Edward F. Poolos
Director

Jeffery W. Kitchens
Deputy Director

Kay Ivey
Governor

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

August 11 , 2025

Pascal Lamontagne
Plant Manager
National Cement Company of Alabama, Inc.
2000 South Bridge Parkway, Suite 600
Birmingham, AL 35209

RE: Draft Permit
Blue Spring Fork Facility
NPDES Permit Number AL0031542
St. Clair County (115)

Dear Mr. Lamontagne:

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

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

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

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

Should you have any questions concerning this matter, please contact Skylar Wilson at (334) 274-4231 or eva.wilson@adem.alabama.gov.

Sincerely,

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

WDM/mab File: DPER/8925

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

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

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

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

ADEM
Alabama Department of Environmental Management

NATIONAL POLLUTANT DISCHARGE ELIMINATION SYSTEM INDIVIDUAL PERMIT

PERMITTEE:	National Cement Company of Alabama, Inc. 2000 South Bridge Parkway, Suite 600 Birmingham, AL 35209
FACILITY LOCATION:	Blue Spring Fork Facility Highway 144 Ragland, AL 35131 St Clair County
PERMIT NUMBER:	AL0031542

DSN & RECEIVING STREAM:

001-1 Trout Creek	002-1 Trout Creek
003-1 Blue Spring Fork	004-1 Trout Creek
005-1 Blue Spring Fork	006-1 Blue Spring Fork
007-1 Unnamed Tributary to Coosa River	008-1 Blue Spring Fork

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

ISSUANCE DATE:

EFFECTIVE DATE:

EXPIRATION DATE:

**** DRAFT ****

Alabama Department of Environmental Management

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

TABLE OF CONTENTS

PART I DISCHARGE LIMITATIONS, CONDITIONS, AND REQUIREMENTS

A. DISCHARGE LIMITATIONS AND MONITORING REQUIREMENTS

1. 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 **Outfall 001-1**, identified on Page 1 of this Permit and described more fully in the Permittee's application, if the outfall has been constructed and certified. Discharges shall be limited and monitored by the Permittee as specified below:

Parameter	Discharge Limitations			Monitoring Requirements	
	Daily Minimum	Monthly Average	Daily Maximum	Sample Type	Measurement Frequency[1]
pH 00400	6.0 s.u.	-------	8.5 s.u.	Grab	2/Month
Solids, Total Suspended 00530	-------	25.0 mg/L	45.0 mg/L	Grab	2/Month
Flow, In Conduit or Thru Treatment Plant[2] 50050	-------	Report MGD	Report MGD	Instantaneous	2/Month
Solids, Total Dissolved 70295	-------	Report mg/L	Report mg/L	Grab	2/Month
Chemical Oxygen Demand 80103	-------	Report mg/L	Report mg/L	Grab	2/Month

2. 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 **Outfalls 002-1 and 004-1**, 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[3]
pH 00400	6.0 s.u.	-------	8.5 s.u.	Grab	2/Month
Solids, Total Suspended 00530	-------	25.0 mg/L	45.0 mg/L	Grab	2/Month
Flow, In Conduit or Thru Treatment Plant[4] 50050	-------	Report MGD	Report MGD	Instantaneous	2/Month
Solids, Total Dissolved 70295	-------	Report mg/L	Report mg/L	Grab	2/Month
Mercury, Total Recoverable 71901	-------	0.045 µg/L	Report µg/L	Grab	1/Month
Chemical Oxygen Demand 80103	-------	Report mg/L	Report mg/L	Grab	2/Month

1 See Part I.C.2. for further measurement frequency requirements.
2 Flow must be determined at the time of sample collection by direct measurement, calculation, or other method acceptable to the Department.
3 See Part I.C.2. for further measurement frequency requirements.
4 Flow must be determiued at the time of sample collection by direct measurement, calculation, or other method acceptable to the Department.

3. During the period beginning on the effective date of this Permit and lasting through the expiration date of this Permit, the Permittee is authorized to discharge from **Outfalls 003-1 and 005-1 through 008-1**, identified on Page 1 of this Permit and described more fully in the Permittee's application, if the outfalls have been constructed and certified. Discharges shall be limited and monitored by the Permittee as specified below:

Parameter	Discharge Limitations			Monitoring Requirements	
	Daily Minimum	Monthly Average	Daily Maximum	Sample Type	Measurement Frequency[1]
pH 00400	6.0 s.u.	-------	8.5 s.u.	Grab	2/Month
Solids, Total Suspended 00530	-------	25.0 mg/L	45.0 mg/L	Grab	2/Month
Flow, In Conduit or Thru Treatment Plant[2] 50050	-------	Report MGD	Report MGD	Instantaneous	2/Month

B. REQUIREMENTS TO ACTIVATE A PROPOSED MINING OUTFALL

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

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

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

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

C. DISCHARGE MONITORING AND RECORD KEEPING REQUIREMENTS

1. Sampling Schedule and Frequency

a. The Permittee shall collect at least one grab sample of the discharge to surface waters from each constructed and certified point source identified on Page 1 of this Permit and described more fully in the Permittee's application twice per month at a rate of at least every other week if a discharge occurs at any time during the two week period, but need not collect more than two samples per calendar month. Each sample collected shall be analyzed for each parameter specified in Part I.A. of this Permit.

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

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

2. Measurement Frequency

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

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

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

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

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

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

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

3. Monitoring Schedule

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

a. MONITORING REQUIRED MORE FREQUENTLY THAN MONTHLY AND MONTHLY shall be conducted during the first full month following the effective date of coverage under this Permit and every month thereafter. More frequently than monthly and monthly monitoring may be done anytime during the month, unless restricted elsewhere in this Permit, but the results should be reported on the last Discharge Monitoring Report (DMR) due for the quarter (i.e., with the March, June, September, and December DMRs).

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

c. SEMIANNUAL MONITORING shall be conducted at least once during the period of January through June and at least once during the period of July through December. The Permittee shall conduct the semiannual monitoring during the first complete semiannual calendar period following the effective date of this Permit and is then required to monitor once during each semiannual period thereafter. Semiannual monitoring may be done anytime during the semiannual period, unless restricted elsewhere in this Permit, but it

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

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

4. Sampling Location

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

5. Representative Sampling

Sample collection and measurement actions taken as required herein shall be representative of the volume and nature of the monitored discharge and shall be in accordance with the provisions of this Permit.

6. Test Procedures

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

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

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

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

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

c. For parameters without an EPA established ML, interim ML, or matrix-specific ML, a report of less than the detection limit shall constitute compliance if the detection limit of all analytical methods is higher than the permit limit using the most sensitive EPA

approved method. For the purpose of calculating a monthly average, "0" shall be used for values reported less than the detection limit.

The Minimum Level utilized for procedures identified in Parts I.C.6.a. and b. shall be reported on the Permittee's DMR. When an EPA approved test procedure for analysis of a pollutant does not exist, the Director shall approve the procedure to be used.

7. Recording of Results

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

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

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

c. The dates and times the analyses were performed;

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

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

f. The results of all required analyses.

8. Routine Inspection by Permittee

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

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

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

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

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

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

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

9. Records Retention and Production

a. The Permittee shall retain records of all monitoring information, including all calibration and maintenance records and all original strip chart recordings for continuous monitoring instrumentation, copies of all reports required by this Permit, and records of all data used to complete the above reports or the application for this Permit, for a period of at least three (3) years from the date of the sample collection, measurement, report, or application. This period may be extended by request of the Director at any time. If litigation or other enforcement action, under the AWPCA, AEMA, and/or the FWPCA, is ongoing which involves any of the above records, the records shall be kept until the litigation is resolved. Upon the written request of the Director, the Permittee shall provide the Director with a copy of any record required to be retained by this paragraph. Copies of these records should not be submitted unless requested.

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

10. Monitoring Equipment and Instrumentation

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

D. DISCHARGE REPORTING REQUIREMENTS

1. Requirements for Reporting of Monitoring

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

b. The Department utilizes a web-based electronic reporting system for submittal of DMRs. **Except as allowed by Part I.D.1.c. or d., the Permittee shall submit all DMRs required by Part I.D.1.a. by utilizing the Department's current electronic reporting system.** The Department's current reporting system, Alabama Environmental Permitting and Compliance System (AEPACS), can be found online at https://aepacs.adem.alabama.gov/nviro/ncore/external/home.

c. If the electronic reporting system is down (i.e. electronic submittal of DMR data is unable to be completed due to technical problems originating with the Department's system; this could include entry/submittal issues with an entire set of DMRs or individual parameters), permittees are not relieved of their obligation to submit DMR data to the Department by the required submittal date. However, if the electronic reporting system is down on the 28th day of the month or is down for an extended period of time as determined by the Department when a DMR is required to be submitted, the facility may submit the data in an alternate manner and format acceptable to the Department. Preapproved alternate acceptable methods include faxing, e-mailing, mailing, or hand-delivery of data such that

they are received by the required reporting date. Within five calendar days of the electronic reporting system resuming operation, the Permittee shall enter the data into the reporting system unless an alternate timeframe is approved by the Department. An attachment should be included with the electronic DMR submittal verifying the original submittal date (date of the fax, copy of dated e-mail, or hand-delivery stamped date).

d. The permittee may submit a request to the Department for a temporary electronic reporting waiver for DMR submittals. The waiver request should include the permit number; permittee name; facility/site name; facility address; name, address, and contact information for the responsible official or duly authorized representative; a detailed statement regarding the basis for requesting such a waiver; and the duration for which the waiver is requested. Approved electronic reporting waivers are not transferrable. Permittees with an approved electronic reporting waiver for DMRs may submit hard copy DMRs for the period that the approved electronic reporting waiver request is effective. The Permittee shall submit the Department-approved DMR forms to the address listed in Part I.D.1.i.

e. If the Permittee, using approved analytical methods as specified in Part I.C.6., monitors any discharge from a point source identified on Page 1 of this Permit and describe more fully in the Permittee's application more frequently than required by this Permit; the results of such monitoring shall be included in the calculation and reporting of values on the DMR Form, and the increased frequency shall be indicated on the DMR Form.

f. In the event no discharge from a point source identified on Page 1 of this Permit and described more fully in the Permittee's application occurs during a monitoring period, the Permittee shall report "No Discharge" for such period on the appropriate DMR Form.

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

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

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

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

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

Certified and Registered Mail shall be addressed to:

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

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

k. If this Permit is a reissuance, then the Permittee shall continue to submit DMRs in accordance with the requirements of their previous permit until such time as DMRs are due as discussed in Part I.D.1.

2. Noncompliance Notification

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

(1) Potentially threatens human health or welfare;

(2) Potentially threatens fish or aquatic life;

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

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

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

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

The Permittee shall orally or electronically report any of the above occurrences, describing the circumstances and potential effects of such discharge to the Director within 24-hours after the Permittee becomes aware of the occurrence of such discharge. In addition to the oral or electronic report, the Permittee shall submit to the Director a written report as provided in Part I.D.2.c., no later than five (5) days after becoming aware of the occurrence of such discharge.

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

c. Any written report required to be submitted to the Director in accordance with Parts I.D.2.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.

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

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

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

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

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

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

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

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

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

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

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

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

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

E. OTHER REPORTING AND NOTIFICATION REQUIREMENTS

1. Anticipated Noncompliance

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

2. Termination of Discharge

The Permittee shall notify the Director, in writing, when all discharges from any point source(s) identified on Page 1 of this Permit and described more fully in the Permittee's application have permanently ceased.

3. Updating Information

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

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

4. Duty to Provide Information

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

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

F. SCHEDULE OF COMPLIANCE

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

Compliance must be achieved by the effective date of this Permit

PART II OTHER REQUIREMENTS, RESPONSIBILITIES, AND DUTIES

A. OPERATIONAL AND MANAGEMENT REQUIREMENTS

1. Facilities Operation and Management

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

2. Pollution Abatement and/or Prevention Plan

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

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

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

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

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

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

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

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

3. Best Management Practices (BMPs)

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

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

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

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

e. Spill Prevention, Control, and Management

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

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

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

discharge would exceed any applicable discharge limitation specified in Part I.A. of this Permit.

4. Biocide Additives

a. The Permittee shall notify the Director in writing not later than sixty (60) days prior to instituting the use of any biocide corrosion inhibitor or chemical additive in any cooling or boiler system(s) regulated by this Permit. Notification is not required for additives that should not reasonably be expected to cause the cooling water or boiler water to exhibit toxicity as determined by analysis of manufacturer's data or testing by the Permittee. Such notification shall include:

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

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

(c) Quantities to be used;

(d) Frequencies of use;

(e) Proposed discharge concentrations; and

(f) EPA registration number, if applicable.

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

5. Facility Identification

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

6. Removed Substances

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

7. **Loss or Failure of Treatment Facilities**

Upon the loss or failure of any treatment facility, including but not limited to the loss or failure of the primary source of power of the treatment facility, the Permittee shall, where necessary to maintain compliance with the discharge limitations specified in Part I.A. of this Permit or any other terms or conditions of this Permit, cease, reduce, or otherwise control production and/or discharges until treatment is restored.

8. **Duty to Mitigate**

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

B. BYPASS AND UPSET

1. **Bypass**

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

b. A bypass is not prohibited if:

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

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

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

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

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

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

(2) There are no feasible alternatives to the bypass, such as the use of auxiliary treatment facilities, retention of untreated wastes, or maintenance during normal periods of equipment downtime. This condition is not satisfied if the Permittee could have installed adequate backup equipment to prevent a bypass which occurred during normal periods of equipment downtime or preventive maintenance; and

(3) The Permittee submits a written request for authorization to bypass to the Director at least ten (10) days, if possible, prior to the anticipated bypass or within 24 hours of an unanticipated bypass, the Permittee is granted such authorization, and Permittee complies with any conditions imposed by the Director to minimize any adverse impact to waters resulting from the bypass.

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

2. Upset

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

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

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

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

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

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

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

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

(2) No later than five (5) days after becoming aware of the occurrence of the upset, furnish the Director with evidence, including properly signed, contemporaneous operating logs, design drawings, construction certification, maintenance records, weir flow measurements, dated photographs, rain gauge measurements, or other relevant evidence, demonstrating that:

(i) An upset occurred;

(ii) The Permittee can identify the specific cause(s) of the upset;

(iii) The Permittee's treatment facility was being properly operated at the time of the upset; and

(iv) The Permittee promptly took all reasonable steps to minimize any adverse impact to waters resulting from the upset.

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

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

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

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

C. PERMIT CONDITIONS AND RESTRICTIONS

1. Prohibition against Discharge from Facilities Not Certified

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

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

2. Permit Modification, Suspension, Termination, and Revocation

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

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

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

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

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

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

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

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

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

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

3. Automatic Expiration of Permits for New or Increased Discharges

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

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

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

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

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

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

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

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

4. Transfer of Permit

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

5. Groundwater

Unless authorized on page 1 of this Permit, this Permit does not authorize any discharge to groundwater. Should a threat of groundwater contamination occur, the Director may require groundwater monitoring to properly assess the degree of the problem, and the Director may require that the Permittee undertake measures to abate any such discharge and/or contamination.

6. Property and Other Rights

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

D. RESPONSIBILITIES

1. Duty to Comply

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

b. The Permittee shall comply with effluent standards or prohibitions established under Section 307(a) of the FWPCA for toxic pollutants within the time provided in the regulations that establish these standards or prohibitions, even if this Permit has not yet been modified to incorporate the effluent standard, prohibition or requirement.

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

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

e. Nothing in this Permit shall be construed to preclude or negate the Permittee's responsibility or liability to apply for, obtain, or comply with other ADEM, federal, state, or local government permits, certifications, licenses, or other approvals.

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

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

2. Change in Discharge

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

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

3. Compliance with Toxic or Other Pollutant Effluent Standard or Prohibition

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

4. Compliance with Water Quality Standards and Other Provisions

a. On the basis of the Permittee's application, plans, or other available information, the Department has determined that compliance with the terms and conditions of this Permit will assure compliance with applicable water quality standards. However, this Permit does not relieve the Permittee from compliance with applicable State water quality standards established in ADEM Admin. Code ch. 335-6-10, and does not preclude the Department from taking action as appropriate to address the potential for contravention of applicable

State water quality standards which could result from discharges of pollutants from the permitted facility.

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

c. If the Department determines, on the basis of a notice provided pursuant to Part II.C.2. of this Permit or any investigation, inspection, or sampling, that a modification of this Permit is necessary to assure maintenance of water quality standards or compliance with other provisions of the AWPCA or FWPCA, the Department may require such modification and, in cases of emergency, the Director may prohibit the noticed act until the Permit has been modified.

5. Compliance with Statutes and Rules

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

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

6. Right of Entry and Inspection

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

a. Enter upon the Permittee's premises where a regulated facility or activity is located or conducted, or where records must be kept under the conditions of the Permit;

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

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

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

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

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

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

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

PART III ADDITIONAL REQUIREMENTS, CONDITIONS, AND LIMITATIONS

A. CIVIL AND CRIMINAL LIABILITY

1. Tampering

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

2. False Statements

Any person who knowingly makes any false statement, representation, or certification in any record or other document submitted or required to be maintained under this Permit, including monitoring reports or reports of compliance or noncompliance shall, upon conviction, be punished as provided by applicable State and Federal law.

3. Permit Enforcement

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

4. Relief From Liability

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

B. OIL AND HAZARDOUS SUBSTANCE LIABILITY

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

C. AVAILABILITY OF REPORTS

Except for data determined to be confidential under Code of Alabama 1975, §22-22-9(c), all reports prepared in accordance with the terms of this Permit shall be available for public inspection at the offices of the Department. Effluent data shall not be considered confidential. Knowingly making any false statement in any such report may result in the imposition of criminal penalties as provided for in Section 309 of the FWPCA, 33 U.S.C. §1319, and Code of Alabama 1975, §22-22-14.

D. DEFINITIONS

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

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

3. Average monthly discharge limitation - means the highest allowable average of "daily discharges" over a calendar month, calculated as the sum of all "daily discharges" measured during a calendar

month divided by the number of "daily discharges" measured during that month (zero discharge days shall not be included in the number of "daily discharges" measured and a less than detectable test result shall be treated as a concentration of zero if the most sensitive EPA approved method was used).

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

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

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

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

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

9. 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. NH3-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 ACTIVIES NOT AUTHORIZED

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

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

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

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

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

G. DISCHARGES TO IMPAIRED WATERS

1. This Permit does not authorize new sources or new discharges of pollutants of coucern 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:	National Cement Company of Alabama, Inc.
Facility Name:	Blue Spring Fork Facility
County:	St. Clair
Permit Number:	AL0031542
Prepared by:	Ange Boatwright
Date:	July 30, 2025
Receiving Waters:	Blue Spring Fork, Trout Creek, Unnamed Tributary to Coosa River (Logan Martin Lake)
Permit Coverage:	Crushed and Broken Limestone Mine, Cement Plant, Wet and Dry Preparation, Transportation and Storage, and Associated Areas
SIC Code(s):	1422, 1429

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

This proposed permit covers a dry and wet preparation crushed and broken limestone mine, cement plant, transportation and storage, and associated areas which discharge to surface waters of the state.

This proposed permit authorizes treated discharges into an unnamed tributary to Coosa River (Logan Martin Lake), Trout Creek, and Blue Spring Fork which currently have 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.

Technology Based Effluent Limits (TBELs) for crushed stone mining facilities can be found in 40 CFR 436.22(1) and (2) for facilities that recycle waste water for use in processing and mine dewatering, respectively. The TBELs were promulgated for existing dischargers using the Best Practicable Control Technology Available (BPT). New Source Performance Standards (NSPS) have not yet been developed by the EPA for the Crushed Stone Subcategory.

The TBELs for 40 CFR 436 Subpart B 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 are those proposed by the EPA for crushed stone mine drainage in the *Development Document for Effluent Limitations Guidelines and New Source Performance Standards for the Mineral Mining and Processing Point Source Category* (July 1979).

The instream WQS for pH, for streams classified F&W, are 6.0 - 8.5 s.u per ADEM Admin Code r. 335-6-10-.09. Regardless, the discharges shall not cause the in-stream pH to deviate more than 1.0 s.u. from the normal or natural pH, nor be less than 6.0 s.u. nor greater than 8.5 s.u.

Reporting requirements for Total Dissolved Solids (TDS) and Chemical Oxygen Demand (COD) have been continued from the previous version of the permit for Outfalls 001-1 and 002-1, as well as being added to Outfall 004-1 due to receiving runoff from the onsite cement plant operation to monitor for any pollutants that may become present in

levels of concern. The results will be used in the future to develop limitations if needed to protect water quality. No limitations are proposed at this time as the levels of pollutants have been controlled through BMP implementation.

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 for Outfalls 003-1 and 005-1 through 008-1. 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 at these Outfalls.

The applicant has, in accordance with 40 CFR Part 122.21 and their NPDES permit application, submitted representative data relative to metals, cyanide, and total phenols as part of the application for Outfalls 001-1, 002-1, and 004-1. The Department has acknowledged that the other Part A, B, and C pollutants listed in EPA Form 2C and 2D are not believed to be present in the waste stream due to the processes involved in the mining activity. Therefore, testing for the other Part A, B, and C pollutants listed in EPA Form 2C and 2D is not required.

