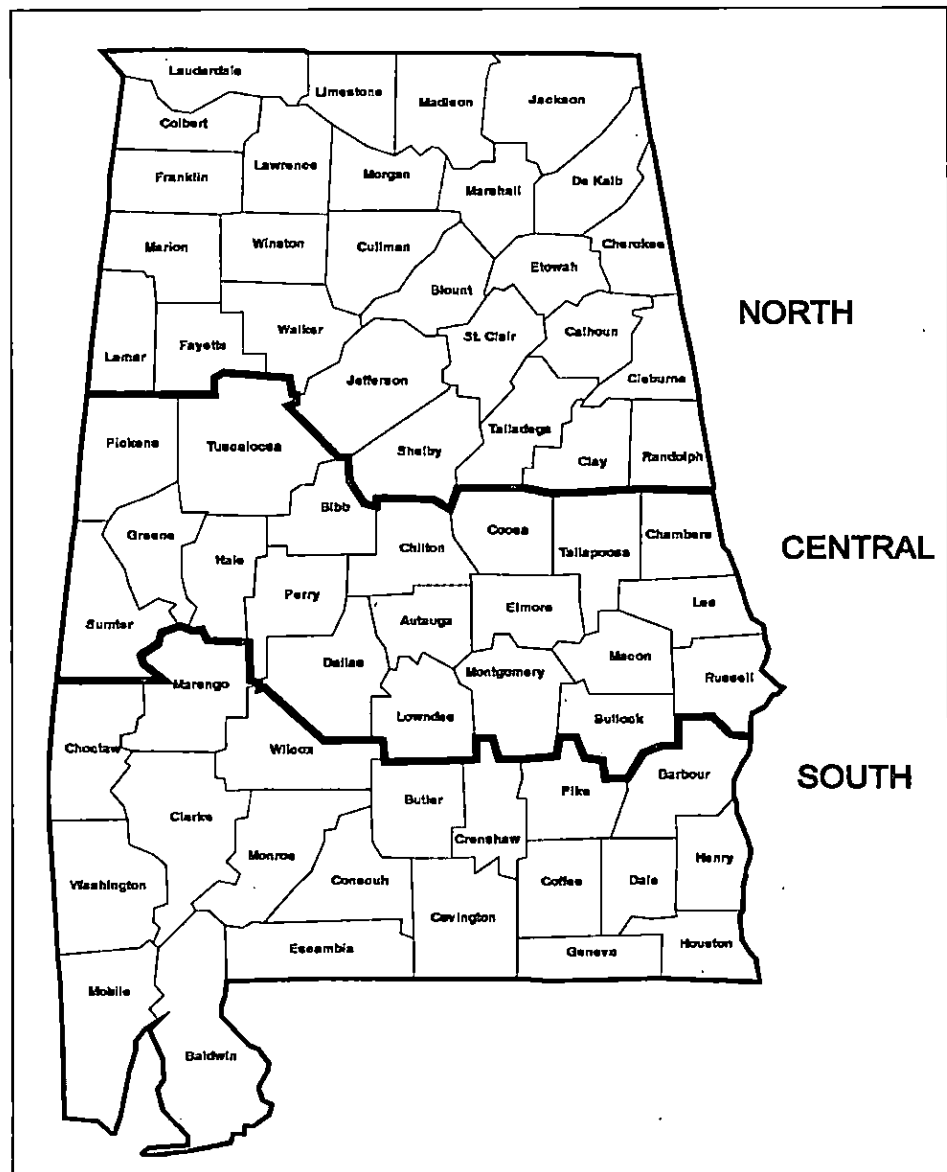


Figure TS-1 Geographical Areas for Species Adaptation and Seeding Dates

Table TS-1 Commonly Used Plants for Temporary Cover

Species	Seeding Rate/AC PLS	Seeding Dates		
		North	Central	South
Millet, Browntop or German	40 lbs	May1-Aug 1	Apr1- Aug 15	Apr 1-Aug 15
Rye	3 bu	Sep 1-Nov 15	Sep 15-Nov 15	Sep 15-Nov 15
Ryegrass	30 lbs	Aug 1-Sep 15	Sep 1-Oct 15	Sep 1-Oct 15
Sorghum-Sudan Hybrids	40 lbs	May 1-Aug 1	Apr 15-Aug 1	Apr 1-Aug 15
Sudangrass	40 lbs	May 1-Aug 1	Apr 15-Aug	Apr 1-Aug 15
Wheat	3 bu	Sep 1-Nov 1	Sep 15-Nov 15	Sep 15-Nov 15
Common Bermudagrass	10 lbs	Apr 1-July 1	Mar 15-July 15	Mar 1-July 15
Crimson Clover	10lbs	Sept 1-Nov 1	Sept 1-Nov 1	Sept 1-Nov 1

### Site Preparation and Soil Amendments

Complete grading and shaping before applying soil amendments if needed to provide a surface on which equipment can safely and efficiently be used to apply soil amendments and accomplish seedbed preparation and seeding.

#### Lime

Apply lime according to soil test recommendations. If a soil test is not available, use 1 ton of agricultural limestone or equivalent per acre on coarse textured soils and 2 tons per acre on fine textured soils. Do not apply lime to alkaline soils or to areas which have been limed during the preceding 2 years. Other liming materials that may be selected should be provided in amounts that provide equal value to the criteria listed for agricultural lime or be used in combination with agricultural limestone or Selma chalk to provide equivalent values to agricultural limestone.

#### Fertilizer

Apply fertilizer according to soil test results. If a soil test is not available, apply 8-24-24 fertilizer.

When vegetation has emerged to a stand and is growing, 30 to 40 lbs/acre (approximately 0.8 lbs/1000 ft<sup>2</sup>) of additional nitrogen fertilizer should be applied.

*Note: Fertilizer can be blended to meet exact fertilizer recommendations. Take soil test recommendations to local fertilizer dealer for bulk fertilizer blends. This may be more economical than bagged fertilizer.*

### Application of Soil Amendments

Incorporate lime and fertilizer into the top 6" of soil during seedbed preparation.

### ***Seedbed Preparation***

Good seedbed preparation is essential to successful plant establishment. A good seedbed is well pulverized, loose, and smooth. If soils become compacted during grading, loosen them to a depth of 6" to 8" using a ripper or chisel plow.

If rainfall has caused the surface to become sealed or crusted, loosen it just prior to seeding by disking, raking, harrowing, or other suitable methods. When hydroseeding methods are used, the surface should be left with a more irregular surface of clods.

### ***Planting Methods***

#### ***Seeding***

Evenly apply seed using a cyclone seeder (broadcast), drill seeder, cultipacker seeder, or hydroseeder. Broadcast seeding and hydroseeding are appropriate for steep slopes where equipment cannot operate safely. Small grains should be planted no more than 1" deep, and grasses and legumes no more than ½" deep. Seed that are broadcast must be covered by raking or chain dragging, and then lightly firmed with a roller or cultipacker.

#### ***Hydroseeding***

Surface roughening is particularly important when hydroseeding, as a roughened slope will provide some natural coverage for lime, fertilizer, and seed. The surface should not be compacted or smooth. Fine seedbed preparation is not necessary for hydroseeding operations; large clods, stones, and irregularities provide cavities in which seeds can lodge.

Mix seed, inoculant if required, and a seed carrier with water and apply as slurry uniformly over the area to be treated. The seed carrier should be a cellulose fiber, natural wood fiber or other approved fiber mulch material which is dyed an appropriate color to facilitate uniform application of seed. Use the correct legume inoculant at 4 times the recommended rate when adding inoculant to hydroseeder slurry. The mixture should be applied within one hour after mixing to reduce damage to seed.

Fertilizer should not be mixed with the seed-inoculant mixture because fertilizer salts may damage seed and reduce germination and seedling vigor. Fertilizer may be applied with a hydro seeder as a separate operation after seedlings are established.

### ***Mulching***

The use of an appropriate mulch provides instant cover and helps ensure establishment of vegetative cover under normal conditions and is essential to seeding success under harsh site conditions (see the Mulching practice for guidance). Harsh site conditions include the following: slopes steeper than 3:1 and adverse soils (soils that are shallow to rock, rocky, or high in clay or sand). Areas with concentrated flow should be treated differently and require a hydromulch formulated for channels or an appropriate erosion control blanket.

## Permanent Seeding (PS)



### Practice Description

Permanent seeding is the establishment of perennial vegetation on disturbed areas from seed. Permanent vegetation provides economical long-term erosion control and helps prevent sediment from leaving the site. This practice is used when vegetation is desired and appropriate to permanently stabilize the soil.

### Planning Considerations

The advantages of seeding over other means of establishing plants include the smaller initial cost, lower labor input, and greater flexibility of method.

Disadvantages of seeding include potential for erosion during the establishment stage, seasonal limitations on suitable seeding dates, and weather-related problems such as droughts.