The Department completed a reasonable potential analysis (RPA) of the discharges from based on the laboratory data provided in the application. The RPA indicates whether or not pollutants in treated effluent have the potential to contribute to excursions of Alabama's in-stream WQS. Based on the analytical data submitted by the Permittee, the RPA indicates that there was a reasonable potential for instream WQS to be exceeded for Total Recoverable Mercury at Outfalls 002-1 and 004-1. As a result, the Department is imposing Water Quality Based Effluent Limitations (WQBELs) for Total Recoverable Mercury at Outfalls 002-1 and 004-1. The WQBELs were calculated as follows:

$$c_{dmax} = \frac{(Q_d + Q_s) \times c_r - Q_s \times c_s}{Q_d}$$

where	cdmax	=	limitation (µg/L)
	Qd	=	expected average daily discharge flow rate (cfs)
	Qs	=	calculated or statistical stream flow (cfs)
	cr	=	water quality criterion (µg/L)
	cs	=	concentration of pollutant upstream of discharge (µg/L)

The WQBELs limitations for Total Recoverable Mercury imposed as a result of the RPA are expressed as both a monthly average and a daily maximum.

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 water quality standards. 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 professional engineer, 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 water quality standards, 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 water quality standards 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 water quality standards.

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

The applicant is not proposing discharges into a stream segment or other State water that is included on Alabama's current CWA §303(d) list. However, the applicant is proposing discharges to Trout Creek, Blue Spring Fork, and a unnamed tributary to Coosa River (Logan Martin Lake) which flow into sections of the Coosa River (Logan Martin Lake) which are on the current CWA §303(d) list for Priority Organics (PCBs). PCBs are not pollutants that are expected in significant concentrations from this type of operation. If the requirements of the proposed permit and pollution abatement plan are fully implemented, there is reasonable assurance that the facility will not discharge pollutants at levels that will cause or contribute to any further impairment of the Coosa River (Logan Martin Lake).

The applicant is proposing discharges of pollutants to the Coosa River (Logan Martin Lake) Watershed, a water of the State with approved Total Maximum Daily Loads (TMDLs). Logan Martin Lake has approved TMDLs for Organic Enrichment/Dissolved Oxygen and Nutrients. Discharges of Nutrients and oxygen demanding constituents are not expected to be discharged from facilities of this type. Also, the approved TMDLs only apply to direct dischargers. If the requirements of the proposed permit and pollution abatement plan are fully implemented, there is reasonable assurance that the facility will not discharge pollutants at levels that will cause or contribute to a violation of the approved TMDLs set forth by the Alabama Department of Environmental Management.

The applicant is not proposing new discharges of pollutants to an ADEM identified Tier I water.

The proposed permit does not authorize new or increased discharges of pollutants to a Tier II water; therefore, the Antidegradation Policy, ADEM Admin Code 335-6-10.04 does not apply.

Facility Name: National Cement Company of Alabama, Inc. - Blue Spring Fork Facility

NPDES No.: AL0031542 Outfalls 002 and 004[1,2,3]

				Freshwater F&W classification.		Freshwater Acute (µg/l) Q_s =1Q10				Freshwater Chronic (µg/l) Q_s = 7Q10						Human Health Consumption Fish only (µg/l) Carcinogen Q_s = Annual Average Non-Carcinogen Q_s = 7Q10			
ID	Pollutant	RP?	Carcinogen yes	Background Instream (Cs) Daily Max	Max Daily Discharge as reported by Applicant[4] (C_{dmax})	Water Quality Criteria (C_r)	Draft Permit Limit (C_{dmax})	20% of Draft Permit Limit	RP?	Background Instream (Cs) Monthly Ave	Avg Daily Discharge as reported by Applicant (C_{davg})	Water Quality Criteria (C_r)	Draft Permit Limit (C_{davg})	20% of Draft Permit Limit	RP?	Water Quality Criteria (C_r)	Draft Permit Limit (C_{davg})	20% of Draft Permit Limit	RP?
1	Antimony		YES	0	0	-	-	-	-	0	0	-	-	-	-	3.73E+02	1.41E+03	2.82E+02	No
2	Arsenic			0	0	340.000	1063.061	212.612	No	0	0	293.542	1107.796	221.559	No	3.03E-01	7.04E+01	1.41E+01	No
3	Beryllium			0	0	-	-	-	-	0	0	-	-	-	-	-	-	-	-
4	Cadmium			0	0	1.026	3.208	0.642	No	0	0	0.152	0.573	0.115	No	-	-	-	-
5	Chromium/ Chromium III			0	0	322.962	1009.788	201.958	No	0	0	42.011	158.544	31.709	No	-	-	-	-
6	Chromium/ Chromium VI			0	0	16.000	50.026	10.005	No	0	0	11.000	41.513	8.303	No	-	-	-	-
7	Copper			0	1.34	6.994	21.869	4.374	No	0	1.34	4.953	18.692	3.738	No	1.30E+03	4.91E+03	9.81E+02	No
8	Lead			0	0	30.136	94.224	18.845	No	0	0	1.174	4.432	0.886	No	-	-	-	-
9	Mercury	YES		0	0.014	2.400	7.504	1.501	No	0	0.014	0.012	0.045	0.009	Yes	4.24E-02	1.60E-01	3.20E-02	No
10	Nickel			0	0	260.491	814.465	162.893	No	0	0	28.933	109.188	21.838	No	9.93E+02	3.75E+03	7.49E+02	No
11	Selenium			0	0	20.000	62.533	12.507	No	0	0	5.000	18.869	3.774	No	2.43E+03	9.17E+03	1.83E+03	No
12	Silver			0	0	0.976	3.053	0.611	No	0	0	-	-	-	-	-	-	-	-
13	Thallium			0	0	-	-	-	-	0	0	-	-	-	-	2.74E-01	1.03E+00	2.06E-01	No
14	Zinc			0	0	65.132	203.644	40.729	No	0	0	65.664	247.811	49.562	No	1.49E+04	5.62E+04	1.12E+04	No
15	Cyanide			0	0	22.000	68.786	13.757	No	0	0	5.200	19.624	3.925	No	9.33E+03	3.52E+04	7.04E+03	No
16	Total Phenolic Compounds			0	0	-	-	-	-	0	0	-	-	-	-	-	-	-	-
17	Hardness (As CaCO3)			0	0	-	-	-	-	0	0	-	-	-	-	-	-	-	-

[1]Outfall 002 and 004 discharges to Trout Creek. The 7Q10 for the receiving stream is 25 cfs. This is the receiving stream flow value used in the calculations.

[2]Outfall 002 is reported to have the highest average discharge flow rate of 0.0699 MGD. This is the discharge flow rate used in the calculations.

[3]A hardness of 50 mg/L was used in the calculations based on expected stream hardness in this portion of the state.

[4]Discharge data for all parameters are the results of samples obtained from Outfall 002 at National Cement Company of Alabama, Inc. Blue Spring Fork Facility on April 23, 2019.

Facility Name: National Cement Company of Alabama, Inc. - Blue Spring Fork Facility

NPDES No.: AL0031542 Outfall 001[123]

				Freshwater F&W classification.		Freshwater Acute (µg/l) Q_s =1Q10				Freshwater Chronic (µg/l) Q_s = 7Q10						Human Health Consumption Fish only (µg/l) Carcinogen Q_s = Annual Average Non-Carcinogen Q_s = 7Q10			
ID	Pollutant	RP?	Carcinogen yes	Background Instream (Cs) Daily Max	Max Daily Discharge as reported by Applicant[4] (C_{dmax})	Water Quality Criteria (C_t)	Draft Permit Limit (C_{dmax})	20% of Draft Permit Limit	RP?	Background Instream (Cs) Monthly Ave	Avg Daily Discharge as reported by Applicant (C_{davg})	Water Quality Criteria (C_t)	Draft Permit Limit (C_{davg})	20% of Draft Permit Limit	RP?	Water Quality Criteria (C_t)	Draft Permit Limit (C_{davg})	20% of Draft Permit Limit	RP?
1	Antimony			0	0	-	-	-	-	0	0	-	-	-	-	3.73E+02	1.32E+03	2.64E+02	No
2	Arsenic		YES	0	0	340.000	999.817	199.963	No	0	0	293.542	1036.575	207.315	No	3.03E-01	6.42E+01	1.28E+01	No
3	Beryllium			0	0	-	-	-	-	0	0	-	-	-	-	-	-	-	-
4	Cadmium			0	0	1.026	3.017	0.603	No	0	0	0.152	0.536	0.107	No	-	-	-	-
5	Chromium/ Chromium III			0	0	322.962	949.713	189.943	No	0	0	42.011	148.351	29.670	No	-	-	-	-
6	Chromium/ Chromium VI			0	0	16.000	47.050	9.410	No	0	0	11.000	38.844	7.769	No	-	-	-	-
7	Copper			0	0	6.994	20.568	4.114	No	0	0	4.953	17.491	3.498	No	1.30E+03	4.59E+03	9.18E+02	No
8	Lead			0	0	30.136	88.619	17.724	No	0	0	1.174	4.147	0.829	No	-	-	-	-
9	Mercury			0	0	2.400	7.058	1.412	No	0	0	0.012	0.042	0.008	No	4.24E-02	1.50E-01	3.00E-02	No
10	Nickel			0	0	260.491	766.011	153.202	No	0	0	28.933	102.169	20.434	No	9.93E+02	3.51E+03	7.01E+02	No
11	Selenium			0	0	20.000	58.813	11.763	No	0	0	5.000	17.656	3.531	No	2.43E+03	8.58E+03	1.72E+03	No
12	Silver			0	0	0.976	2.871	0.574	No	0	0	-	-	-	-	-	-	-	-
13	Thallium			0	0	-	-	-	-	0	0	-	-	-	-	2.74E-01	9.66E-01	1.93E-01	No
14	Zinc			0	0	65.132	191.529	38.306	No	0	0	65.664	231.879	46.376	No	1.49E+04	5.26E+04	1.05E+04	No
15	Cyanide			0	0	22.000	64.694	12.939	No	0	0	5.200	18.363	3.673	No	9.33E+03	3.30E+04	6.59E+03	No
16	Total Phenolic Compounds			0	0	-	-	-	-	0	0	-	-	-	-	-	-	-	-
17	Hardness (As CaCO3)			0	0	-	-	-	-	0	0	-	-	-	-	-	-	-	-

[1]Outfall 001 discharges to Trout Creek. The 7Q10 for the receiving stream is 25 cfs. This is the receiving stream flow value used in the calculations.

[2]Outfall 001 is reported to have an average discharge flow rate of 0.076 MGD. This is the discharge flow rate used in the calculations.

[3]A hardness of 50 mg/L was used in the calculations based on expected stream hardness in this portion of the state.

[4]Discharge data for all parameters are the results of samples obtained from Outfall 001 at National Cement Company of Alabama, Inc. Blue Spring Fork Facility on April 23. 2019.

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

R# 17-41507 A. Boatwright $5280.00

INSTRUCTIONS: 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 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):	County(s) in which Facility is Located:
AL 0031542	St. Clair

Company/Permittee Name:			Facility Name (*e.g.*, Mine Name, Pit Name, *etc.*):		
National Cement Company of Alabama, Inc.			Blue Spring Fork Facility		
Mailing Address of Company/Permittee:			Physical Address of Facility (as near as possible to entrance):		
2000 South Bridge Parkway Suite 600			80 National Cement Drive		
City:	State:	Zip:	City:	State:	Zip:
Birmingham, AL		35209	Ragland, AL		35131
Permittee Phone Number:	Permittee Fax Number:		Latitude and Longitude of entrance:		
(205) 472-2191	(205) 472-3560		33.7362°, -86.1539°		

Responsible Official (as described on page 13 of this application):			Responsible Official Title:		
Pascal Lamontagne			Plant Manager		
Mailing Address of Responsible Official:			Physical Address of Responsible Official:		
2000 South Bridge Parkway Suite 600			80 National Cement Drive		
City:	State:	Zip:	City:	State:	Zip:
Birmingham, AL		35209	Ragland, AL		35131
Phone Number of Responsible Official:	Fax Number of Responsible Official:		Email Address of Responsible Official:		
(205) 472-2191	(205) 472-3560		plamontagne@natcem.com		

RECEIVED APR - 4 2017 STORMWATER MANAGEMENT WATER DIVISION

Facility Contact:			Facility Contact Title:		
Bob Gunn			Environmental Manager		
Physical Address of Facility Contact:			Phone Number of Facility Contact:	Fax Number of Facility Contact:	
80 National Cement Drive			(205) 472-2191	(205) 472-3560	
City:	State:	Zip:	Email Address of Facility Contact:		
Ragland, AL		35131	bgunn@natcem.com		

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)
Pascal Lamontagne	Plant Manager	3440 Oakdale Drive; Birmingham, Alabama 35223
Spencer Weitman	President / Agent	561 Oakline Drive; Hoover, AL 35226

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:
None		

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: National Cement, Inc.

D. Land Owner(s): National Cement Company of Alabama, Inc.

E. Mining Sub-contractor(s)/Operator(s), if known: Not Applicable (No Mining Sub-Contractor)

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?	☐	☑
(2) An Alabama license to mine suspended or revoked?	☐	☑
(3) An Alabama or federal mining permit suspended or terminated?	☐	☑
(4) A reclamation bond, or similar security deposited in lieu of a bond, or portion thereof, forfeited?	☐	☑
(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?	☐	☑

(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:

Blue Springs (AL0031542) - Warning 05/20/15 - Discharge Noncompliance - Algae Control - Resolved 06/15/15

Cherokee (AL0075264) - Warning 05/20/15 - Discharge Noncompliance - Unusual Event - Resolved 06/15/15

Beaver Creek (AL0031534) - Warning 08/30/16 - Discharge Noncompliance - Installed BMPs - Resolved 01/05/17

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:

ADEM Title V Air Operating Permit 410-0002

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:

AL0031534, AL0075264, AL0076171, AL0076601, and current ADIR permits

VI. PROPOSED SCHEDULE

Anticipated Activity Commencement Date: 1979 Anticipated Activity Completion Date: 2101

VII. ACTIVITY DESCRIPTION & INFORMATION

A. Proposed Total Area of the Permitted Site: 2413 acres Proposed Total Disturbed Area of the Permitted Site: 361 acres

B. Township(s), Range(s), Section(s): T 15S; R 5W; S 9, 10, 15, 16, 17, 18

C. Detailed Directions to Site: AL Hwy 144 approximately one mile south of Ragland

D. Is/ will this facility:

		Yes	No
(1)	an existing facility which currently results in discharges to State waters?	☑	☐
(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 ½ 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	5 ____Crushed rock (other)
____Bentonite	____Industrial Sand	____Marble	5 ____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	90 ____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):

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

B. Primary SIC Code: 1422 Description: Crushed and broken limestone (mining)

Secondary SIC Code(s): 1429 Description: Crushed and broken stone, NEC

C. Narrative Description of the Activity: Quarrying crushed and broken limestone

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	See Attachment A	_____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 XI.B., provide the date that the PAP Plan was submitted to ASMC: _____

(2) If "No" to Part XI.B., provide the anticipated date that the PAP Plan will be submitted to ASMC: _____

XII. ASMC REGULATED ENTITIES

A. Is this coal mining operation regulated by ASMC? ☐ Yes ☐ No

B. If "Yes", provide copies as part of this application of any pre-mining hydrologic sampling reports and Hydrologic Monitoring Reports which have been submitted to ASMC within the 36 months prior to submittal of this application.

Attachment A

Area	Volume (gallons)	Contents
1a	500	Kerosene
1b	1,000	Used oil
1c	55	Drums with various contents
2	55	Drums with various contents
3	1,000	Gasoline
4a	10,000	Diesel
4b	16,000	Process oil water
	16,000	Process oil water
4c	250	Hydraulic oil
	500	Hydraulic oil
	500	Motor oil
5	500	Hydraulic oil
	500	Hydraulic oil
6	1,000	Gear oil
	1,000	Gear oil
	1,000	Hydraulic oil
7	500	Diesel
8	10,000	Diesel
	500	Cooling oil
	500	Cooling oil
	500	Hydraulic oil
9	1,000	Diesel
10	10,000	Liquid fuels
NP1	10,000	Non-petroleum hydrophobe
	15,000	Non-petroleum grinding aid

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

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

XV. RECEIVING WATERS

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.

Action	Outfall E/P	Receiving Water	Latitude	Longitude	Distance to Rec. Water	Disturbed Acres	Drainage Acres	ADEM WUC	303(d) Segment (Y/N)	TMDL Segment* (Y/N)
Reissue	001E	Trout Creek	33° 44' 13"	86° 09' 13"	1500	20	46	F&W	N	N
Reissue	002E	Trout Creek	33° 44' 05"	86° 09' 03"	1500	20	42	F&W	N	N
Reissue	003E	Blue Spring Fork	33° 43' 53"	86° 07' 29"	0	115	115	F&W	N	N
Reissue	004E	Trout Creek	33° 43' 46"	86° 09' 02"	400	1	35	F&W	N	N
Reissue	005E	Blue Spring Fork	33° 44' 18"	86° 06' 48"	0	35	383	F&W	N	N
Reissue	006E	Blue Spring Fork	33° 43' 58"	86° 07' 29"	0	25	25	F&W	N	N
Reissue	007E	UT to Coosa River	33° 43' 37"	86° 07' 27"	0	30	35	F&W	N	N
Reissue	008E	Blue Spring Fork	33° 44' 27"	86° 06' 34"	0	115	115	F&W	N	N

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

XVI. DISCHARGE CHARACTERIZATION

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.

B. The applicant is required to supply the following information separately for every P or E outfall. If necessary, attach extra sheets. List expected average daily discharge flow rate in cfs and gpd, frequency of discharge in hours per day and days per month, average summer and winter temperature of discharge(s) in degrees centigrade (C), average pH in standard units, average daily discharge in pounds per day of BOD_5, Total Suspended Solids, Total Iron, Total Manganese, and Total Aluminum (if bauxite or bauxitic clay):

Outfall E/P	Information Source - # of Samples	Flow cfs	Flow gpd	Frequency hours/day	Frequency days/mth	Sum/Win Temp, °C	pH s.u.	BOD_5 lbs/day	TSS lbs/day	Tot Fe lbs/day	Tot Mn lbs/day	Tot Al lbs/day
001E	2016DMR/BPE	0.14	92000	24	30	21/19	8.07	1.53	4.16	0.08	0.02	NA
002E	2016DMR/BPE	0.13	84000	24	30	21/19	8.13	1.40	2.89	0.07	0.01	NA
003E	2016DMR/BPE	0.71	460000	24	30	21/19	7.60	7.67	11.99	0.38	0.08	NA
004E	2016DMR/BPE	0.11	70000	24	30	21/19	7.10	1.17	5.33	0.06	0.01	NA
005E	2016DMR/BPE	1.19	766000	24	30	21/19	7.52	12.78	20.44	0.64	0.13	NA
006E	2016DMR/BPE	0.08	50000	24	30	21/19	7.55	0.83	0.42	0.04	0.01	NA
007E	2016DMR/BPE	0.11	70000	24	30	21/19	7.60	1.17	2.39	0.06	0.01	NA
008E	2016DMR/BPE	0.71	460000	24	30	21/19	7.60	7.67	11.99	0.38	0.08	NA

C. The applicant is required to supply the following information separately for every P or E outfall. If necessary, attach extra sheets. Identify and list expected average daily discharge in pounds per day of any other pollutant(s) listed in EPA Form 2C, Item V – Intake And Effluent Characteristics, Parts A, B, & C that are not referenced in Part XV.B., that you know is present or have reason to believe could be present in the discharge(s) at levels of concern:

Outfall E/P	Reason Believed Present	Information Source - # of Samples										
			lbs/day	lbs/day	lbs/day	lbs/day	lbs/day	lbs/day	lbs/day	lbs/day	lbs/day	
None												

XVII. DISCHARGE STRUCTURE DESCRIPTION & POLLUTANT SOURCE

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.

Outfall	Discharge structure Description	Description of Origin Of pollutants	Surface Discharge	Groundwater Discharge	Wet Prep -Other Production Plant	Pumped or Controlled Discharge	Low Volume STP	Other
001E	Channel	8,11	Yes	No	No	Yes	No	NA
002E	Channel	8,11	Yes	No	No	Yes	No	NA
003E	Channel	7,8,10	Yes	No	Yes	Yes	No	NA
004E	Channel	8	Yes	No	No	Yes	No	NA
005E	Channel	8	Yes	No	No	Yes	No	NA
006E	Channel	7,8	Yes	No	No	Yes	No	NA
007E	Pipe / Spilway	8	Yes	No	No	Yes	No	NA
008E	Channel	7,8,10	Yes	No	Yes	Yes	No	NA

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:** Conveyor dust suppression, (11) Cement plant

XVIII. 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 Items 1 through 6 of this Part (XVII.B.), ADEM Form 311-Alternative Analysis, and either ADEM Form 312 or ADEM Form 313-Calculation of Total Annualized Project Costs (Public-Section or Private-Sector, whichever is applicable). ADEM Form 312 or ADEM Form 313, whichever, is applicable, should be completed for each technically feasible alternative evaluated on ADEM Form 311. ADEM Forms can be found on the Department's website at www.adem.alabama.gov/DeptForms. **Attach additional sheets/documentation and supporting information as needed.**

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

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

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

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

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

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

XIX. POLLUTION ABATEMENT PLAN (PAP) SUMMARY

Outfall(s): 001E

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

✓ 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):

No mining disturbance -- no sedimentation pond; these plant areas are subject to NPDES permitting but not the sedimentation pond requirements of mining so the surface runoff is directed through BMP measures.

The stream was relocated by a previous permit action. There are no stream crossings over the relocated stream within the disturbed mined area. Haul road crossings maintain rip rap inlet and outlet protection at the culverts utilized at each crossing.

XIX. POLLUTION ABATEMENT PLAN (PAP) SUMMARY

Outfall(s): 002E

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

✓ 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):

No mining disturbance -- no sedimentation pond; these plant areas are subject to NPDES permitting but not the sedimentation pond requirements of mining so the surface runoff is directed through BMP measures.

The stream was relocated by a previous permit action. There are no stream crossings over the relocated stream within the disturbed mined area. Haul road crossings maintain rip rap inlet and outlet protection at the culverts utilized at each crossing.

XIX. POLLUTION ABATEMENT PLAN (PAP) SUMMARY

Outfall(s): 003E

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

✓ 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):

Incised ponds located in the quarry where sufficient volume exists to contain all runoff from the 25-yr/24-hr storm event.

The stream was relocated by a previous permit action. There are no stream crossings over the relocated stream within the disturbed mined area. Haul road crossings maintain rip rap inlet and outlet protection at the culverts utilized at each crossing.

XIX. POLLUTION ABATEMENT PLAN (PAP) SUMMARY

Outfall(s): 004E

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

✓ 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):

Special incised pond for additional treatment; controlled inflow with pumped discharge (no spillpipe or open-channel spillway); the only disturbed area is the footprint of the pond.

The stream was relocated by a previous permit action. There are no stream crossings over the relocated stream within the disturbed mined area. Haul road crossings maintain rip rap inlet and outlet protection at the culverts utilized at each crossing.

XIX. POLLUTION ABATEMENT PLAN (PAP) SUMMARY

Outfall(s): 005E

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

✓ 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):

Incised ponds located in the quarry where sufficient volume exists to contain all runoff from the 25-yr/24-hr storm event.

The stream was relocated by a previous permit action. There are no stream crossings over the relocated stream within the disturbed mined area. Haul road crossings maintain rip rap inlet and outlet protection at the culverts utilized at each crossing.

XIX. POLLUTION ABATEMENT PLAN (PAP) SUMMARY

Outfall(s): 006E

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

✓ 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):

Special sedimentation structure -- rock check dam.

The stream was relocated by a previous permit action. There are no stream crossings over the relocated stream within the disturbed mined area. Haul road crossings maintain rip rap inlet and outlet protection at the culverts utilized at each crossing.

XIX. POLLUTION ABATEMENT PLAN (PAP) SUMMARY

Outfall(s): 007E

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

✓ 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):

The embankment is so low that guidance from the National Resources Conservation Service (formerly SCS) indicates that the pond is appropriately considered incised. Generally, the embankment is constructed per ADEM guidelines but there is no need for a cutoff trench or anti-seep collars when the hydraulic gradient through the embankment is essentially flat.

The spillpipe allows for subsurface withdrawal and is sized to safely discharge the peak discharge from a 25-yr/24-hr event so there is no open channel spillway.

The stream was relocated by a previous permit action. There are no stream crossings over the relocated stream within the disturbed mined area. Haul road crossings maintain rip rap inlet and outlet protection at the culverts utilized at each crossing.

XIX. POLLUTION ABATEMENT PLAN (PAP) SUMMARY

Outfall(s): 008E

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

✓ 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):

Incised ponds located in the quarry where sufficient volume exists to contain all runoff from the 25-yr/24-hr storm event.

The stream was relocated by a previous permit action. There are no stream crossings over the relocated stream within the disturbed mined area. Haul road crossings maintain rip rap inlet and outlet protection at the culverts utilized at each crossing.

XX. POLLUTION ABATEMENT PLAN (PAP) REVIEW CHECKLIST

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

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

XXI. 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 and 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

XXII. 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: CFM Group; 2135 University Blvd, Ste A; Tuscaloosa

PE Registration #: 16938

Name and Title (type or print): R A (Rick) Deerman, PE

Phone Number: (205) 752-4037

Signature: R A Deerman

Date Signed: March 31 2017

XXIII. 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): Pascal Lamontagne

Official Title: Plant Manager

Signature:

Date Signed: 4/3/17

*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.

mcgehee engineering corp

Date Printed: 6/11/2019

Client: National Cement Company of Alabama
2000 Southbridge Parkway #600
Birmingham, AL 35209

REPORT OF FINDINGS

Location: , NCCA-Special Ragland -- 002 **Lab ID:** 19042611-02

Sample Date: 4/23/2019 @ 10:35:00 AM **Comments:**

Analyte	Result	Minimum Level / Units	Method	Analysis Date	Analyst
Antimony, Dissolved	BML	1.92 µg/L	EPA200.8	4/30/2019 11:43:29 AM	KyleThomas
Antimony, Total	BML	1.92 µg/L	EPA200.8	4/30/2019 11:26:20 AM	KyleThomas
Arsenic III	BML	0.30 µg/L	EPA200.8/HPLC	5/6/2019	KyleThomas
Arsenic, Dissolved	0.68	0.27 µg/L	EPA200.8	4/30/2019 11:43:29 AM	KyleThomas
Arsenic, Total	0.75	0.27 µg/L	EPA200.8	4/30/2019 11:26:20 AM	KyleThomas
Beryllium, Dissolved	BML	2.20 µg/L	EPA200.8	4/30/2019 11:43:29 AM	KyleThomas
Beryllium, Total	BML	2.20 µg/L	EPA200.8	4/30/2019 11:26:20 AM	KyleThomas
Cadmium, Dissolved	BML	0.08 µg/L	EPA200.8	4/30/2019 11:43:29 AM	KyleThomas
Cadmium, Total	BML	0.08 µg/L	EPA200.8	4/30/2019 11:26:20 AM	KyleThomas
Chromium, Dissolved	BML	1.64 µg/L	EPA200.8	4/30/2019 11:43:29 AM	KyleThomas
Chromium, Total	BML	1.64 µg/L	EPA200.8	4/30/2019 11:26:20 AM	KyleThomas
Conductance	394.0	µS/cm	SM2510-B	4/26/2019	ToddManuel
Copper, Dissolved	1.34	0.90 µg/L	EPA200.8	4/30/2019 11:43:29 AM	KyleThomas
Copper, Total	3.24	0.90 µg/L	EPA200.8	4/30/2019 11:26:20 AM	KyleThomas
Cyanide, Total	BML	3.0 µg/L	SM4500-CN-E	5/1/2019	KyleThomas
Flow/MGD	NA	MGD	EPA5.1	4/23/2019	National Cement Company of Alabama
Hardness	131.4	meq CaCO3/L	SM2340-B	4/30/2019	Calculation
Iron, Dissolved	BML	0.02 mg/L	EPA200.8	4/30/2019 11:43:29 AM	KyleThomas
Iron, Total	0.12	0.02 mg/L	EPA200.8	4/30/2019 11:26:20 AM	KyleThomas
Lead, Dissolved	BML	0.31 µg/L	EPA200.8	4/30/2019 11:43:29 AM	KyleThomas
Lead, Total	BML	0.31 µg/L	EPA200.8	4/30/2019 11:26:20 AM	KyleThomas
Manganese, Dissolved	BML	0.03 mg/L	EPA200.8	4/30/2019 11:43:29 AM	KyleThomas
Manganese, Total	BML	0.03 mg/L	EPA200.8	4/30/2019 11:26:20 AM	KyleThomas
Mercury, Total	0.014	0.010 µg/L	EPA245.2	5/21/2019 12:30:00 PM	KyleThomas
Nickel, Dissolved	BML	6.86 µg/L	EPA200.8	4/30/2019 11:43:29 AM	KyleThomas
Nickel, Total	BML	6.86 µg/L	EPA200.8	4/30/2019 11:26:20 AM	KyleThomas
pH	8.22	s.u.	D1293-B	4/23/2019	National Cement Company of Alabama

NA = Not Analyzed ND = No Discharge BML = Below Minimum Level

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Phenols, Total	BML	6.0 µg/L	EPA420.1	4/26/2019	KyleThomas
Selenium, Dissolved	BML	0.95 µg/L	EPA200.8	4/30/2019 11:43:29 AM	KyleThomas
Selenium, Total	BML	0.95 µg/L	EPA200.8	4/30/2019 11:26:20 AM	KyleThomas
Silver, Dissolved	BML	0.15 µg/L	EPA200.8	4/30/2019 11:43:29 AM	KyleThomas
Silver, Total	BML	0.15 µg/L	EPA200.8	4/30/2019 11:26:20 AM	KyleThomas
Solids, Total Suspended	3	mg/L	SM2540-D	4/26/2019 1:10:48 PM	ToddManuel
Thallium, Dissolved	BML	0.08 µg/L	EPA200.8	4/30/2019 11:43:29 AM	KyleThomas
Thallium, Total	BML	0.08 µg/L	EPA200.8	4/30/2019 11:26:20 AM	KyleThomas
Zinc, Dissolved	BML	16.45 µg/L	EPA200.8	4/30/2019 11:43:29 AM	KyleThomas
Zinc, Total	BML	16.45 µg/L	EPA200.8	4/30/2019 11:26:20 AM	KyleThomas

Analysis Approved: 5/23/2019

John Morris
Laboratory Manager

NA = Not Analyzed *ND = No Discharge* *BML = Below Minimum Level*

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Date Printed: 6/11/2019

Client: **National Cement Company of Alabama**
2000 Southbridge Parkway #600
Birmingham, AL 35209

REPORT OF FINDINGS

Location: , NCCA-Special Ragland -- 001 **Lab ID:** 19042611-01

Sample Date: 4/23/2019 @ 10:12:00 AM **Comments:**

Analyte	Result	Minimum Level / Units	Method	Analysis Date	Analyst
Antimony, Dissolved	BML	1.92 µg/L	EPA200.8	4/30/2019 11:22:18 AM	KyleThomas
Antimony, Total	BML	1.92 µg/L	EPA200.8	4/30/2019 11:18:16 AM	KyleThomas
Arsenic III	BML	0.30 µg/L	EPA200.8/HPLC	5/6/2019	KyleThomas
Arsenic, Dissolved	0.39	0.27 µg/L	EPA200.8	4/30/2019 11:22:18 AM	KyleThomas
Arsenic, Total	0.44	0.27 µg/L	EPA200.8	4/30/2019 11:18:16 AM	KyleThomas
Beryllium, Dissolved	BML	2.20 µg/L	EPA200.8	4/30/2019 11:22:18 AM	KyleThomas
Beryllium, Total	BML	2.20 µg/L	EPA200.8	4/30/2019 11:18:16 AM	KyleThomas
Cadmium, Dissolved	BML	0.08 µg/L	EPA200.8	4/30/2019 11:22:18 AM	KyleThomas
Cadmium, Total	BML	0.08 µg/L	EPA200.8	4/30/2019 11:18:16 AM	KyleThomas
Chromium, Dissolved	BML	1.64 µg/L	EPA200.8	4/30/2019 11:22:18 AM	KyleThomas
Chromium, Total	BML	1.64 µg/L	EPA200.8	4/30/2019 11:18:16 AM	KyleThomas
Conductance	356.0	µS/cm	SM2510-B	4/26/2019	ToddManuel
Copper, Dissolved	BML	0.90 µg/L	EPA200.8	4/30/2019 11:22:18 AM	KyleThomas
Copper, Total	2.13	0.90 µg/L	EPA200.8	4/30/2019 11:18:16 AM	KyleThomas
Cyanide, Total	BML	3.0 µg/L	SM4500-CN-E	5/1/2019	KyleThomas
Flow/MGD	NA	MGD	EPA5.1	4/23/2019	National Cement Company of Alabama
Hardness	154.6	meq CaCO3/L	SM2340-B	4/30/2019	Calculation
Iron, Dissolved	BML	0.02 mg/L	EPA200.8	4/30/2019 11:22:18 AM	KyleThomas
Iron, Total	0.11	0.02 mg/L	EPA200.8	4/30/2019 11:18:16 AM	KyleThomas
Lead, Dissolved	BML	0.31 µg/L	EPA200.8	4/30/2019 11:22:18 AM	KyleThomas
Lead, Total	BML	0.31 µg/L	EPA200.8	4/30/2019 11:18:16 AM	KyleThomas
Manganese, Dissolved	BML	0.03 mg/L	EPA200.8	4/30/2019 11:22:18 AM	KyleThomas
Manganese, Total	BML	0.03 mg/L	EPA200.8	4/30/2019 11:18:16 AM	KyleThomas
Mercury, Total	BML	0.010 µg/L	EPA245.2	5/21/2019 12:28:00 PM	KyleThomas
Nickel, Dissolved	BML	6.86 µg/L	EPA200.8	4/30/2019 11:22:18 AM	KyleThomas
Nickel, Total	BML	6.86 µg/L	EPA200.8	4/30/2019 11:18:16 AM	KyleThomas
pH	8.17	s.u.	D1293-B	4/23/2019	National Cement Company of Alabama

NA = Not Analyzed ND = No Discharge BML = Below Minimum Level

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Date Printed: 6/11/2019

Phenols, Total	BML	6.0 µg/L	EPA420.1	4/26/2019	KyleThomas
Selenium, Dissolved	BML	0.95 µg/L	EPA200.8	4/30/2019 11:22:18 AM	KyleThomas
Selenium, Total	BML	0.95 µg/L	EPA200.8	4/30/2019 11:18:16 AM	KyleThomas
Silver, Dissolved	BML	0.15 µg/L	EPA200.8	4/30/2019 11:22:18 AM	KyleThomas
Silver, Total	BML	0.15 µg/L	EPA200.8	4/30/2019 11:18:16 AM	KyleThomas
Solids, Total Suspended	5	mg/L	SM2540-D	4/26/2019 1:10:30 PM	ToddManuel
Thallium, Dissolved	BML	0.08 µg/L	EPA200.8	4/30/2019 11:22:18 AM	KyleThomas
Thallium, Total	BML	0.08 µg/L	EPA200.8	4/30/2019 11:18:16 AM	KyleThomas
Zinc, Dissolved	BML	16.45 µg/L	EPA200.8	4/30/2019 11:22:18 AM	KyleThomas
Zinc, Total	BML	16.45 µg/L	EPA200.8	4/30/2019 11:18:16 AM	KyleThomas

Analysis Approved: 5/23/2019

John Morris
Laboratory Manager

NA = Not Analyzed *ND = No Discharge* *BML = Below Minimum Level*

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Facility Name: **National Cement Company of Alabama, Inc. - Blue Spring Fork Facility**

NPDES No.: **AL0031542** **Outfalls 002 and 004[123]**

				Freshwater F&W classification.		Freshwater Acute ($\mu g/l$) Q_s =1Q10				Freshwater Chronic ($\mu g/l$) Q_s = 7Q10						Human Health Consumption Fish only ($\mu g/l$) Carcinogen Q_s = Annual Average Non-Carcinogen Q_s = 7Q10			
ID	Pollutant	RP?	Carcinogen yes	Background Instream (Cs) Daily Max	Max Daily Discharge as reported by Applicant[4] (C_{dmax})	Water Quality Criteria (C_r)	Draft Permit Limit (C_{dmax})	20% of Draft Permit Limit	RP?	Background Instream (Cs) Monthly Ave	Avg Daily Discharge as reported by Applicant (C_{davg})	Water Quality Criteria (C_r)	Draft Permit Limit (C_{davg})	20% of Draft Permit Limit	RP?	Water Quality Criteria (C_r)	Draft Permit Limit (C_{davg})	20% of Draft Permit Limit	RP?
1	Antimony			0	0	-	-	-	-	0	0	-	-	-	-	3.73E+02	1.41E+03	2.82E+02	No
2	Arsenic		YES	0	0	340.000	1063.061	212.612	No	0	0	293.542	1107.796	221.559	No	3.03E-01	7.04E+01	1.41E+01	No
3	Berylium			0	0	-	-	-	-	0	0	-	-	-	-	-	-	-	-
4	Cadmium			0	0	1.026	3.208	0.642	No	0	0	0.152	0.573	0.115	No	-	-	-	-
5	Chromium/ Chromium III			0	0	322.962	1009.788	201.958	No	0	0	42.011	158.544	31.709	No	-	-	-	-
6	Chromium/ Chromium VI			0	0	16.000	50.026	10.005	No	0	0	11.000	41.513	8.303	No	-	-	-	-
7	Copper			0	1.34	6.994	21.869	4.374	No	0	1.34	4.953	18.692	3.738	No	1.30E+03	4.91E+03	9.81E+02	No
8	Lead			0	0	30.136	94.224	18.845	No	0	0	1.174	4.432	0.886	No	-	-	-	-
9	Mercury	**YES**		0	0.014	2.400	7.504	1.501	No	0	0.014	0.012	0.045	0.009	Yes	4.24E-02	1.60E-01	3.20E-02	No
10	Nickel			0	0	260.491	814.465	162.893	No	0	0	28.933	109.188	21.838	No	9.93E+02	3.75E+03	7.49E+02	No
11	Selenium			0	0	20.000	62.533	12.507	No	0	0	5.000	18.869	3.774	No	2.43E+03	9.17E+03	1.83E+03	No
12	Silver			0	0	0.976	3.053	0.611	No	0	0	-	-	-	-	-	-	-	-
13	Thallium			0	0	-	-	-	-	0	0	-	-	-	-	2.74E-01	1.03E+00	2.06E-01	No
14	Zinc			0	0	65.132	203.644	40.729	No	0	0	65.664	247.811	49.562	No	1.49E+04	5.62E+04	1.12E+04	No
15	Cyanide			0	0	22.000	68.786	13.757	No	0	0	5.200	19.624	3.925	No	9.33E+03	3.52E+04	7.04E+03	No
16	Total Phenolic Compounds			0	0	-	-	-	-	0	0	-	-	-	-	-	-	-	-
17	Hardness (As CaCO3)			0	0	-	-	-	-	0	0	-	-	-	-	-	-	-	-

[1]Outfall 002 and 004 discharges to Trout Creek. The 7Q10 for the receiving stream is 25 cfs. This is the receiving stream flow value used in the calculations.

[2]Outfall 002 is reported to have the highest average discharge flow rate of 0.0699 MGD. This is the discharge flow rate used in the calculations.

[3]A hardness of 50 mg/L was used in the calculations based on expected stream hardness in this portion of the state.

[4]Discharge data for all parameters are the results of samples obtained from Outfall 001 at National Cement Company of Alabama, Inc. Blue Spring Fork Facility on April 23. 2019.

Facility Name: **National Cement Company of Alabama, Inc. - Blue Spring Fork Facility**

NPDES No.: **AL0031642** Outfall 001[123]

				Freshwater F&W classification.		Freshwater Acute (µg/l) Q_s =1Q10				Freshwater Chronic (µg/l) Q_s = 7Q10						Human Health Consumption Fish only (µg/l) Carcinogen Q_s = Annual Average Non-Carcinogen Q_s = 7Q10			
ID	Pollutant	RP?	Carcinogen yes	Background Instream (Cs) Daily Max	Max Daily Discharge as reported by Applicant[4] (C_{dmax})	Water Quality Criteria (C_t)	Draft Permit Limit (C_{dmax})	20% of Draft Permit Limit	RP?	Background Instream (Cs) Monthly Ave	Avg Daily Discharge as reported by Applicant (C_{davg})	Water Quality Criteria (C_t)	Draft Permit Limit (C_{davg})	20% of Draft Permit Limit	RP?	Water Quality Criteria (C_t)	Draft Permit Limit (C_{davg})	20% of Draft Permit Limit	RP?
1	Antimony			0	0	-	-	-	-	0	0	-	-	-	-	3.73E+02	1.32E+03	2.64E+02	No
2	Arsenic		YES	0	0	340.000	999.817	199.963	No	0	0	293.542	1036.575	207.315	No	3.03E-01	6.42E+01	1.28E+01	No
3	Berylium			0	0	-	-	-	-	0	0	-	-	-	-	-	-	-	-
4	Cadmium			0	0	1.026	3.017	0.603	No	0	0	0.152	0.536	0.107	No	-	-	-	-
5	Chromium/ Chromium III			0	0	322.962	949.713	189.943	No	0	0	42.011	148.351	29.670	No	-	-	-	-
6	Chromium/ Chromium VI			0	0	16.000	47.050	9.410	No	0	0	11.000	38.844	7.769	No	-	-	-	-
7	Copper			0	0	6.994	20.568	4.114	No	0	0	4.953	17.491	3.498	No	1.30E+03	4.59E+03	9.18E+02	No
8	Lead			0	0	30.136	88.619	17.724	No	0	0	1.174	4.147	0.829	No	-	-	-	-
9	Mercury			0	0	2.400	7.058	1.412	No	0	0	0.012	0.042	0.008	No	4.24E-02	1.50E-01	3.00E-02	No
10	Nickel			0	0	260.491	766.011	153.202	No	0	0	28.933	102.169	20.434	No	9.93E+02	3.51E+03	7.01E+02	No
11	Selenium			0	0	20.000	58.813	11.763	No	0	0	5.000	17.656	3.531	No	2.43E+03	8.58E+03	1.72E+03	No
12	Silver			0	0	0.976	2.871	0.574	No	0	0	-	-	-	-	-	-	-	-
13	Thallium			0	0	-	-	-	-	0	0	-	-	-	-	2.74E-01	9.66E-01	1.93E-01	No
14	Zinc			0	0	65.132	191.529	38.306	No	0	0	65.654	231.879	46.376	No	1.49E+04	5.26E+04	1.05E+04	No
15	Cyanide			0	0	22.000	64.694	12.939	No	0	0	5.200	18.363	3.673	No	9.33E+03	3.30E+04	6.59E+03	No
16	Total Phenolic Compounds			0	0	-	-	-	-	0	0	-	-	-	-	-	-	-	-
17	Hardness (As CaCO3)			0	0	-	-	-	-	0	0	-	-	-	-	-	-	-	-

[1]Outfall 001 discharges to Trout Creek. The 7Q10 for the receiving stream is 25 cfs. This is the receiving stream flow value used in the calculations.