The probability of successful plant establishment can be maximized through good planning. The selection of plants for permanent vegetation must be site specific. Factors that should be considered are type of soils, climate, establishment rate, and management requirements of the vegetation. Other factors that may be important are wear, mowing tolerance, and salt tolerance of vegetation.

Plant selection for permanent vegetation should be based on plant characteristics, site and soil conditions, time of year of planting, method of planting, and the intended use of the vegetated area. Climate factors can vary widely in Alabama. Important plant attributes are discussed in Vegetation Establishment for Erosion and Sediment Control in Chapter 2.

Plant selection may include companion plants to provide quick cover on difficult sites, late seedings, or where the desired permanent cover may be slow to establish. Annuals are usually used for companion plants and should be selected carefully to prevent using a species that provide so much competition that it prevents the establishment of the desired species.

Seeding properly carried out within the optimum dates has a higher probability of success. It is also possible to have satisfactory establishment when seeding outside these dates. However, as plantings are deviated from the optimum dates, the probability of failure increases rapidly. Seeding dates should be taken into account in scheduling land-disturbing activities.

Site quality impacts both short-term and long-term plant success. Sites that have compacted soils, soils that are shallow to rock or have textures that are too clayey or too sandy should be modified whenever practical to improve the potential for plant growth and long-term cover success.

The operation of equipment is restricted on slopes steeper than 3:1, severely limiting the quality of the seedbed that can be prepared. Provisions for establishment of vegetation on steep slopes can be made during final grading. In construction of fill slopes, for example, the last 4-6" might not be compacted. A loose, rough seedbed with irregularities that hold seeds and lime and fertilizer is essential for hydroseeding. Cut slopes should be roughened (see Land Grading practice).

Proper mulching is critical to protect against erosion on steep slopes. When using straw, anchor with netting or asphalt. On slopes steeper than 2:1, jute, excelsior, or synthetic matting may be required.

The use of irrigation (temporary or permanent) will greatly improve the success of vegetation establishment.

## Design Criteria

### *Plant Selection*

Select plants that can be expected to meet planting objectives. To simplify plant selection, use Figure PS-1 Geographical Areas for Species Adaptation and Seeding Dates and Table PS-1, Commonly Used Plants for Permanent Cover. Mixtures commonly specified by the Alabama Department of Transportation are an appropriate alternative for plantings on rights-of-ways. Additional information related to plantings in Alabama is found in Chapter 2 under the section Vegetation for Erosion and Sediment Control.

The plants used for temporary vegetation may be used for companion plants provided the seeding rate is reduced by one half. See the Temporary Seeding practice for additional information on establishing temporary vegetation.  
**Ryegrass or other highly competitive plants should not be used as a companion plant.**