[2]Outfall 001 is reported to have an average discharge flow rate of 0.076 MGD. This is the discharge flow rate used in the calculations.

[3]A hardness of 50 mg/L was used in the calculations based on expected stream hardness in this portion of the state.

[4]Discharge data for all parameters are the results of samples obtained from Outfall 001 at National Cement Company of Alabama, Inc. Blue Spring Fork Facility on April 23. 2019.

CFM Group

MINING NPDES PERMIT APPLICATION FOR BLUE SPRING FORK QUARRY

Prepared for
National Cement Company of Alabama, Inc.

CFM Group, LLC
2135 University Blvd.
Suite A
Tuscaloosa, AL 35401
(205) 752-4037

Engineer's Certification

I certify that this report was prepared by me and that I am a Professional Engineer in the State of Alabama.

R. A. Deerman, PE 16938

March 31, 2017
Date

Table of Contents

1. Introduction

1.1. Location

National Cement Company of Alabama, Inc., located in St. Clair County, proposes to continue operating its Blue Spring Fork Plant and Quarry. The plant is located in portions of Sections 17 and 18 in Township 15S and Range 5E. The quarry is located in portions of Sections 9, 10, 15, and 16 in Township 15S and Range 5E. Figure 1-1 is a location map of the plant and quarry along with the outfall locations.

1.2. Work Description

National Cement quarries limestone along with some rock and shale. The plant produces portland cement and masonry products.

1.3. Contents

This document contains an engineering certification, sedimentation control plans, a Pollution Abatement and Prevention (PAP) Plan, a Best Management Practices Plan, and a Spill Prevention Control and Countermeasures (SPCC) Plan.

1.4. Purpose

The purpose of this document is to apply for re-issuance and modification of NPDES individual mining permit AL0031542 for National Cement.

The permit authorizes discharges from non-contact cooling water, mine de-watering activities, and stormwater. The permit includes the following outfalls:

DSN001E	Stormwater from the eastern portion of the plant; sulfuric acid treatment option; drains toward Alabama Highway 144 northeast of the plant
DSN002E	Stormwater from the western portion of the plant; sulfuric acid treatment option; drains toward Alabama Highway 144 north of the plant
DSN003E	De-watering activities, including stormwater, from the quarry
DSN004E	Discharge of the treated Alkaline Pond located east of Alabama Highway 144; anti-algal additive option
DSN005E	Discharge from the shale mining area north of the quarry
DSN006E	Rock/Chert storage area
DSN007E	Outfall from sedimentation pond southwest of quarry; pond may include grass-eating carp
DSN008E	Alternate for DSN003E

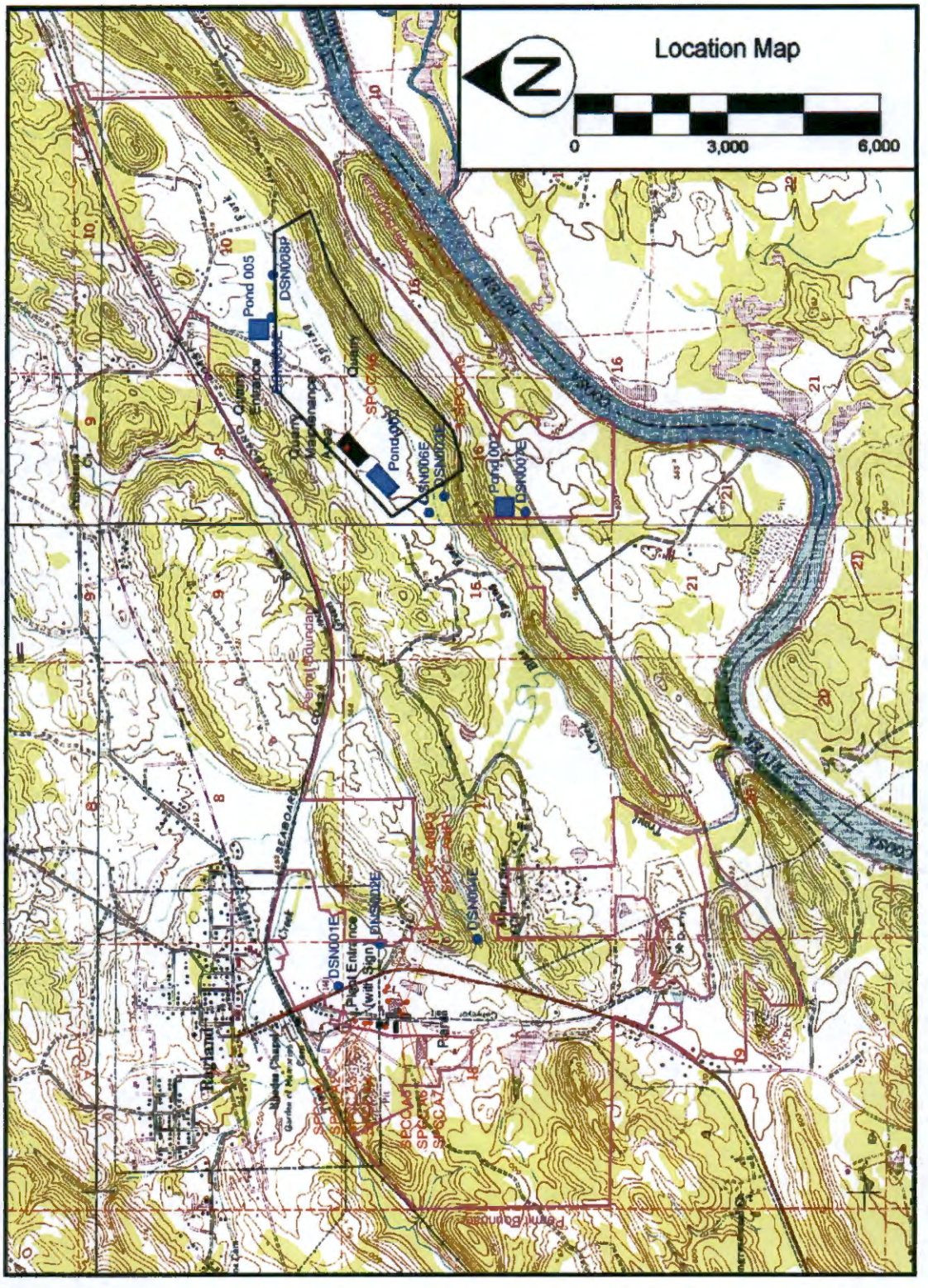


Figure 1-1. Location Map.

1.5. Outfall 001 (DSN001E)

Outfall DSN001E is the discharge of the stormwater from the eastern portion of the plant. A sulfuric acid treatment system may be installed to allow additions of 0 to 50 mL per minute. The outfall is located east of the plant at the culvert outlet from the stormwater conveyance channel that runs from the eastern portion of the plant to the right-of-way of Alabama Highway 144. The stormwater conveyance channel discharges into Trout Creek. Storm water run-off consists of run-off from plant operations, run-off from parking lots, roof drains, rail and truck transport areas and loading areas. The drainage area for DSN001E is approximately 46 acres.

1.6. Outfall 002 (DSN002E)

Outfall DSN0002E is the discharge of the stormwater from the western portion of the plant. A sulfuric acid treatment system may be installed to allow additions of 0 to 50 mL per minute. The outfall is located north of the plant at the culvert outlet from the stormwater conveyance channel that runs from the western portion of the plant to the right-of-way of Alabama Highway 144. The stormwater conveyance channel discharges into Trout Creek. Storm water run-off consists of run-off from plant operations, run-off from parking lots, roof drains, rail and truck transport areas and loading areas. The drainage area for DSN002E is approximately 42 acres.

1.7. Outfall 003 (DSN003E)

Outfall DSN0003E is the discharge from de-watering activities and stormwater accumulated within the quarry. A sedimentation basin, Pond 003, is located within the quarry prior to pumping to the discharge point adjacent to the quarry into Blue Spring Fork. The drainage area for DSN003E is approximately 230 acres. Previously, the permitted area omitted a "C"-shaped interior property that has now been added.

1.8. Outfall 004 (DSN004E)

Outfall DSN004E is the discharge of the Alkaline Pond located east of Alabama Highway 144. An anti-algal additive may be included in the discharge. Outfall from the Alkaline Pond is located southeast of the main plant. The stormwater conveyance channel from the Alkaline Pond discharges into Trout Creek. The Alkaline pond is a settling basin for collection of leachate from the inactive cement kiln dust (CKD) Storage Pile. The water collected in the pond is either used as cooling water in the plant or treated with CO_2 prior to discharge when necessary. Only stormwater run-on from the immediate area of the Alkaline Pond, approximately 35 acres, contributes to DSN004E.

1.9. Outfall 005 (DSN005E)

Outfall DSN005E is the discharge of the current shale mining area north of the quarry. Outfall DSN005 is located northeast of the quarry on the stormwater conveyance channel that drains the northern and eastern portion of the spoil pile area prior to a

sedimentation basin, Pond 005. The drainage area for DSN005E is approximately 383 acres.

1.10. Outfall 006 (DSN006E)

Outfall DSN006E includes the discharge from a rock spoil area. The spoil area discharges through a rock-lined flume through a series of rock filter dams to a rock filter dam encircled splash pad. The structure then releases the treated stormwater as sheet flow. This discharge regime mimics the original flow pattern. In order to allow the collection of a water sample, a short section of concrete curb and gutter (less than 10 feet long) can be constructed at the downstream toe of a rock filter dam. The gutter can end with a small cascade of sufficient height to allow a sample bottle to be held beneath the cascading water.

1.11. Outfall 007 (DSN007E)

Outfall DSN007E includes the discharge from a spoil area located southwest from the quarry. Runoff from the spoil area drains to a sedimentation basin, Pond 007, prior to reaching Outfall DSN007E. Pond 007 may include grass-eating carp. The drainage area for DSN007E is approximately 35 acres.

1.1. Outfall 008 (DSN008E)

Outfall DSN008E is an alternate for Outfall DSN003E. The quarry is oriented approximately southwest to northeast. DSN003E is located at the southwest end of the quarry. DSN008E is located at the northeast end of the quarry. Blue Spring Fork is the receiving water for each of the two outfalls. Outfall DSN0008E is the discharge from de-watering activities and stormwater accumulated within the quarry. A sedimentation basin, Pond 003, is located within the quarry and treats the water prior to pumping to the discharge point adjacent to the quarry into Blue Spring Fork. The drainage area for DSN008E is identical to the drainage area for DSN003E (the same ground as DSN003E, approximately 230 acres).

2. Sedimentation Controls

2.1. Introduction

The pollution abatement facilities are designed and will be constructed so as to control the quality of runoff of the pumped discharge from the quarry at Outfall DSN003E (or its alternate, DSN008E), and stormwater discharges from DNS005E, DSN006E, and DNS007E. Normal drainage patterns direct most of the runoff and process water to the outfalls. In some cases, diversions direct runoff from the quarry or to sedimentation features. Best management practices will be used to control the quality of plant runoff and process water at Outfalls DSN001E, DSN002E, and DSN004E.

2.2. Diversions

A previously approved diversion directs some of the undisturbed upstream runoff of Blue Spring Fork around and to the north of the quarry. There are no creek crossings, but culverted roads cross the diversion at five locations. A dike around the existing spoil pile channels runoff to the rock dam structure (Pond 006). A previously approved diversion directs runoff from a spoil pile to Pond 007.

2.3. Sedimentation Ponds

Figure 2-1 presents the design information for Pond 003 for Outfall DSN003E (or its alternate, DSN008E). The pond is located in the quarry. The entire quarry detains rainfall runoff as a sedimentation pond, but an area will be specially prepared to improve sedimentation. Subsurface withdrawal will be provided by a pump. Figure 2-3 presents the design information for Pond 005 for Outfall DSN005E. The pond detains the runoff discharge from the shale pit before the runoff enters Blue Spring Fork. Figure 2-4 presents the design information for Pond 006 (rock filter dam). Figure 2-5 presents the design information for Pond 007. All of the sedimentation ponds are previously approved.

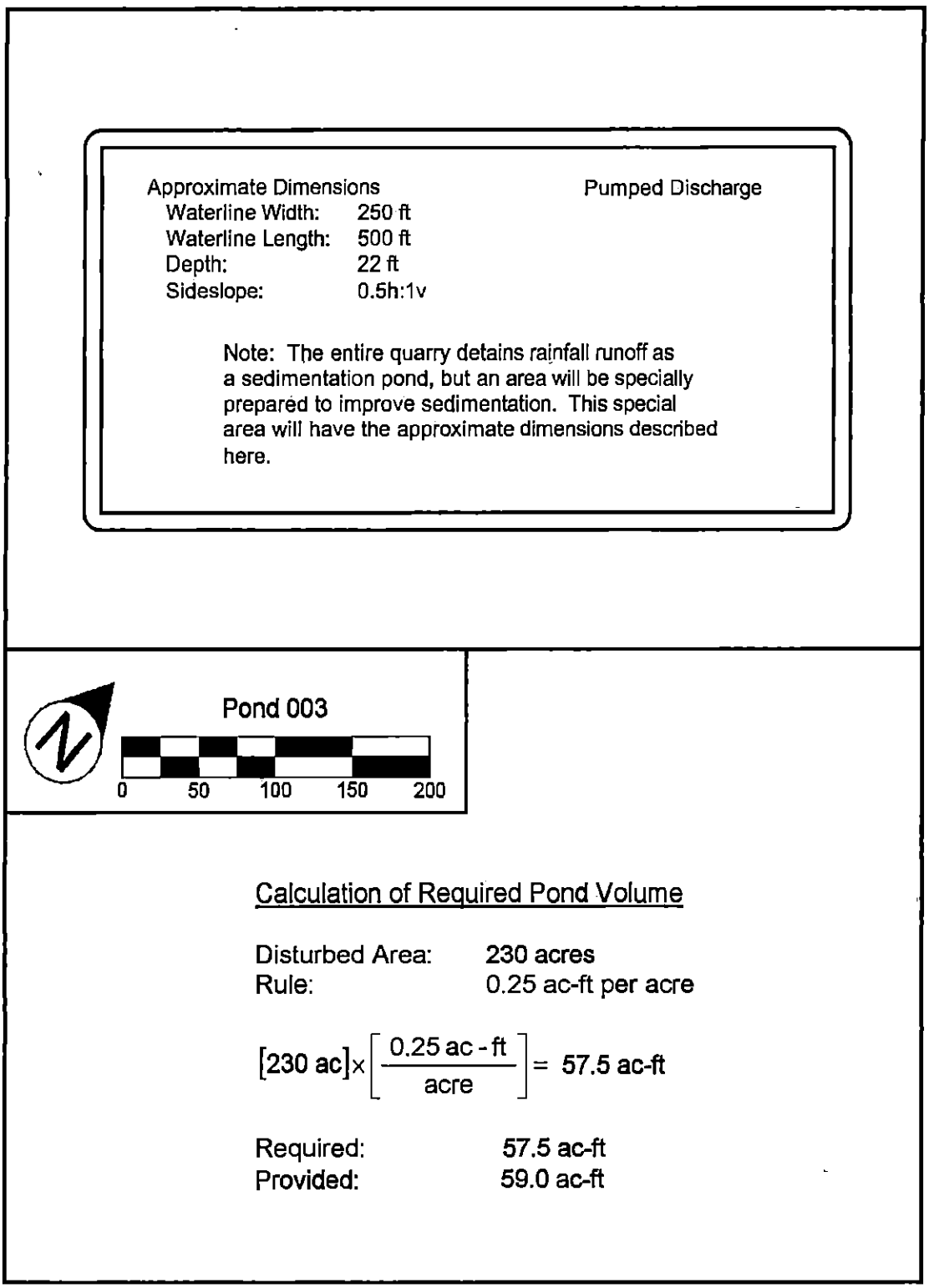


Figure 2-1. Design Information for Pond 003.

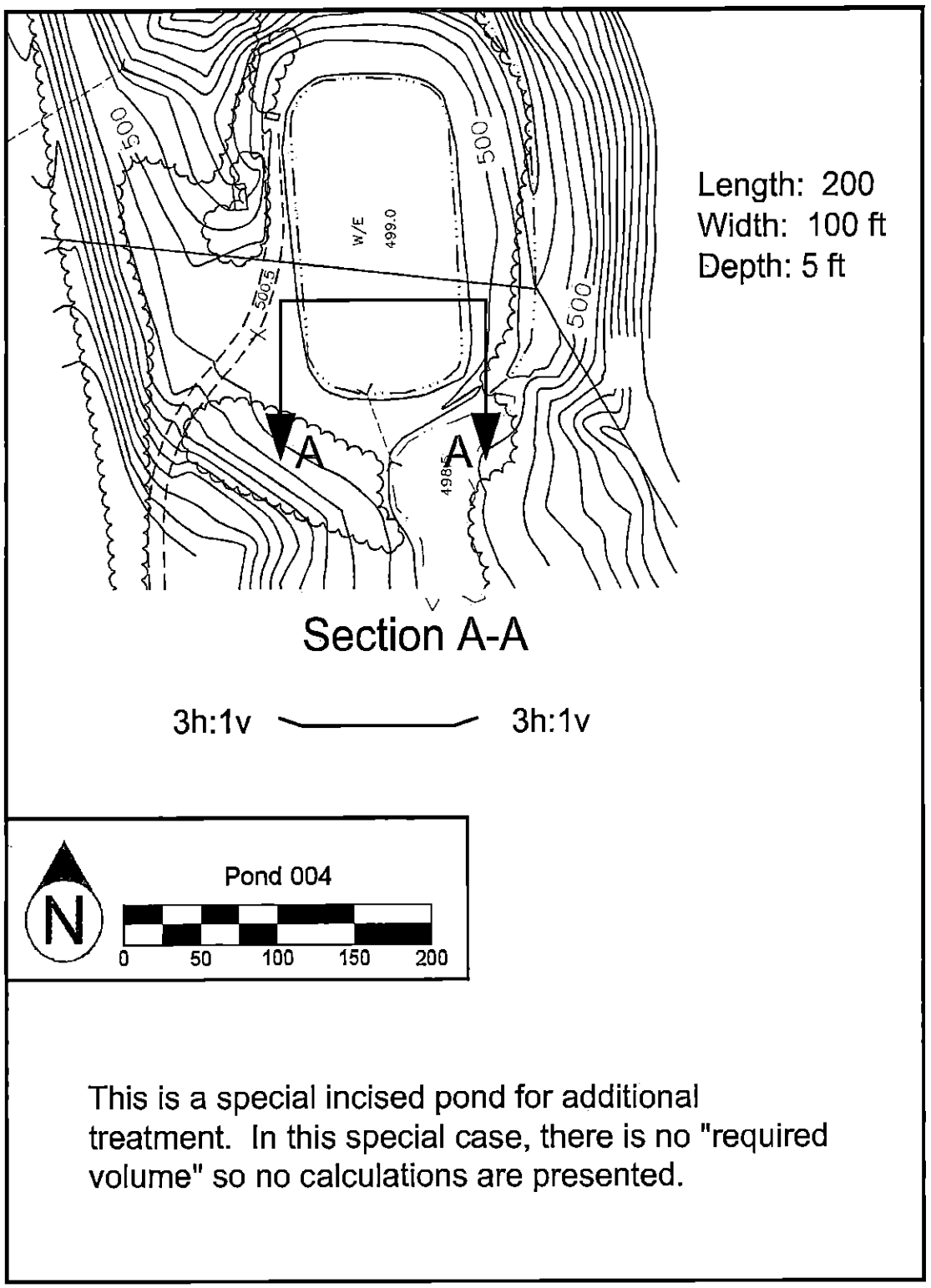


Figure 2-2. Design Information for Pond 004.

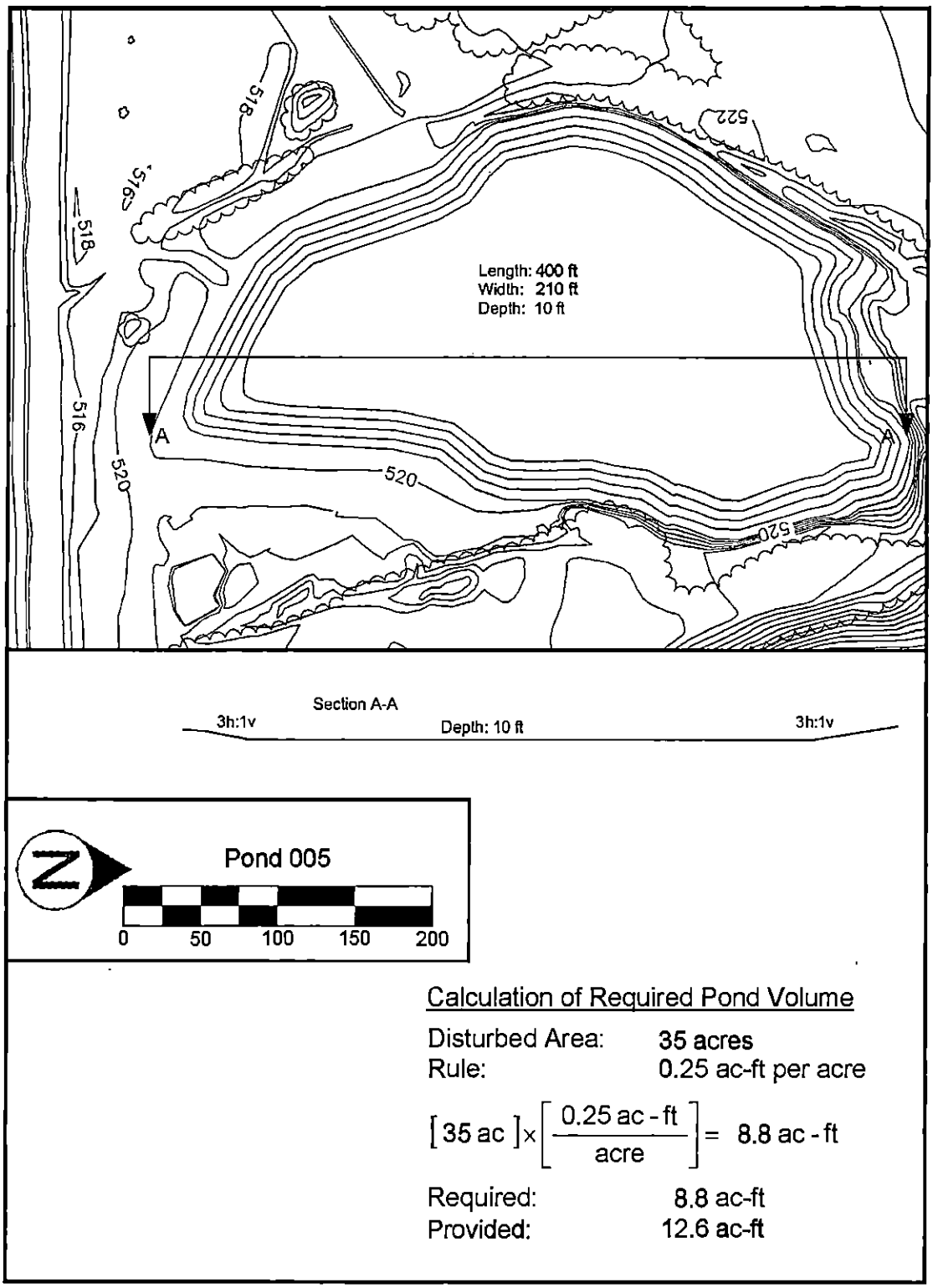


Figure 2-3. Design Information for Pond 005.

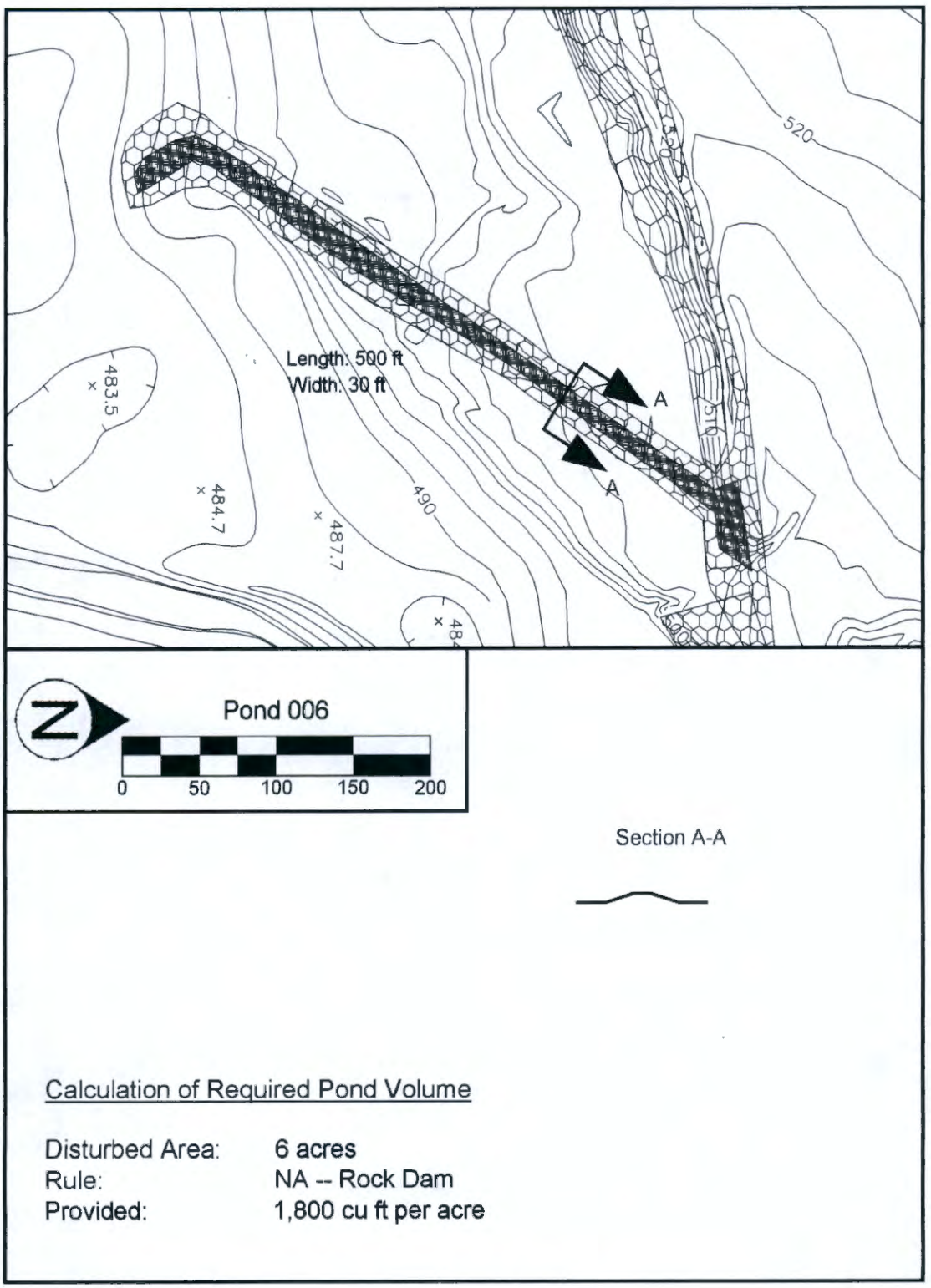
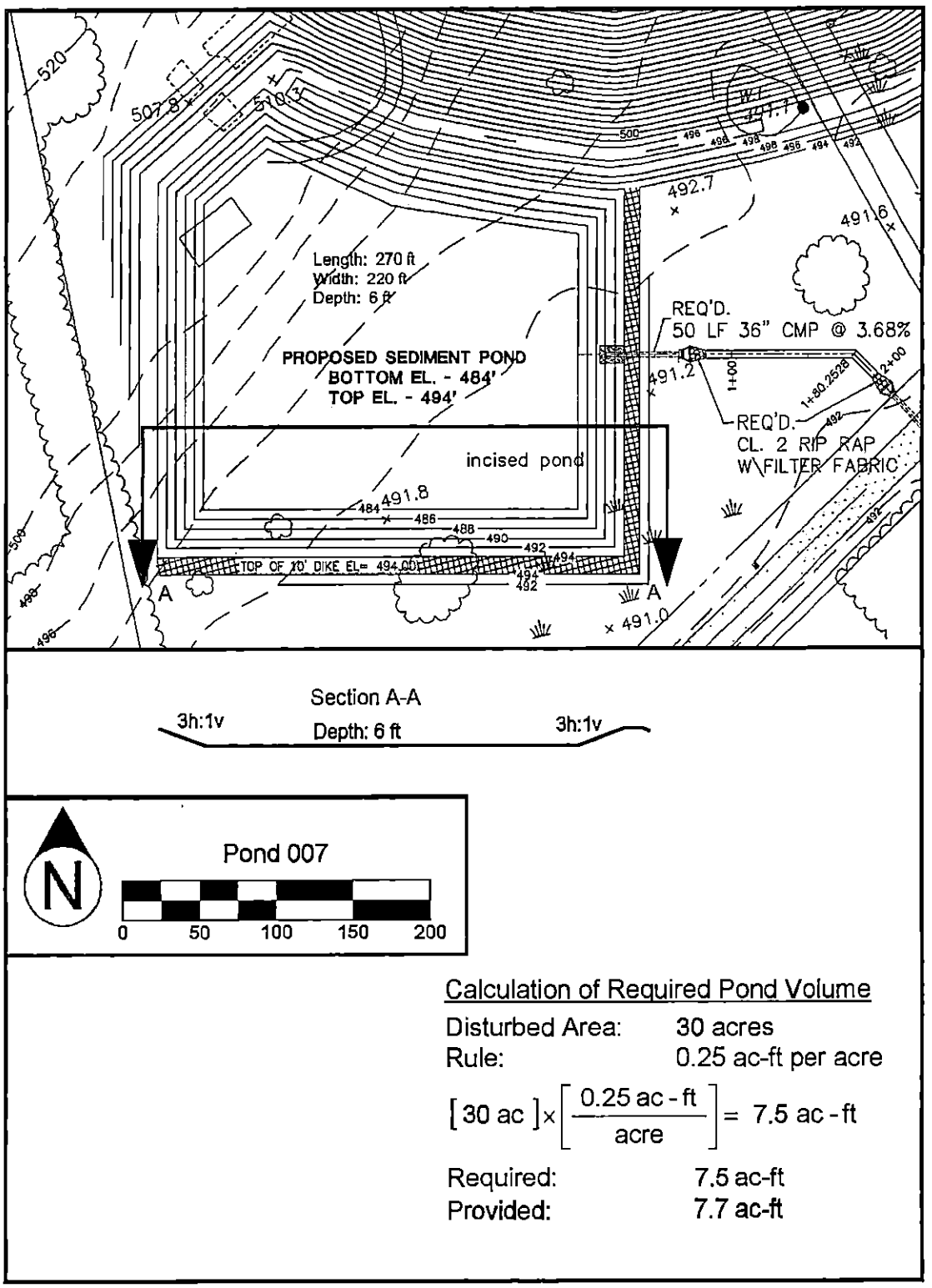


Figure 2-4. Design Information for Pond 006.



Calculation of Required Pond Volume

Disturbed Area:	30 acres
Rule:	0.25 ac-ft per acre

$$[30\ \text{ac}] \times \left[\frac{0.25\ \text{ac-ft}}{\text{acre}}\right] = 7.5\ \text{ac-ft}$$

Required:	7.5 ac-ft
Provided:	7.7 ac-ft

Figure 2-5. Design Information for Pond 007.

3. Pollution Abatement and Prevention Plan

3.1. Introduction

The plan follows the regulatory outline with each section introduced by the applicable portion of Rule 335 6 9 .03 "Pollution Abatement and/or Prevention Plan".

3.2. Name and Address

335-6-9-.03(2)(a) name and address of the operator and a legal description of the area to be mined.

The operator is National Cement Company of Alabama, Inc. and the mailing address is as follows:

National Cement -- Blue Spring Fork Facility
P.O. Box 460
Ragland, Alabama 35131

The telephone number for the Blue Spring Fork Facility office is (205) 472-2191 and the contact person is Mr. Bob Gunn, Environmental Manager, at Extension 4472.

The plant and quarry are in St. Clair County, Alabama in portions of Sections 9, 10, 15, 16, 17, and 18 in Township 15S and Range 5E.

3.3. General Information

335-6-9-.03(2)(b) general information, including name and affiliation of company, number of employees, product(s) to be mined, hours of operation and water supply and disposition.

The operator is National Cement Company of Alabama, Inc. and its parent corporation is National Cement Company, Inc. Employment is approximately 110 individuals and operation is 24 hours per day, 7 days per week. National Cement quarries limestone along with some rock and shale. The plant manufactures portland cement and masonry products.

3.4. Topographic Map

335-6-9-.03(2)(c) topographic map showing location of mine, preparation plant, settling basin and all waste water discharge points.

Figure 1-1 is a topographic map which shows the location of the plant, the quarry, settling basins, and the outfalls. Material is taken from the quarry or the shale mining area and transported to the plant for further processing. The settling basins, mining sedimentation ponds, detain surface runoff from mining areas. The outfalls are located where discharges are returned to natural drainage courses.

3.5. Diversions

335-6-9-.03(2)(d) method and plan for diverting surface water runoff from operational areas and mineral and refuse storage piles.

A previously approved diversion directs some of the undisturbed upstream runoff of Blue Spring Fork around and to the north of the quarry. A dike around the existing spoil pile channels runoff to the rock dam structure (Pond 006). A diversion directs runoff from a spoil pile to Pond 007.

3.6. Operations

335-6-9-.03(2)(e) narrative account of operation(s) explaining and/or defining raw materials, processes and products. Blockline or schematic diagrams indicating points of waste origin and its collection and disposal shall be included.

National Cement Company of Alabama, Inc. quarries limestone along with some rock and shale. The plant produces portland cement and masonry products. Material is removed by blasting and by heavy equipment. Limestone and other quarried products are transported to the plant by conveyor. At the plant, limestone is fired in kilns and the quarried products are processed.

The potential wastes generated in the production of cement include cement kiln dust (CKD) and spilled cement. The composition of CKD, a by-product resulting from the removal of dust-sized cement particles from the pyro-processing operation, is dependent on the specific raw material constituents and fuel used to fire the kilns. These materials are recycled back into the process.

Waste products generated as a result of the mining operation are sediments from disturbed areas which are transported by rainfall runoff or pumped discharges. The sediments originate from the quarry, spoil areas, or other disturbed areas. The sediments are transported by rainfall runoff or pumped discharges. The sediments are captured by detaining the water in sedimentation ponds or by filtering the water through rock dams. When necessary, the accumulated sediments are removed from the sedimentation ponds or rock dams. A schematic is given in Figure 3-1.

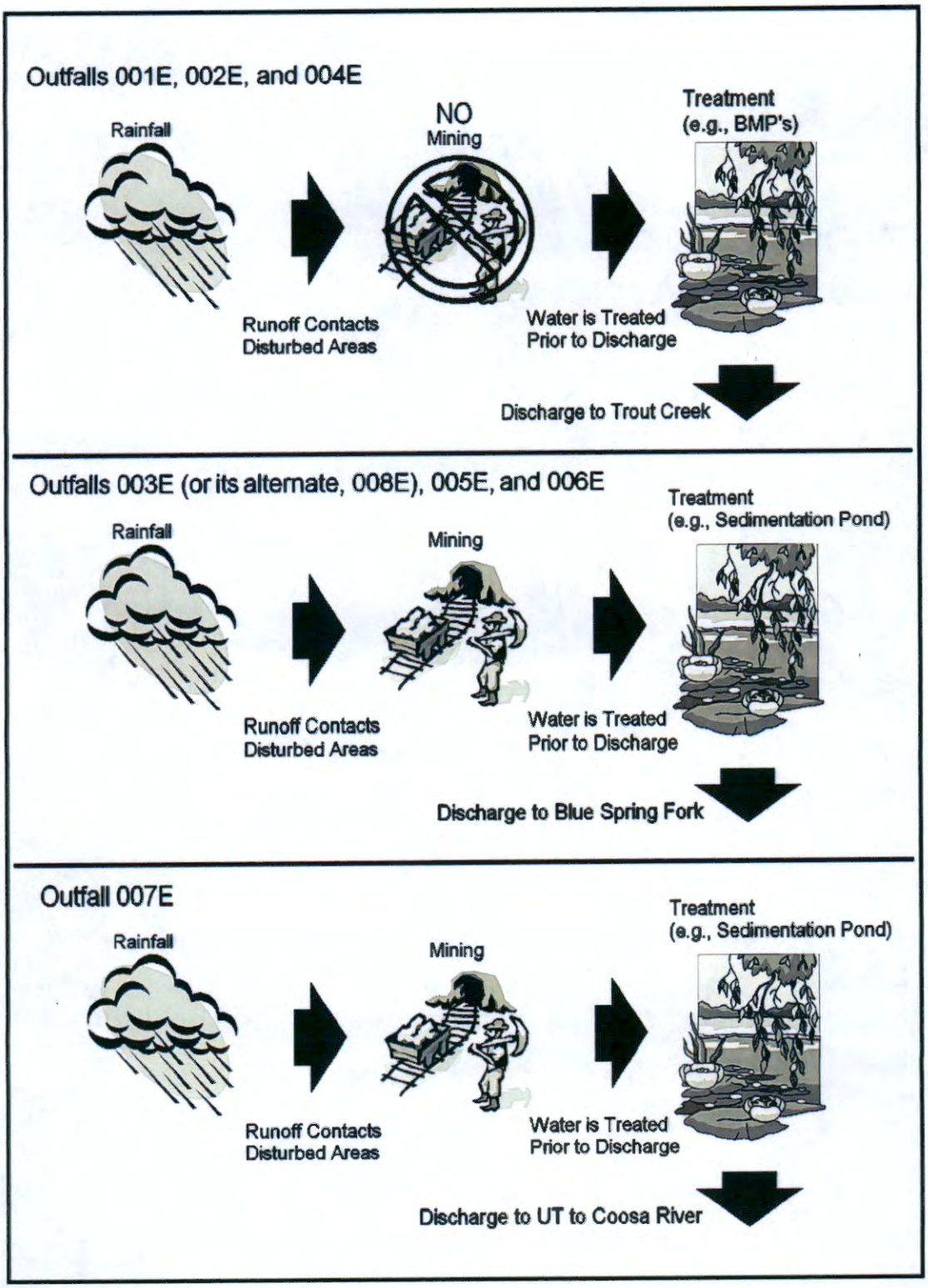


Figure 3-1. Waste Schematic.

3.7. Waste Characteristics

335-6-9-.03(2)(f) quantity and characteristics of waste after treatment with respect to flow, suspended solids, total iron, and pH.

Assuming an average annual rainfall of 54 inches and an average runoff coefficient of 50%, runoff should be approximately 2,000 gallons per day per acre of watershed. Considering the uncertainties in the value and the fact that process water contributions are relatively small in comparison, process water contributions are not considered in these calculations. Using the factor, the average daily flow from DSN001E is 92,000 gallons per day (gpd), the average daily flow from DSN002E is 84,000 gpd, the average daily flow from DSN003E (or its alternate, 008E) is 3,060,000 gpd, the average daily flow from DSN004E is 70,000 gpd, the average daily flow from DSN005E is 766,000 gpd, the average daily flow from DSN006E is 20,000 gpd, and the average daily flow from DSN007E is 70,000. Based on sampling the suspended solids will be less than 10 mg/L and the pH will be between 7.0 and 8.2. Based on best professional estimates (BPE) the total iron will be 0.1 mg/L.

3.8. Waste Treatment Facilities

335-6-9-.03(2)(g) description of waste treatment facilities, pretreatment measures and recovery systems including expected life of sedimentation basins and schedules for cleaning or proper abandonment of such basins. If earthen sedimentation basins are a portion of the treatment scheme, plans for the construction of these facilities should meet minimum construction criteria as found in the Guidelines in Appendix A.

The waste treatment facilities consist of the sedimentation controls, diversions and sedimentation ponds (including the rock filter dam at Pond 006), described in Chapter 2. The plans for these facilities were also included in Chapter 2. The plans for the construction of the sedimentation ponds meet the minimum construction criteria as found in the ADEM Guidelines. The expected life of the sedimentation basins is the life of the mine and the sedimentation basins are scheduled to be cleaned out when sediment accumulation is 60% of design capacity.

3.9. Haul Road Sediment Control

335-6-9-.03(2)(h) a plan to eliminate or minimize sediment and other pollutants from haul roads must be included and should meet minimum design criteria as established by the Guidelines in Appendix B.

The haul roads meet the specifications listed below:

1) No sustained grade exceeds 10 percent;
2) The maximum grade does not exceed 15 percent for 300 feet. There is no more than 300 feet of 15 percent maximum grade for each 1000 feet of road constructed;
3) Haul roads within the mining area are constructed so that runoff from the road is routed to the sedimentation basin;

4) Outer slopes for haul roads out of the permitted area are not steeper than 2:1 and are lined with natural vegetation or rock to avoid erosion;
5) Roads are surfaced with either slag, chert, crushed limestone, crushed sandrock, or red rock, other than temporary roads for limited access; and
6) There are no creek crossings, but culverted roads cross the diversion (the previously approved diversion directs some of the undisturbed upstream runoff of Blue Spring Fork around and to the north of the quarry) at five locations.

3.10. Stream Impact Minimization

335-6-9-.03(2)(I) location of all streams in or adjacent to the mining area and those measures which will be taken to minimize the impact on water quality when the mining operation is located in close proximity to such streams. Such measures may include but not be limited to setbacks, buffer strips, or screens.

The mining operation is in the valley of Blue Spring Fork. Downstream, Blue Spring Fork joins Trout Creek. The sedimentation controls, diversions and sedimentation ponds (including the rock filter dam at Pond 006), described in Chapter 2 are intended to minimize any negative stream impacts.

3.11. Non-Point Impact Minimization

335-6-9-.03(2)(j) those measures to be employed to minimize the effect of any non point source pollution which may be generated as a result of the surface mining operation.