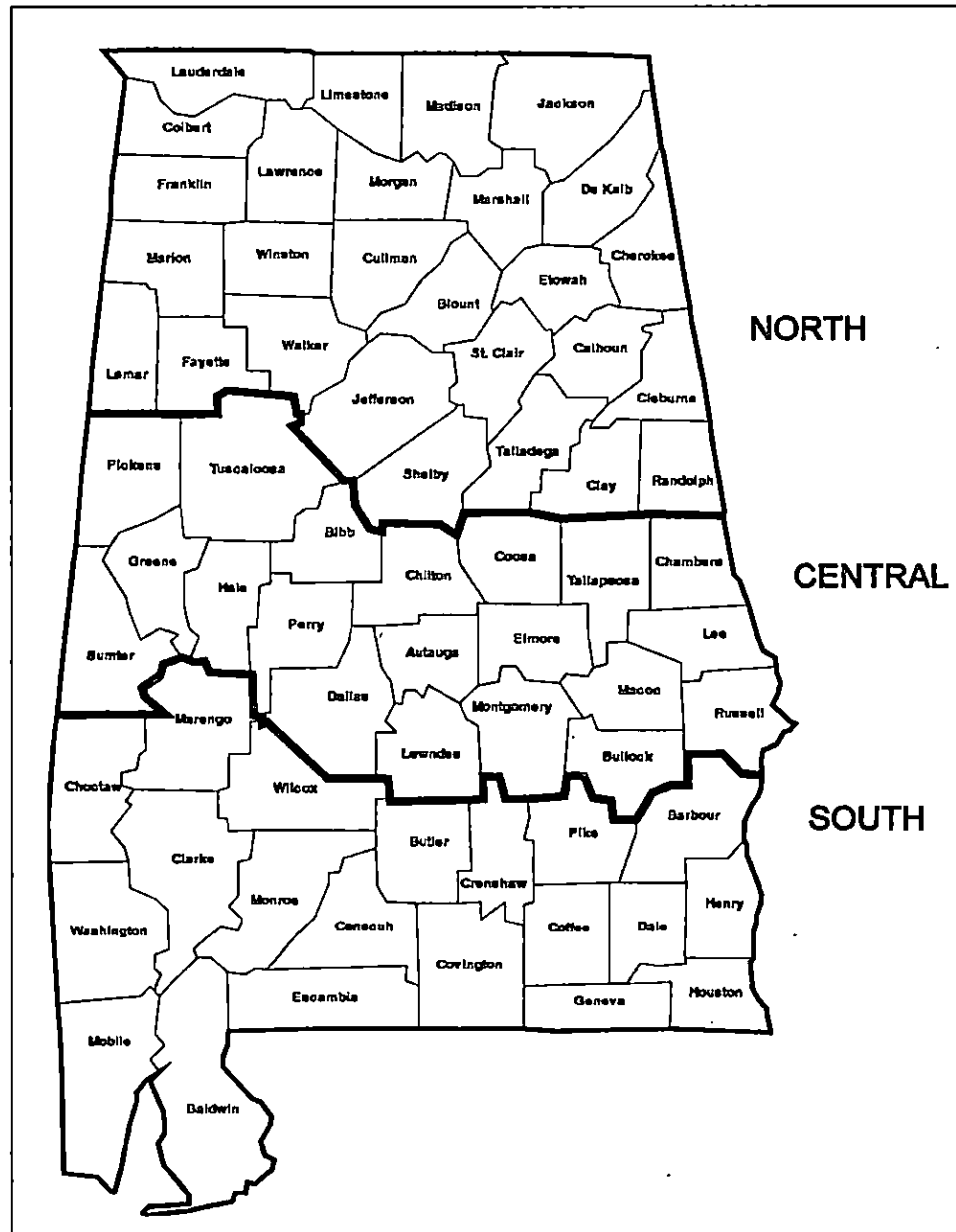


Figure PS-1 Geographical Areas for Species Adaptation and Seeding Dates

Table PS-1 Commonly Used Plants for Permanent Cover with Seeding Rates and Dates

Rates and Dates		North	Central	South
Species	Seeding Rates/Ac PLS		Seeding Dates	
Bahiagrass, Pensacola	40 lbs	--	Mar 1-July 1	Feb 1-Nov 1
Bermudagrass, Common	10 lbs	Apr 1-July 1	Mar 15-July 15	Mar 1-July 15
Bahiagrass, Pensacola Bermudagrass, Common	30 lbs 5 lbs	--	Mar 1-July 1	Mar 1-July 15
Bermudagrass, Hybrid (Lawn Types)	Solid Sod	Anytime	Anytime	Anytime
Bermudagrass, Hybrid (Lawn Types)	Sprigs 1/sq ft	Mar 1-Aug 1	Mar 1-Aug 1	Feb 15-Sep 1
Fescue, Tall	40-50 lbs	Sep 1-Nov 1	Sep 1-Nov 1	--
Sericea	40-60 lbs	Mar 15-July 15	Mar 1-July 15	Feb 15-July 15
Sericea & Common Bermudagrass	40-60 lbs 10 lbs	Mar 15-July 15	Mar 1-July 15	Feb 15-July 15
Switchgrass, Alamo	4 Lbs	Apr 1-Jun 15	Mar 15-Jun 15	Mar 15-Jun 15

PLS means pure live seed and is used to adjust seeding rates. For example, to plant 10 lbs PLS of a species with germination of 80% and 10% inert material, 10 lbs PLS = 10 lbs / % live seed = 10 / 0.70 = 14.3 lbs.

### Seedbed Requirements

Establishment of vegetation should not be attempted on sites that are unsuitable due to compaction or inappropriate soil texture, poor drainage, concentrated overland flow, or steepness of slope until measures have been completed to correct these problems. To maintain a good stand of vegetation, the soil must meet certain minimum requirements as a growth medium. A good growth medium should have these attributes:

- Sufficient pore space to permit root penetration.
- Enough fine-grained soil material (silt and clay) to maintain adequate moisture and nutrient supply.
- Sufficient depth of soil to provide an adequate root zone. The depth to rock or impermeable layers such as hardpans should be 12" or more, except on slopes steeper than 2:1 where topsoiling is not feasible.
- A favorable pH range for plant growth, usually 6.0-6.5.