The surface runoff from mined areas generally drains to sedimentation ponds. Any negative impacts from non-point discharges will be minimized using best management practices.

3.12. Construction Certification

335-6-9-.03(2)(k) all pollution abatement facilities must be certified by the design engineer as being constructed in accordance with the approved plans.

The existing pollution abatement facilities have previously been certified by the design engineer.

3.13. Watershed Classification

335-6-9-.03(2)(l) the applicant shall specify if the proposed mining operation is to be constructed in the watershed of an impoundment classified as a public water supply or a direct tributary thereon.

The Coosa River from Broken Arrow Creek (downstream) to Trout Creek (which receives runoff from the plant and whose tributary, Blue Spring Fork, receives runoff from the quarry) is classified as a public water supply. The same reach is otherwise classified for swimming and for fish and wildlife.

The actual receiving streams; Trout Creek, Blue Spring Fork, and unnamed tributary to Coosa River; are classified for fish and wildlife, not public water supply.

4. Best Management Practices Plan

4.1. Introduction

In response to the Water Quality Act of 1987, the Environmental Protection Agency (EPA) expanded the National Pollutant Discharge Elimination System (NPDES). The expanded permit system is for many types of discharges including industrial storm water discharges. The EPA's storm water program emphasizes pollution prevention and reflects a heavy reliance on Best Management Practices (BMP) Plans to reduce pollutant loadings and improve water quality. BMP's are defined as schedules of activities, prohibitions of practices, maintenance procedures, and other management practices to prevent or reduce the pollution of waters of the United States. BMP's also include treatment requirements, operating procedures, and practices to control facility site runoff, spillage or leaks, sludge or water disposal, or drainage from raw material storage.

Previous chapters presented sediment control structures along with the Pollution Abatement and Prevention Plan to minimize discharges of sediments and other pollutants. There remain other areas, such as those around the plant and at isolated spots, where other control features could be helpful. For those areas, this comprehensive BMP Plan has been prepared for the prevention and minimization of all sources of pollution in stormwater and authorized related process wastewater runoff for this site utilizing effective BMP's from the *Alabama Handbook for Erosion Control, Sediment Control, And Stormwater Management On Constructions Sites And Urban Areas,* by the Alabama Soil and Water Conservation Committee. If the Best Management Practices Plan is properly implemented and maintained by the registrant, discharges of pollutants in stormwater runoff can reasonably be expected to be effectively minimized to the maximum extent practicable according to the requirements of ADEM Administrative Code Chapter 335-6-12. The BMP Plan describes the pollution abatement/prevention management and effective structural and nonstructural BMPs that must be fully implemented and regularly maintained as needed at the registered site in accordance with sound sediment and erosion practices to ensure the protection of water quality.

4.2. Excerpts

Several excerpts from the *Alabama Handbook for Erosion Control, Sediment Control, And Stormwater Management On Constructions Sites And Urban Areas*, are included in the end of this chapter. If other portions of the Handbook prove useful they may be incorporated.

4.3. Permanent Seeding

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 etc.

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.

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.

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 Land Grading practice).

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.

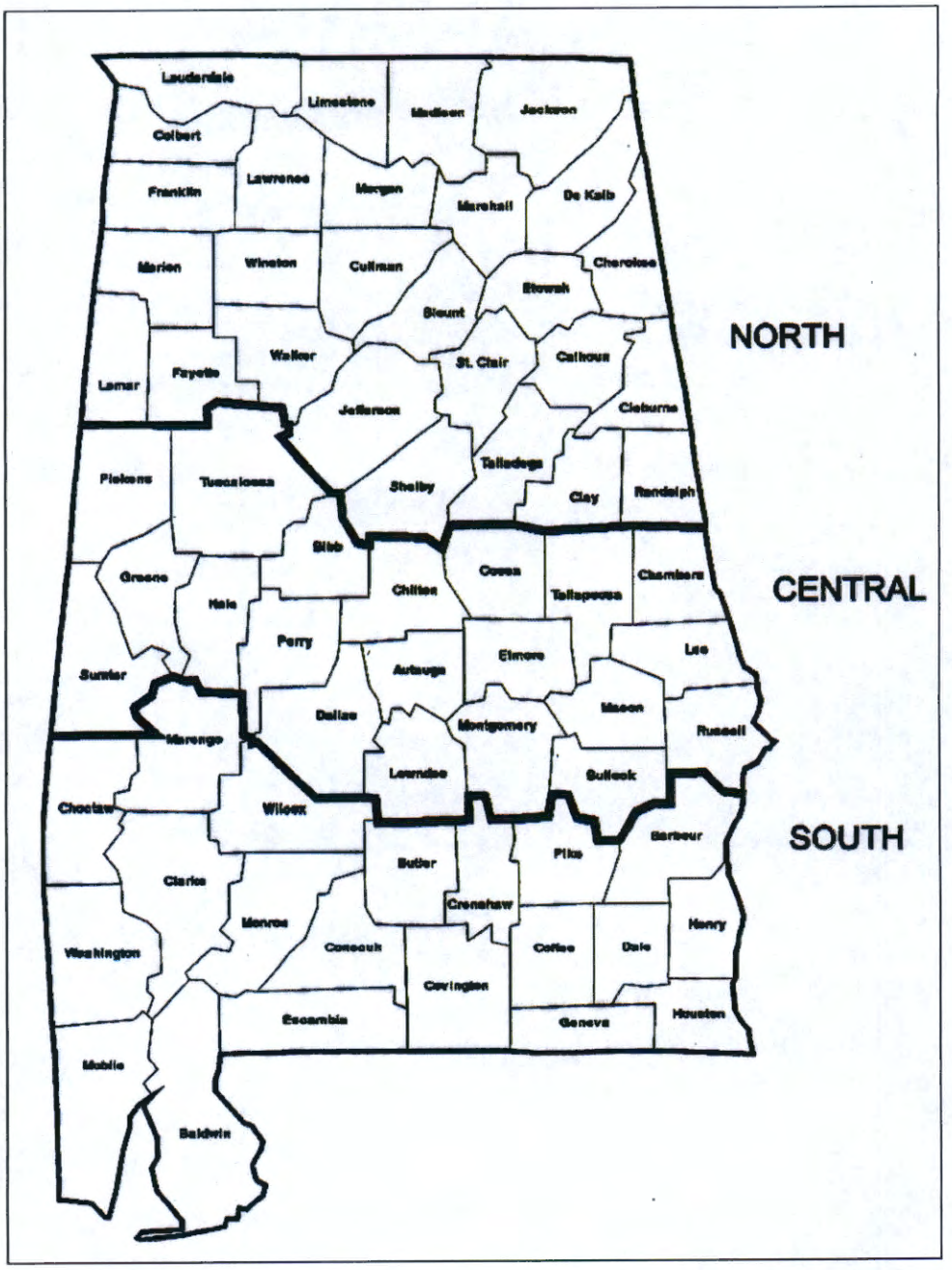
The use of irrigation (temporary or permanent) will greatly improve the success of vegetation establishment.

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 1 under the section Concepts on 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 Temporary Vegetation Seeding practice for additional information on establishing temporary vegetation. Ryegrass or other highly competitive plants should not be used as a companion plant.



PS-1 Geographical Areas for Species Adaptation and Seeding Dates

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

Species	Seeding Rates/Ac	North	Central	South
			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

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 taken 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 criteria:

- 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 criteria are not met: i.e., if the existing soil is too dense, coarse, shallow or acidic to foster vegetation – chiseling, special amendments or topsoil 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.

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. 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)
Light-textured, sandy soils: Use 1 ton/acre (exception on sandy soils – if the cover will be tall fescue and clover) use 2 tons/acre.
Heavy-textured, 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^2).
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.

Complete the seedbed that will adequately loosen the soil 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, drill, 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 in 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 roughened slope will provide some natural coverage for lime, fertilizer, and seed. The surface should not be compacted or smooth. Fine seeded 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 cane 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 about 2 feet apart in the row 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 will help ensure establishment of vegetation under normal conditions and is essential to seeding success under harsh site conditions (see Mulching practice). Harsh site conditions include: seeding in late fall (wood fiber mulches are not adequate for this use), slopes steeper than 3:1, adverse soils (shallow, rocky, or high in clay or sand), and areas receiving concentrated flow.

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 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 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 seeding temporary cover 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.

Fertilization on the typical disturbed site, full establishment usually requires application of fertilizer 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 establishing vegetation from traffic that will be harmful. Use either temporary fences or barriers to protect areas that may be damaged by excessive traffic.

4.4. Check Dam

Check Dam (CD)

Practice Description

A check dam is a small barrier or dam constructed across a swale, drainage ditch or other area of concentrated flow for the purpose of reducing channel erosion. Channel erosion is reduced because check dams flatten the gradient of the flow channel and slow the velocity of channel flow. Most check dams are constructed of rock, but hay bales, logs and other materials may be acceptable. Contrary to popular opinion, most check dams trap an insignificant volume of sediment.

This practice applies in small open channels and drainageways, including temporary and permanent swales. It is not to be used in a live stream. Situations of use include areas in need of protection during establishment of grass and areas that cannot receive a temporary or permanent non-erodible lining for an extended period of time.

Planning Considerations

Check dams are utilized in concentrated flow areas to provide temporary channel stabilization during the intense runoff periods associated with construction disturbances. Check dams may be constructed of rock, logs, hay bales or other suitable material. Most check dams are constructed of rock. Rock may not be acceptable in some installations because of aesthetics and hay bales or logs may need to be considered.

Rock check dams (Figures CD-1 and CD-2) are easier to install with backhoes or other suitable equipment. The rock is usually purchased and some locations in the state may not have rock readily available. Rock should be considered carefully in areas to be mowed. Some rock may be washed downstream and should be removed before each mowing operation.

Log check dams (Figure CD-3) are more economical from a material cost standpoint since logs can usually be salvaged from clearing operations. The time and labor required would be greater for log check dams. Increased labor costs would offset the reduced material costs. Log check dams would not be permanent but would last long enough to get grass linings established.

Check dams constructed of hay bales (Figure CD-4) have the shortest life of the materials discussed and are only used as a temporary means to help establish a channel to vegetation. Hay bale check dams should not be used where permanent watercourse protection is needed and should only be used in concentrated flow areas where only minimal runoff occurs.

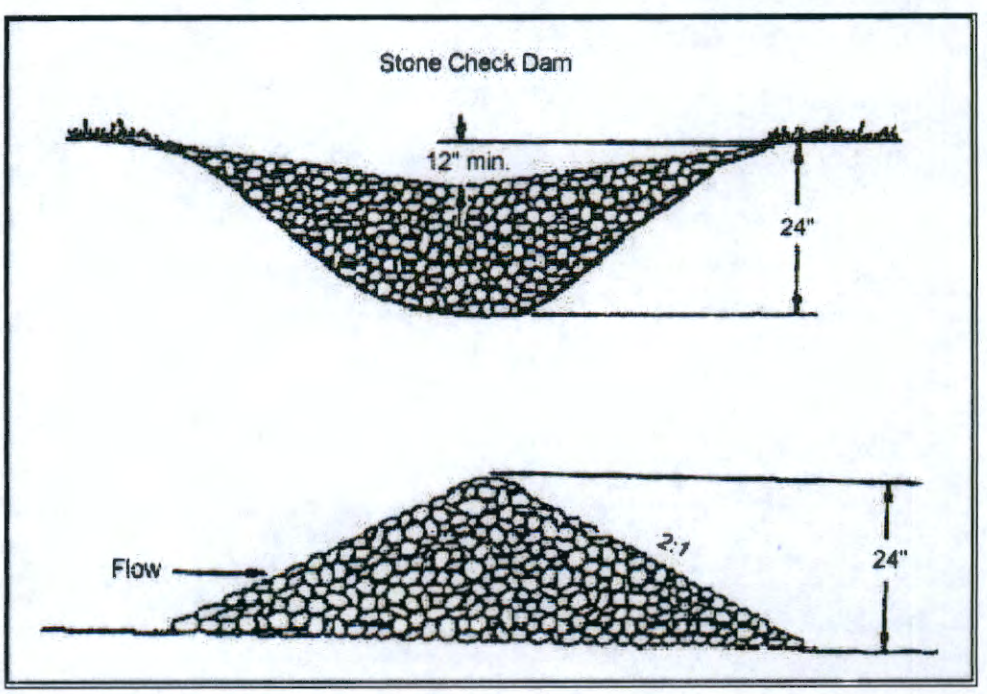


Figure CD-1 Profile of Typical Rock Check Dams

Check dams should be planned to be compatible with the other features such as streets, walks, trails, sediment basins and rights-of-way or property lines. Check dams are normally constructed in series and the dams should be located at a normal interval from other grade controls such as culverts or sediment basins.

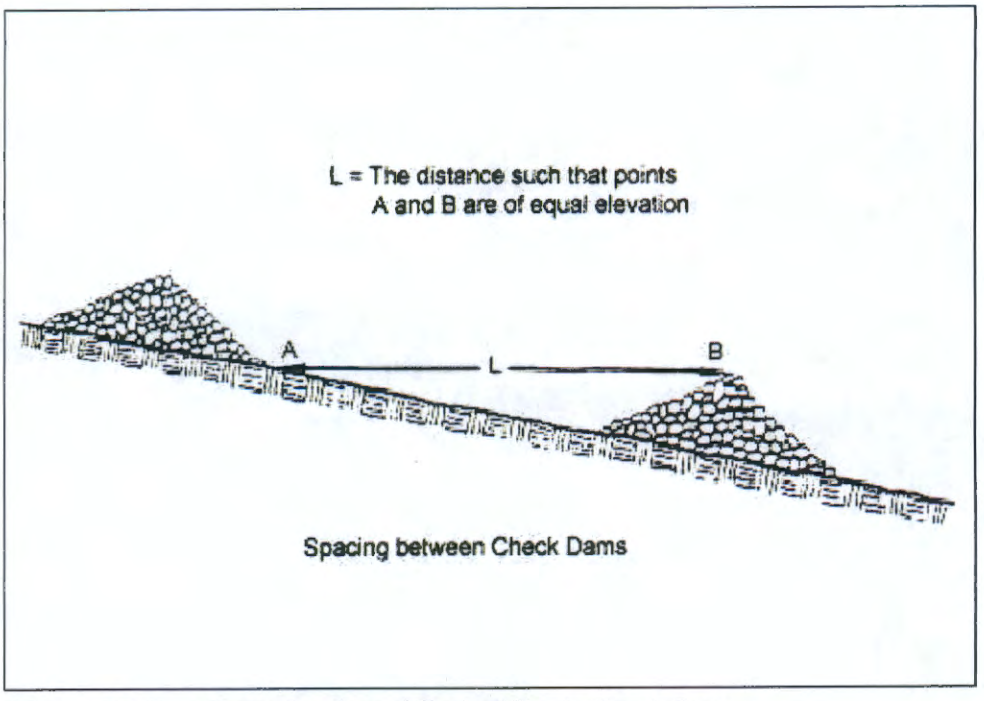


Figure CD-2 Cross Section of Typical Rock Check Dam

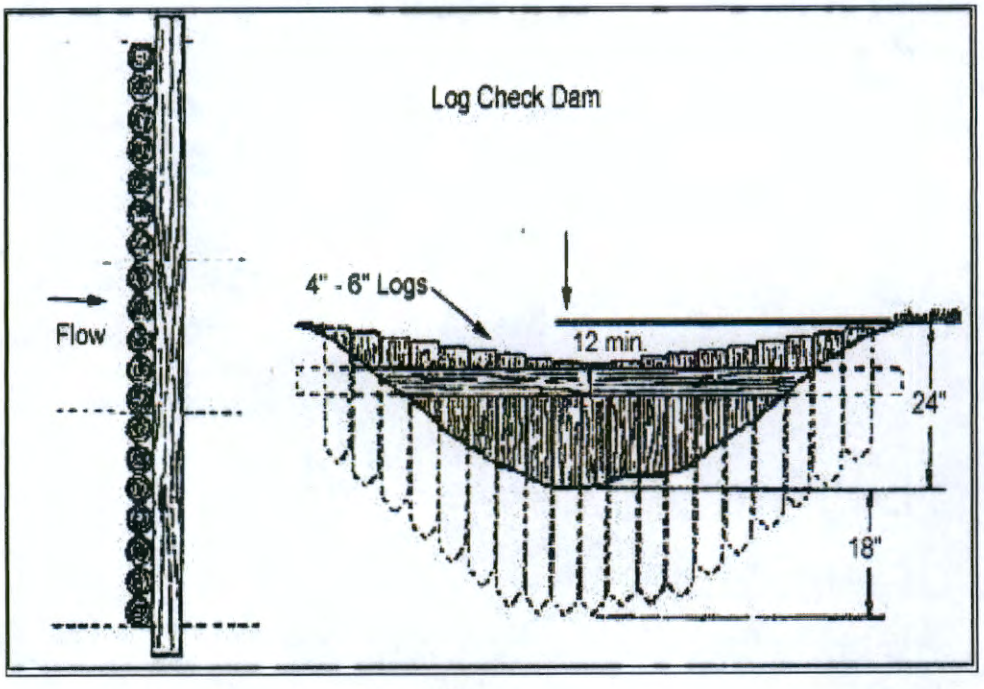
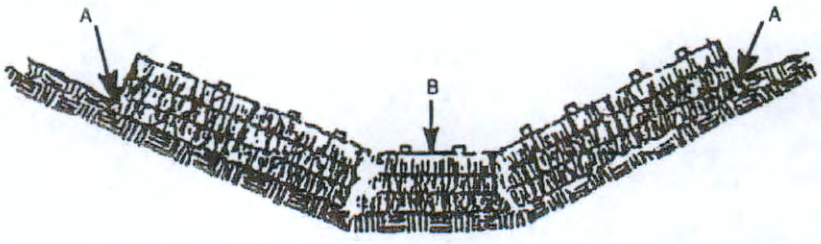
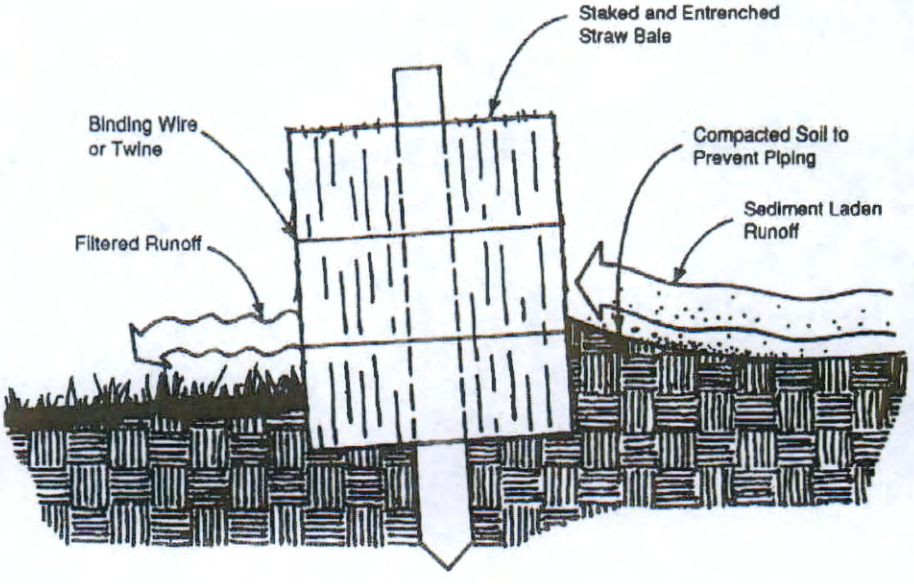


Figure CD-3 Typical Log Check Dam



Points A should be higher than point B

PROPER PLACEMENT OF STRAW BALE BARRIER IN DRAINAGE WAY



Note: Embed hay bales a minimum of 4 inches.

CROSS-SECTION OF A PROPERLY INSTALLED STRAW BALE

Figure CD-4 Typical Hay Bale Check Dam

Design Criteria

Formal design is not required. The following limiting factors should be adhered to when designing check dams.

Drainage Area

Ten acres or less (Rock or logs).

Maximum Height

Two feet when drainage area is less than 5 acres.

Three feet when drainage area is 5 to 10 acres.

Depth of Flow

Six inches when drainage area is less than 5 acres.

Twelve inches when drainage area is 5 to 10 acres.

The top of dam, perpendicular to flow, should be parabolic. The center of the dam should be constructed lower than the ends. The elevation of the center of the dam should be lower than the ends by the depth of flow listed above.

Side Slopes

2:1 or flatter.

Spacing

Elevation of toe of upstream dam is at or below elevation of crest of downstream dam.

Keyway

The rock or log check dam should be keyed into the channel bottom and abutments to a depth of 12 to 24". The keyway width should be at least 12". The keyway is to prevent erosion around the end of and beneath the dam. Hay bale check dams should be embedded into the soil at least 3".

Rock Check Dams

Rock check dams should be constructed of durable rock riprap. Riprap gradation should conform to the requirements of Class I Riprap, Alabama Highway Department, Standard Specification for Highway Construction.

In soils where failure by piping of soils into the rock is likely, a geotextile will be used as a filter to separate the soils from the rock. Geotextile should conform to the requirements of type I geotextile in Table CD-1:

Table CD-1 Requirements for Nonwoven Geotextile

Property	Test method	Class I	Class II	Class III	Class IV [1]
Tensile strength (lb) [2]	ASTM D 4632 grab test	180 minimum	120 minimum	90 minimum	115 minimum
Elongation at failure (%) [2]	ASTM D 4632	≥ 50	≥ 50	≥ 50	≥ 50
Puncture (pounds)	ASTM D 4833	80 minimum	60 minimum	40 minimum	40 minimum
Ultraviolet light (% residual tensile strength)	ASTM D 4355 150-hr exposure	70 minimum	70 minimum	70 minimum	70 minimum
Apparent opening size (AOS)	ASTM D 4751	As specified max. no.40 [3]	As specified max. no.40 [3]	As specified max. no.40 [3]	As specified max. no.40 [3]
Permittivity sec^{-1}	ASTM D 4491	0.70 minimum	0.70 minimum	0.70 minimum	0.10 minimum

Table copied from NRCS Material Specification 592.

1 Heat-bonded or resin-bonded geotextile may be used for classes III and IV. They are particularly well suited to class IV. Needle-punched geotextile are required for all other classes.
2 Minimum average roll value (weakest principal direction).
3 U.S. standard sieve size.

4.5. Outlet Protection

Outlet Protection (OP)

Practice Description

This practice is designed to prevent erosion at the outlet of a channel or conduit by reducing the velocity of flow and dissipating the energy. Outlet protection measures usually consist of a riprap-lined apron, a reinforced concrete flume with concrete baffles or a reinforced concrete box with chambers or baffles. This practice applies wherever high velocity discharge must be released on erodible material.

Planning Considerations

The outlets of pipes and structurally lined channels are points of critical erosion potential. Stormwater which is transported through man-made conveyance systems at design capacity generally reaches a velocity which exceeds the ability of the receiving channel or area to resist erosion. To prevent scour at stormwater outlets, a flow transition structure is required which will absorb the initial impact of the flow and reduce the flow velocity to a level which will not erode the receiving channel or area.

The most commonly used structure for outlet protection is an erosion resistant lined apron. These aprons are generally lined with loose rock riprap, grouted riprap or concrete. They are constructed at zero grade for a distance which is related to the outlet flow rate and the tailwater level. Criteria for designing these structures are

contained in this practice. Several outlet conditions are shown in Figure OP-1. Example design problems for outlet protection are found at the end of this practice.

Where the flow is excessive for the economical use of an apron, excavated stilling basins may be used. Acceptable designs for stilling basins may be found in the following documents available from the U. S. Government Printing Office.

1) Hydraulic Design of Energy Dissipaters for Culverts and Channels, Hydraulics Engineering Circular No.14, U. S. Department of Transportation, Federal Highway Administration.

2) Hydraulic Design of Stilling Basins and Energy Dissipaters, Engineering Monograph No.25 U. S. Department of Interior-Bureau of Reclamation.

Design Criteria

Structurally lined aprons at the outlets of pipes and paved channel sections should be designed according to the following criteria:

Pipe Outlets

Capacity

The structurally lined apron should have the capacity to carry the peak stormflow from the 25-year 24-hour frequency storm or the storm specified in state laws or local ordinances or the design discharge of the water conveyance structure, whichever is greatest.

Tailwater

The depth of tailwater immediately below the pipe outlet must be determined for the design capacity of the pipe. Manning's Equation may he used to determine tailwater depth. Manning's Equation may be found in the practice Grass Swales. If the tailwater depth is less than half the diameter of the outlet pipe, it shall be classified as a Minimum Tailwater Condition. If the tailwater depth is greater than half the pipe diameter, it shall be classified as a Maximum Tailwater Condition. Pipes which outlet to flat areas, with no defined channel, may be assumed to have a Minimum Tailwater Condition.

Apron Length

The apron length should be determined from Figure OP-2 or OP-3 according to the tailwater condition.

Apron Thickness

The apron thickness should be determined by the maximum stone size (dmax), when the apron is lined with riprap. The maximum stone size shall be 1.5 x d_{50} (median stone size), as determined from Figure OP-2 or OP-3. The apron thickness shall be 1.5 x dmax.

When the apron is lined with concrete, the minimum thickness of the concrete shall be 4".

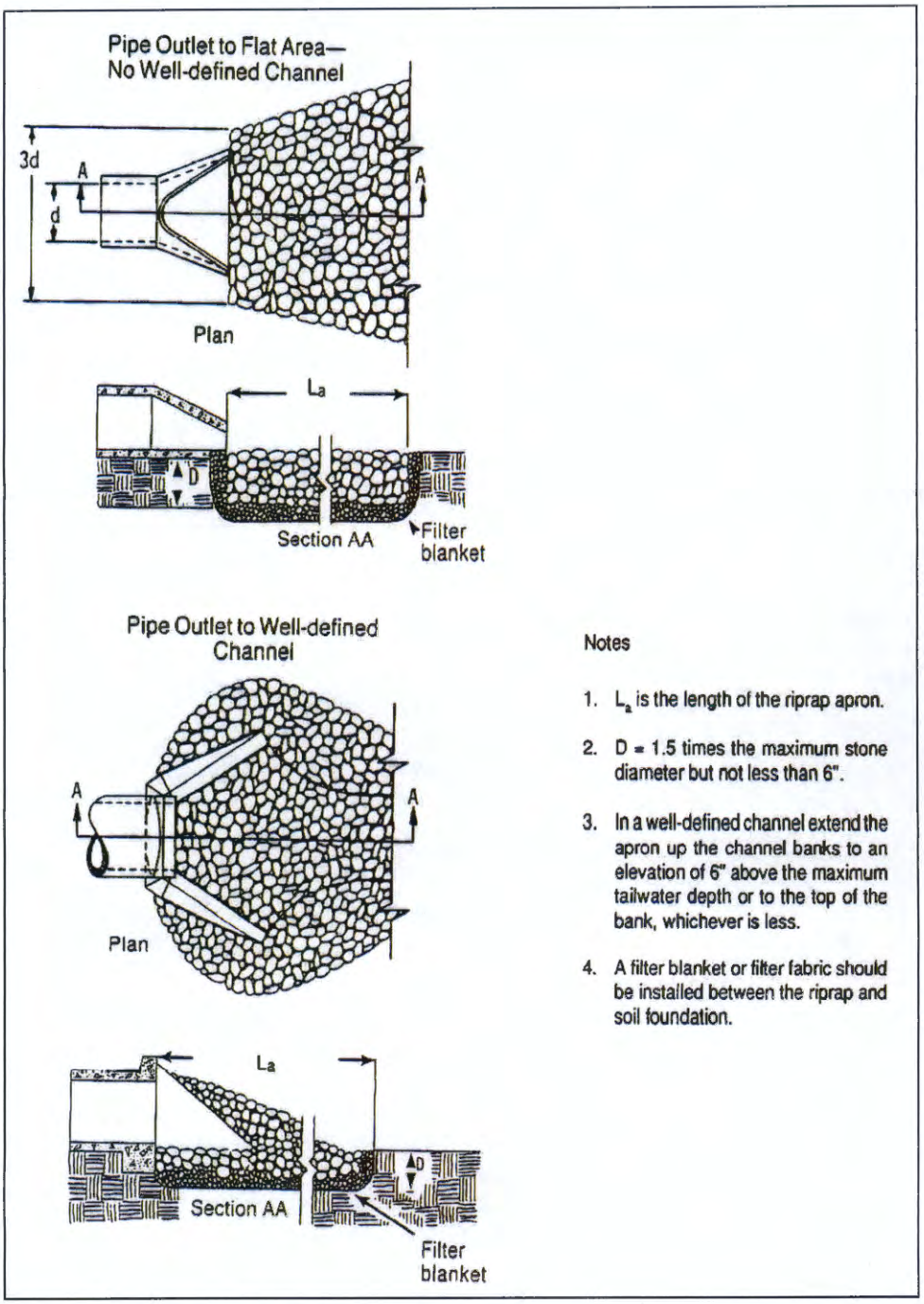


Figure OP-1 Pipe Outlet Conditions

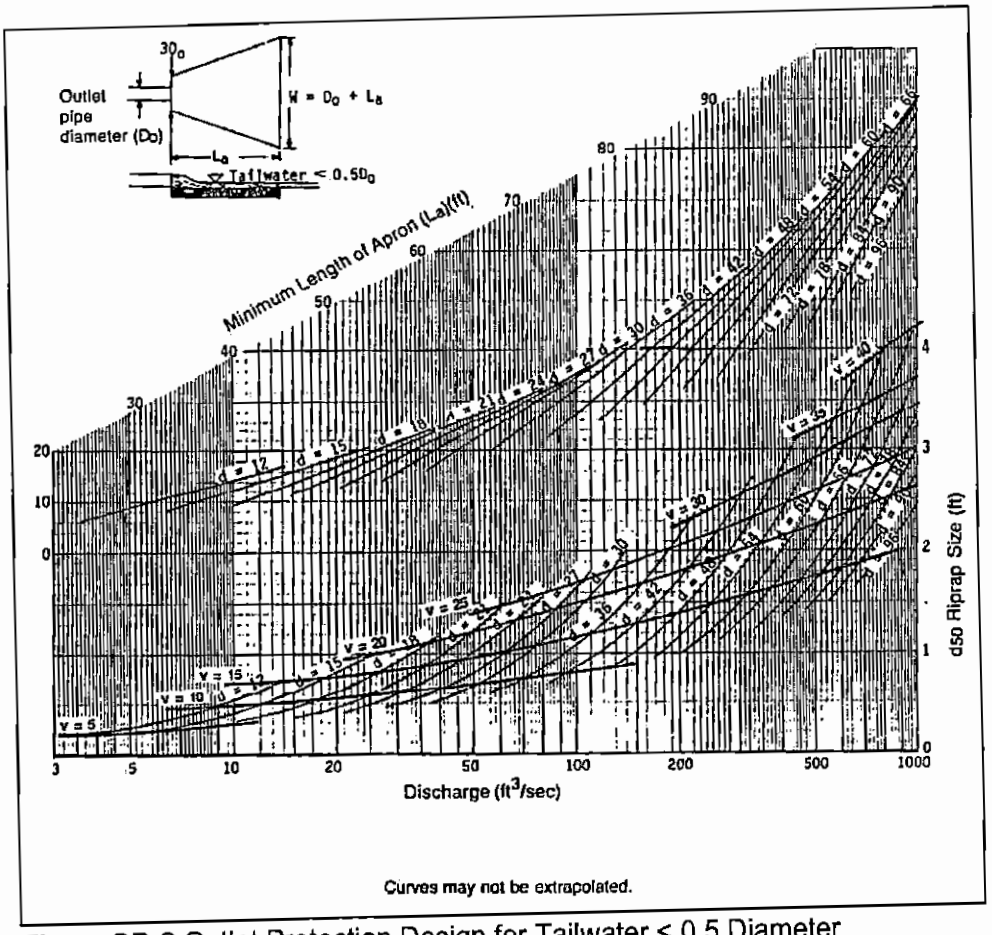


Figure OP-2 Outlet Protection Design for Tailwater < 0.5 Diameter

Apron Width

If the pipe discharges directly into a well-defined channel, the apron should extend across the channel bottom and up the channel banks to an elevation 1 foot above the maximum tailwater depth or to the top of the bank, whichever is the least.

If the pipe discharges onto a flat area with no defined channel, the width of the apron should be determined as follows:

- The upstream end of the apron, adjacent to the pipe, should have a width 3 times the diameter of the outlet pipe.
- For a Minimum Tailwater Condition, the downstream end of the apron should have a width equal to the pipe diameter plus the length of the apron obtained from the figures.

- For a Maximum Tailwater Condition, the downstream end shall have a width equal to the pipe diameter plus 0.4 times the length of the apron from Figures OP-2 or OP-3.

Bottom Grade

The apron should be constructed with no slope along its length (0.0% grade). The invert elevation of the downstream end of the apron shall be equal to the elevation of the invert of the receiving channel. There shall be no overfall at the end of the apron.

Side Slope

If the pipe discharges into a well-defined channel, the side slopes of the channel should not be steeper than 2:1 (Horizontal:Vertical).

Alignment

The apron should be located so that there are no bends in the horizontal alignment.

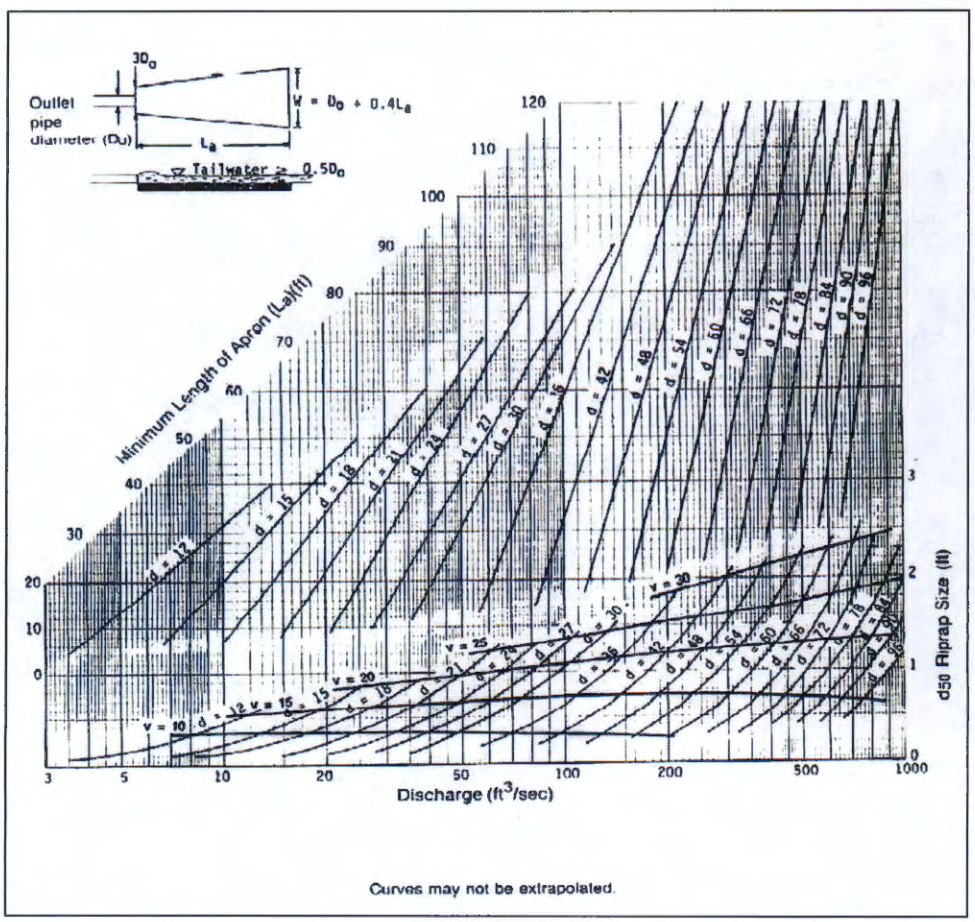


Figure OP-3 Outlet Protection Design for Tailwater ≥ 0.5 Diameter

Geotextile

When riprap is used to line the apron, geotextile should be used as a separator between the graded stone, the soil subgrade, and the abutments. Geotextile should be placed immediately adjacent to the subgrade without any voids between the fabric and the subgrade. The geotextile will prevent the migration of soil particles from the subgrade into the graded stone. The geotextile shall meet the requirements shown in the table below for class I geotextile:

Table OP-1 Requirements for Nonwoven Geotextile

Property	Test method	Class I	Class II	Class III	Class IV [1]
Tensile strength (lb)[2]	ASTM D 4632 grab test	180 minimum	120 minimum	90 minimum	115 minimum
Elongation at failure (%)[2]	ASTM D 4632	≥ 50	≥ 50	≥ 50	≥ 50
Puncture (pounds)	ASTM D 4833	80 minimum	60 minimum	40 minimum	40 minimum
Ultraviolet light (% residual tensile strength)	ASTM D 4355 150-hr exposure	70 minimum	70 minimum	70 minimum	70 minimum
Apparent opening size (AOS)	ASTM D 4751	As specified max. no.40[3]	As specified max. no.40[3]	As specified max. no.40[3]	As specified max. no.40[3]
Permittivity sec^{-1}	ASTM D 4491	0.70 minimum	0.70 minimum	0.70 minimum	0.10 minimum

Table copied from NRCS Material Specification 592.

1 Heat-bonded or resin-bonded geotextile may be used for classes III and IV. They are particularly well suited to class IV. Needle-punched geotextile are required for all other classes.
2 Minimum average roll value (weakest principal direction).
3 U.S. standard sieve size.

Materials

The apron may be lined with loose rock riprap, grouted riprap, or concrete. The median sized stone for riprap should be determined from the curves on Figure OP-2 and OP-3 according to the tailwater condition.

After the median stone size is determined, the gradation of rock to be used should be specified using Tables OP-2 and OP-3. Table OP-2 is used to determine the weight of the median stone size (d_{50}). Using this median weight, a gradation can be selected from Table OP-3, which shows the commercially available riprap gradations as classified by the Alabama Department of Transportation.

Stone for riprap should consist of field stone or rough unhewn quarry stone of approximately rectangular shape. The stone should be hard and angular and of such quality that it will not disintegrate on exposure to water or weathering and it shall be suitable in all other respects for the purpose intended. The specific gravity of the individual stones should be at least 2.5.

When the apron is lined with concrete, the concrete should have a minimum compressive strength at 28 days of 3000 pounds per square inch. American Concrete Institute guidelines should be used to design concrete structures and reinforcement. As a minimum, the concrete should be reinforced with steel welded wire fabric.

Table OP-2 Size of Riprap Stones

Weight	Mean Spherical Diameter (feet)	Rectangular Shape	
		Length	Width, Height (feet)
50	0.8	1.4	0.5
100	1.1	1.75	0.6
150	1.3	2.0	0.67
300	1.6	2.6	0.9
500	1.9	3.0	1.0
1000	2.2	3.7	1.25
1500	2.6	4.7	1.5
2000	2.75	5.4	1.8
4000	3.6	6.0	2.0
6000	4.0	6.9	2.3
8000	4.5	7.6	2.5
20000	6.1	10.0	3.3

Table OP-3 Graded Riprap

Class	Weight (lbs.)					
	d_{10}	d_{15}	d_{25}	d_{50}	d_{75}	d_{90}
1	10	-	-	50	-	100
2	10	-	-	80	-	200
3	-	25	-	200	-	500
4	-	-	50	500	1000	-
5	-	-	200	1000	-	2000

Paved Channel Outlets (Figure OP-4)

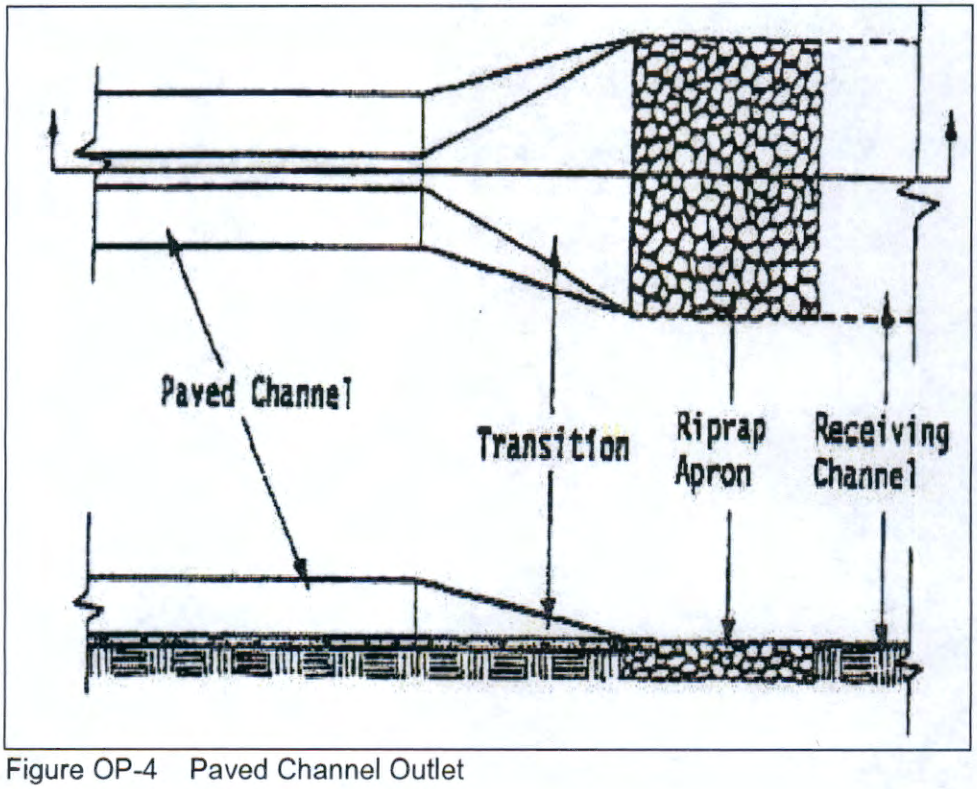


Figure OP-4 Paved Channel Outlet

1) The flow velocity at the outlet of paved channels flowing at design capacity should not exceed the velocity, which will cause erosion and instability in the receiving channel.

2) The end of the paved channel should merge smoothly with the receiving channel section. There should be no overfall at the end of the paved section. Where the bottom width of the paved channel is narrower than the bottom

width of the receiving channel, a transition section should be provided. The maximum side divergence of the transition shall be 1 in 3F where

F = v/gd , and
F = Froude no.
V = Velocity at beginning of transition (ft./sec.)
d = Dept of flow at beginning of transition (feet.)
g = 32.2 ft./sec.^{2}

3) Bends or curves in the horizontal alignment of the transition are not allowed unless the Froude no. (F) is 0.8 or less, or the section is specifically designed for turbulent flow.