- Sufficient nutrients (nitrogen, phosphorus and potassium) for initial plant establishment.
- Freedom from large roots, branches, stones, or large clods. Clods and stones may be left on slopes steeper than 3:1 if they are to be hydroseeded.

If any of the above attributes are not met: i.e., if the existing soil is too dense, coarse, shallow or acidic to foster vegetation – chiseling, topsoil, or special amendments should be used to improve soil conditions. The soil conditioners described below may be beneficial or topsoil may be applied (for guidance on topsoiling see Topsoiling practice). These amendments should only be necessary where soils have limitations that make them poor for plant growth or for turf establishment.

- Peat-appropriate types are sphagnum moss peat, reed-sedge peat, or peat humus, all from fresh-water sources. Peat should be shredded and conditioned in storage piles for at least 6 months after excavation.
- Sand-should be clean and free of toxic materials.
- Vermiculite-use horticultural grade.
- Rotted manure-use stable or cattle manure not containing undue amounts of straw or other bedding materials.
- Thoroughly rotted sawdust-should be free of stones and debris. Add 6 lbs of nitrogen to each cubic yard.

### **Soil Amendments**

#### **Liming Materials**

Lime (Agricultural limestone) should have a neutralizing value of not less than 90 percent calcium carbonate equivalent and 90 percent will pass through a 10 mesh sieve and 50 percent will pass through a 60 mesh sieve.

Selma chalk should have a neutralizing value of not less than 80 percent calcium carbonate equivalent and 90 percent will pass through a 10 mesh sieve.

Other liming materials that may be selected should be provided in amounts that provide equal value to the criteria listed for agricultural lime or be used in combination with agricultural limestone or Selma chalk to provide equivalent values to agricultural limestone.

#### **Plant Nutrients**

Commercial grade fertilizers that comply with current Alabama Fertilizer Laws should be used to supply nutrients required to establish vegetation.

#### **Rates of Soil Amendments**

Lime and fertilizer needs should be determined by soil tests. Soil testing is performed by the Auburn University Soil Testing Laboratory and provides recommendations based on field tests on Alabama soils. The local county

Cooperative Extension Service can provide information on obtaining soil tests. Commercial laboratories that make recommendations based on soil analysis may be used.

When soil tests are not available, use the following rates for application of soil amendments.

**Lime (Agricultural Limestone or Equivalent – see Liming Materials)**

Sandy soils: Use 1 ton/acre (exception on sandy soils – if the cover will be tall fescue and clover) use 2 tons/acre.

Clayey soils: 2 tons/acre.

(Do not apply lime to alkaline soils).

**Fertilizer**

Grasses alone: Use 400 lbs/acre of 8-24-24 or the equivalent. Apply 30 lbs of additional nitrogen when grass has emerged and begun growth (approximately 0.8lbs/1000 ft<sup>2</sup>).

Grass-legume mixtures: Use 800 to 1200 lbs/acre of 5-10-10 or the equivalent.

Legumes Alone: Use 800 to 1200 lbs/acre of 0-10-10 or the equivalent.

*Note: Fertilizer can be blended to meet exact fertilizer recommendations. Take soil test recommendations to local fertilizer dealer for bulk fertilizer blends. This may be more economical than bagged fertilizer.*

### **Application of Soil Amendments**

Apply lime and fertilizer evenly and incorporate into the top 6" of soil by disking, chiseling or other suitable means during seedbed preparation. Operate machinery on the contour.

### **Seedbed Preparation**

If needed, grade and shape to provide a surface on which equipment can safely and efficiently be used for seedbed preparation and seeding.

Install necessary sediment control practices before seedbed preparation and complete grading according to the approved plan.

Prepare a friable seedbed with tillage to a depth of at least 6". Break up large clods, alleviate compaction, and smooth and firm the soil into a uniform surface. Fill in or level depressions that can collect water.

## ***Planting Methods***

### **Seeding**

Use certified seed for permanent seeding whenever possible. Certified seed is inspected by the Alabama Crop Improvement Association to meet high quality standards and will be tagged with a "Certified Seed" tag. (Note: all seed sold in Alabama is required by law to be tagged to identify seed purity, germination, and presence of weed seeds. Seed must meet state standards for content of noxious weeds.)

Seeding dates are determined using Figure PS-1 and Table PS-1.

Inoculate legume seed with the Rhizobium bacteria appropriate to the species of legume. Details of legume inoculation are located in Chapter 2 in the part on Vegetation for Erosion and Sediment Control under Inoculation of Legumes.

Plant seed uniformly with a cyclone seeder, a drill seeder, a cultipacker seeder, or by hand on a fresh, firm, friable seedbed. If the seedbed has been sealed by rainfall, it should be disked so the seed will be sown into a freshly prepared seedbed.

When using broadcast-seeding methods, subdivide the area into workable sections and determine the amount of seed needed for each section. Apply one-half the seed while moving back and forth across the area, making a uniform pattern; then apply the second half in the same way, but moving at right angles to the first pass.

Cover broadcast seed by raking or chain dragging; then firm the surface with a roller or cultipacker to provide good seed contact. Small grains should be planted no more than 1" deep and grasses and legume seed no more than ½" deep.

### **Hydroseeding**

Surface roughening is particularly important when hydroseeding, as a roughened slope will provide some natural coverage for lime, fertilizer, and seed. The surface should not be compacted or smooth. Fine seedbed preparation is not necessary for hydroseeding operations; large clods, stones, and irregularities provide cavities in which seeds can lodge.

Mix seed, inoculant if required, and a seed carrier with water and apply as a slurry uniformly over the area to be treated. The seed carrier should be a cellulose fiber, natural wood fiber or other approved fiber mulch material which is dyed an appropriate color to facilitate uniform application of seed. Use the correct legume inoculant at 4 times the recommended rate when adding inoculant to a hydroseeder slurry. The mixture should be applied within one hour after mixing to reduce damage to seed.

Fertilizer should not be mixed with the seed-inoculant mixture because fertilizer salts may damage seed and reduce germination and seedling vigor.

Fertilizer may be applied with a hydroseeder as a separate operation after seedlings are established.

Lime is not normally applied with a hydraulic seeder because it is abrasive but if necessary it can be added to the seed slurry and applied at seeding or it may be applied with the fertilizer mixture. Also lime can be blown onto steeper slopes in dry form.

### **Sprigging**

Hybrid bermudagrass cannot be grown from seed and must be planted vegetatively. Vegetative methods of establishing common and hybrid bermudagrass, centipedegrass and zoysia include sodding, plugging and sprigging (see Sodding practice).

When sprigs are planted with a sprigging machine, furrows should be 4-6" deep and 2 feet apart. Place sprigs no farther than 2 feet apart in the row and so that at least one rooting node is in the furrow.

When broadcasting is used for sprig planting, broadcast sprigs at the specified rate (Table PS-1). Press into the top ½" to 2" of soil with a cultipacker or with a disk set nearly straight so that the sprigs are not brought back to the surface. A mulch tacking machine may be used to press sprigs into the soil.

### **Mulching**

The use of mulch provides instant cover and helps ensure establishment of vegetation under normal conditions and is essential to seeding success under harsh site conditions (see Mulching practice). Harsh site conditions include: slopes steeper than 3:1 and adverse soils (shallow, rocky, or high in clay or sand). Areas with concentrated flow should be treated differently and require sod, a hydromulch formulated for channels or an appropriate erosion control blanket.

### **Irrigation**

Moisture is essential for seed germination and vegetation establishment. Supplemental irrigation can be very helpful in assuring adequate stands in dry seasons or to speed development of full cover. It is a requirement for establishment of vegetation from sod and sprigs and should be used elsewhere when feasible. However, irrigation is rarely critical for low-maintenance vegetation planted at the appropriate time of the year.

Water application rates must be carefully controlled to prevent runoff. Inadequate or excessive amounts of water can be more harmful than no supplemental water.

### **Maintenance**

Generally, a stand of vegetation cannot be determined to be fully established until soil cover has been maintained for 1 full year from planting. Inspect vegetated areas for failure and make necessary repairs and vegetate as soon as possible.

If a stand has inadequate cover, reevaluate choice of plant materials and quantities of lime and fertilizer. Re-establish the stand after seedbed

preparation or over-seed the stand. Consider a temporary seeding if the time of year is not appropriate for establishment of permanent vegetation (see Temporary Seeding practice).

If vegetation fails to grow, soil must be tested to determine if acidity or nutrient imbalance is responsible.

To attain complete establishment, fertilization is usually required in the second growing season. Turf grasses require annual maintenance fertilization. Use soil tests if possible or follow the guidelines given for the specific seeding mixtures.

Protect vegetation during its establishing period from traffic that will be harmful. If appropriate, use either temporary fences or barriers to protect areas that may be damaged by excessive traffic.

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