Example Design Problems

Example 1

Given: An 18" pipe discharges 24 cu. ft/sec at design capacity onto a grassy slope (no defined channel).

Find: The required length, width and median stone size (d_{50}) for a riprap-lined apron.

Solution

Since the pipe discharges onto a grassy slope with no defined channel, a Minimum Tailwater Condition may be assumed.

From Figure OP-2, an apron length (La) of 20 feet and a median stone size (d_{50}) of 0.8 feet is determined.

The upstream apron width equals 3 times the pipe diameter: 3 x 1.5 feet = 4.5 feet.

The downstream apron width equals the apron length plus the pipe diameter:
20 feet + 1.5 foot.= 21.5 feet.

Example 2

Given: The pipe in example No. 1 discharges into a channel with a triangular cross section, 2 feet deep and 2:1 side slopes. The channel has a 2% slope and an "n" coefficient of 0.045.

Find: The required length, width and the median stone size (d_{50}) for a riprap lining.

Solution

Determine the tailwater depth using Manning's Equation and the Continuity Equation.

$$Q = 1.49/n \; R^{2/3} S^{1/2} A$$

$$24 = 1.49/n \; [2d/4.47]^{2/3} (.02)^{1/2} (2d^2)$$

where, d = depth of tailwater
d = 1.74 feet. *

*Since d is greater than half the pipe diameter, a Maximum Tailwater Condition exists.

From Figure OP-3, a median stone size (d_{50}) of 0.5 feet. and an apron length (La) of 41 feet. is determined.

The entire channel cross section should be lined, since the maximum tailwater depth is within 1 foot of the top of the channel.

4.6. Rock Filter Dam

Rock Filter Dam (RD)

Practice Description

A rock filter dam is a stone embankment designed to capture sediment in natural drainageways on construction sites and prevent delivery of sediment off-site. This practice can be used as an alternative to a standard sediment basin for locations with a drainage area of 10 acres or less. It may be preferable to standard sediment basins for sites where an earthen embankment would be difficult to construct. It is usually located so that it intercepts runoff primarily from disturbed areas, is accessible for periodic sediment removal and does not interfere with construction activities

Planning Considerations

Rock filter dams are used across drainageways to filter sediment and reduce off-site sediment delivery. Since rock filter dams are installed in flowing water, all local, state and federal laws and regulations must be followed during the design and construction process.

Dams should be designed so that impounded water behind the structures will not encroach on adjoining property owners upstream or on other sediment and erosion control measures that outlet into the impoundment area.

Dams should be located so that the basin intercepts runoff primarily from disturbed areas, has adequate storage, and so that the basin can be accessed for sediment removal. Dams should also be located, as much as possible, in areas that do not interfere with construction activities.

Rock filter dams are not permanent structures. The design life of the structure is 3 years or less.

Design Criteria

Drainage Area

The drainage area above the dam should not exceed 10 acres.

Dam Height

The height of dam will be limited by the channel bank height or 8 feet, whichever is less. The dam height should also not exceed the elevation of the upstream property line. Water will bypass over the top of the dam and the back slope of the rock dam should be designed to be stable.

Spillway Capacity

The top of the dam should be designed to handle the peak runoff from a 10 year, 24 hour design storm with a maximum flow depth of 1 foot and freeboard of 1 foot. Therefore, the center portion of the dam should be at least 2 feet lower than the outer edges at the abutment. See Figure RD-1.

Dam Top Width

The minimum top width should be 6 feet. See Figure RD-2.

Dam Side Slopes

Side slopes should be 3:1 or flatter on the back slope and 2.5:1 or flatter on the front slope.

Outlet Protection

The downstream toe of the dam should be protected from erosion by placing a riprap apron at the toe. The apron should be placed on a zero grade with a riprap thickness of 1.5 feet. The apron should have a length equal to the height of the dam as a minimum and longer if needed to protect the toe of the dam.

Location

The dam should be located as close to the source of sediment as possible and so that it will not causes water to back up onto adjoining property.

Basin Requirements

The basin behind the dam should provide a surface area that maximizes the sediment trapping efficiency. The basin should have a sediment storage capacity of 67 cubic yards per acre of drainage area.

Riprap Requirements

Stone for riprap should consist of field stone or rough unhewn quarry stone of approximately rectangular shape. The stone should be hard and angular and of such quality that it will not disintegrate on exposure to water or weathering and it should be suitable in all other respects for the purpose intended. The specific gravity of the individual stones should be at least 2.5.

The minimum median stone size should be 9". The gradation of rock to be used should be specified using Tables RD-1 and RD-2. Table RD-1 is used to determine the weight of the median stone size (d_{50}). Using this median weight, a gradation can be selected from Table RD-2, which shows the commercially available riprap gradations as classified by the Alabama Department of Transportation.

The dam should be faced with 1 foot of smaller stone (½" to ¾" gravel) on the upstream side to increase filtering.

Table RD-1 Size of Riprap Stones

Weight	Mean Spherical Diameter (ft)	Rectangular Shape	
		Length	Width, Height (ft)
50	0.8	1.4	0.5
100	1.1	1.75	0.6
150	1.3	2.0	0.67
300	1.6	2.6	0.9
500	1.9	3.0	1.0
1000	2.2	3.7	1.25
1500	2.6	4.7	1.5
2000	2.75	5.4	1.8
4000	3.6	6.0	2.0
6000	4.0	6.9	2.3
8000	4.5	7.6	2.5
20000	6.1	10.0	3.3

Table RD-2 Graded Riprap

Class	Weight (lbs.)					
	d_{10}	d_{15}	d_{25}	d_{50}	d_{75}	d_{90}
1	10	-	-	50	-	100
2	10	-	-	80	-	200
3	-	25	-	200	-	500
4	-	-	50	500	1000	-
5	-	-	200	1000	-	2000

Geotextiles

Geotextiles should be used as a separator between the graded stone, the soil base and the abutments. Class I geotextile as specified in Table RD-3 below should be used. Geotextile should be placed immediately adjacent to the subgrade without any voids between the fabric and the subgrade.

Table RD-3 Requirements for Nonwoven Geotextile

Property	Test method	Class I	Class II	Class III	Class IV [1]
Tensile strength (lb)[2]	ASTM D 4632 grab test	180 minimum	120 minimum	90 minimum	115 minimum
Elongation at failure (%)[2]	ASTM D 4632	≥ 50	≥ 50	≥ 50	≥ 50
Puncture (pounds)	ASTM D 4833	80 minimum	60 minimum	40 minimum	40 minimum
Ultraviolet light (% residual tensile strength)	ASTM D 4355 150-hr exposure	70 minimum	70 minimum	70 minimum	70 minimum
Apparent opening size (AOS)	ASTM D 4751	As specified max. no.40[3]	As specified max. no.40[3]	As specified max. no.40[3]	As specified max. no.40[3]
Permitivity sec^{-1}	ASTM D 4491	0.70 minimum	0.70 minimum	0.70 minimum	0.10 minimum

Table copied from NRCS Material Specification 592.

1 Heat-bonded or resin-bonded geotextile may be used for classes III and IV. They are particularly well suited to class IV. Needle-punched geotextile are required for all other classes.

2 Minimum average roll value (weakest principal direction).

3 U.S. standard sieve size.

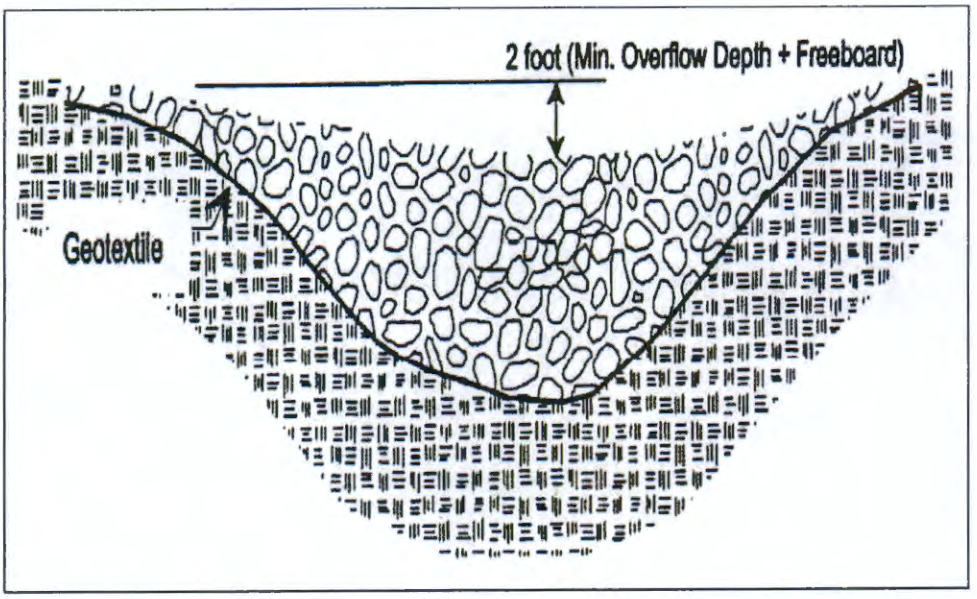


Figure RD-1 Typical Front View of Rock Filter Dam

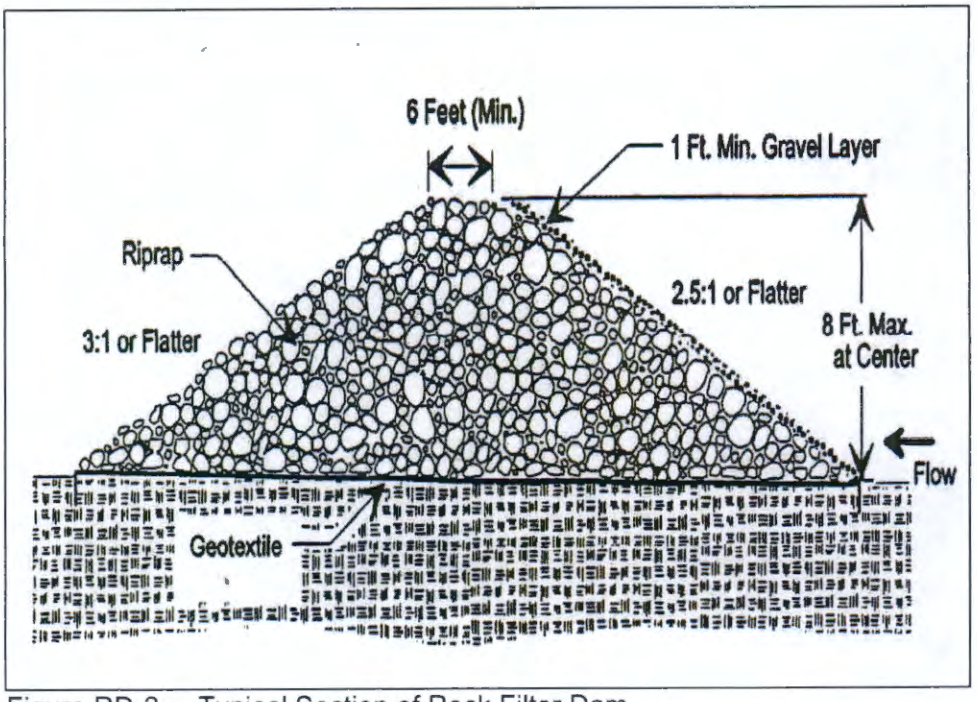


Figure RD-2 Typical Section of Rock Filter Dam

4.7. Sediment Barrier

Sediment Barrier (SB)

Practice Description

A sediment barrier is a temporary structure used across a landscape to reduce the quantity of sediment that is moving farther downslope. Commonly used barriers include silt fence (a geotextile fabric which is trenched into the ground and attached to supporting posts) or hay bales trenched into the ground. Other barrier materials include sand bags, brush piles and various man-made materials that can be used in a similar manner as silt fence and hay bales.

This practice applies where sheet and rill erosion occurs on small disturbed areas. Barriers intercept runoff from upslope to form ponds that temporarily store runoff and allow sediment to settle out of the water and stay on the construction site. Barriers can also prevent sheet erosion by decreasing the velocity of the runoff.

Planning Considerations

Sediment barriers may be used on developing sites. They should be installed on the contour so that flow will not concentrate and cause bypassing, overtopping and/or failure.

The 2 most commonly used sediment barriers are silt fences and hay bales. Silt fences are usually preferable to hay bales because silt fences can trap a much higher percentage of suspended solids. The design and installation of hay bale sediment

barrier is the same as the installation for Straw Bale Sediment Traps. Silt fence is the only barrier covered in this edition of the handbook.

The success of silt fences depends on a proper installation so as to develop maximum efficiency of trapping. Silt fences should be carefully installed to meet the intended purpose.

A silt fence is specifically designed to retain sediment transported by sheet flow from disturbed areas, while allowing water to pass through the fence. Silt fences should be installed to be stable under the flows expected from the site. Silt fences should not be installed across streams, ditches, waterways, or other concentrated flow areas.

Silt fences are composed of woven geotextile supported between steel or wooden posts. Silt fences are commercially available with geotextile attached to the post and can be rolled out and installed by driving the post into the ground. This type of silt fence is simple to install, but more expensive than some other installations. Silt fences must be trenched in at the bottom to prevent runoff from undermining the fence and developing rills under the fence. Locations with high runoff flows or velocities should use wire reinforcement.

Design criteria

Silt fences are normally limited to situations in which only sheet or overland flow is expected. They normally cannot filter the volumes of water generated by channel flow. Silt fences are normally constructed of synthetic fabric (woven geotextile) and the life is expected to be the duration of most construction projects. Silt fence fabric should conform to the requirements of Table SB-1.

The drainage area behind the silt fence should not exceed ¼ acre per 100 linear feet of silt fence for non-reinforced fence and ½ acre per 100 feet of wire reinforced fence. When all runoff from the drainage area is to be stored behind the fence (i.e. there is no stormwater disposal system in place) the maximum slope length behind the fence should not exceed those shown in the table below:

Type A Silt Fence

Type A fence is 36" wide with wire reinforcements. The wire reinforcement is necessary because this fabric allows almost 3 times the flow rate as type B silt fence. Type A silt fence should be used where runoff flows or velocities are particularly high or where slopes exceed a vertical height of 10 feet.

Provide a riprap splash pad or other outlet protection device for any point where flow may overtop the sediment fence. Ensure that the maximum height of the fence at a protected, reinforced, outlet does not exceed 1 foot and that support post spacing does not exceed 4 feet.

The silt fence should be installed as shown in Figure SB-1 Materials for posts and fasteners are shown in Tables SB-3 and SB-4. Details for overlap of the silt fence and fastener placement are shown in Figure SB-4.

Table SB-1 Specifications for Silt Fence

Specifications	Type A	Type B	Type C
Tensile Strength (Lbs. Min.[1] ASTM D-4632)	Warp – 260 Fill – 100	Warp – 120 Fill – 100	Warp – 120 Fill – 100
Elongation (% Max.) (ASTM D-4632)	40	40	40
AOS (Apparent Opening Size) (Max. Sieve Size) (ASTM D-4751)	no.30	no.30	no.30
Flow Rate (Gal/Min/Sq. Ft.) (GDT-87)	70	25	25
Ultraviolet Stability[2] (ASTM D-4632 after 300 hours weathering in accordance with ASTM D-4355)	80	80	80
Bursting Strength (PSI Min.) (ASTM D-3786 Diaphragm Bursting Strength Tester)	175	175	175
Minimum Fabric Width (Inches)	36	36	22

[1] Minimum roll average of 5 specimens.
[2] Percent of required initial minimum tensile strength.

Table SB-2 Slope Limitations for Silt Fence

Land Slope (Percent)	Maximum Slope Length Above Fence (Feet)
<2	100
2 to 5	75
5 to 10	50
10 to 20*	25
>20	15

*In areas where the slope is greater than 10%, a flat area length of 10 feet between the toe of the slope to the fence should be provided.

Type B Silt Fence

This 36" wide filter fabric should be used on developments where the life of the project is greater than or equal to 6 months.

The silt fence should be installed as shown in Figure SB-2. Materials for posts and fasteners are shown in Tables SB-3 and SB-4. Details for overlap of the silt fence and fastener placement are shown in Figure SB-4.

Type C Silt Fence

Though only 22" wide, this filter fabric allows the same flow rate as Type B silt fence. Type C silt fence should be limited to use on minor projects, such as residential home sites or small commercial developments where permanent stabilization will be achieved in less than 6 months.

The silt fence should be installed as shown in Figure SB-3. Materials for posts and fasteners are shown in Tables SB-3 and SB-4. Details for overlap of the silt fence and fastener placement are shown in Figure SB-4.

Table SB-3 Post Size for Silt Fence

	Minimum Length	Type of Post	Size of Post
Type A	4'	Steel	1.3lb./ft. min.
Type B	4'	Soft Wood Oak Steel	3" diameter or 2X4 1.5" X 1.5" 1.3lb./ft. min.
Type C	3'	Soft Wood Oak Steel	2" diameter or 2X2 1" X 1" .75lb./ft. min.

Table SB-4 Wood Post Fasteners for Silt Fence

	Gauge	Crown	Legs	Staples/Post
Wire Staples	17 min.	¾" wide	½" long	5 min.
	Gauge	Length	Button Heads	Nail/Post
Nails	14 min.	1"	¾" long	4 min.

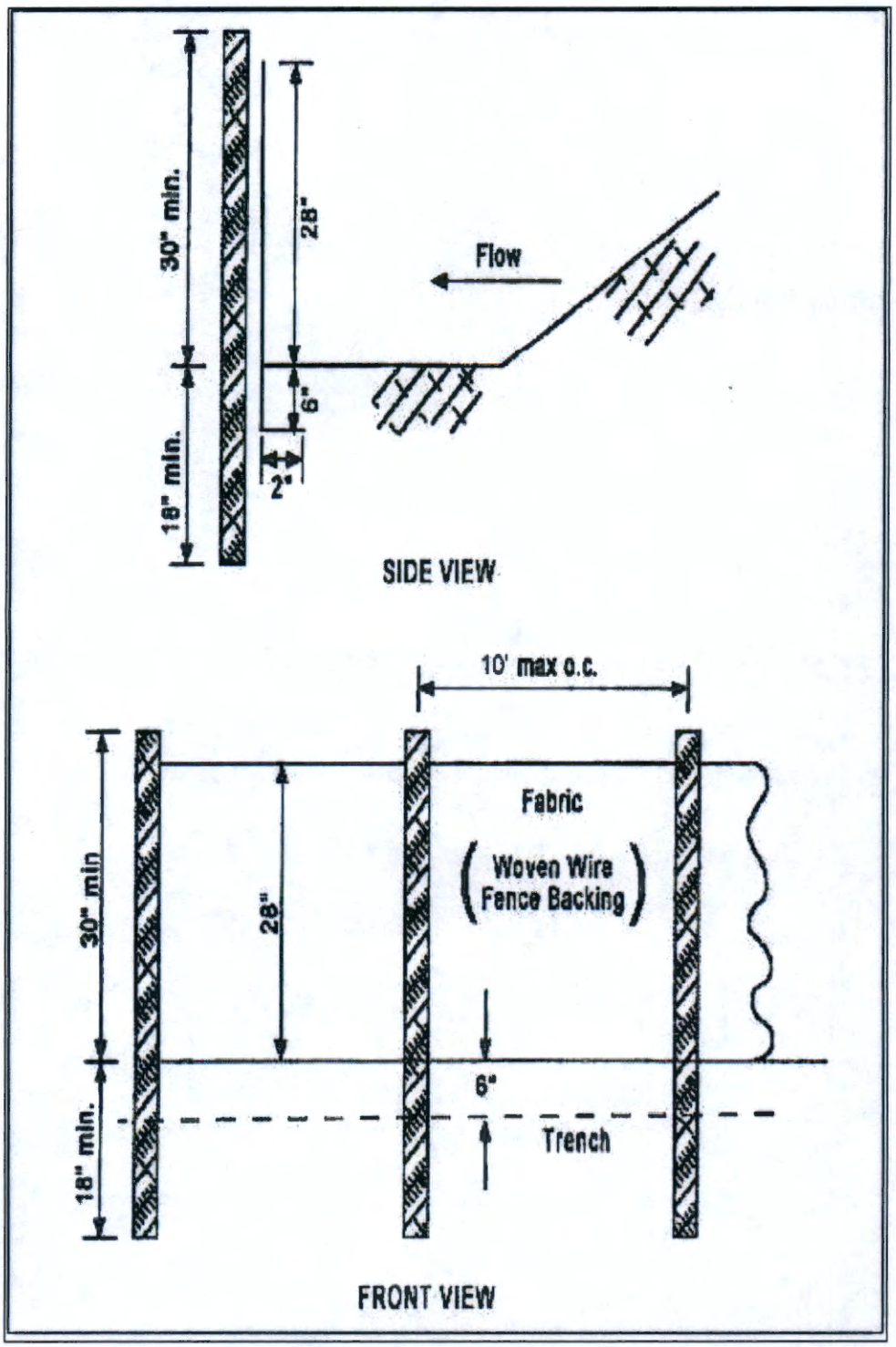


Figure SB-1 Silt Fence-Type A

(1) For fabric material requirements see Table SB-1
(2) For post material requirements see Tables SB-3 and SB-4

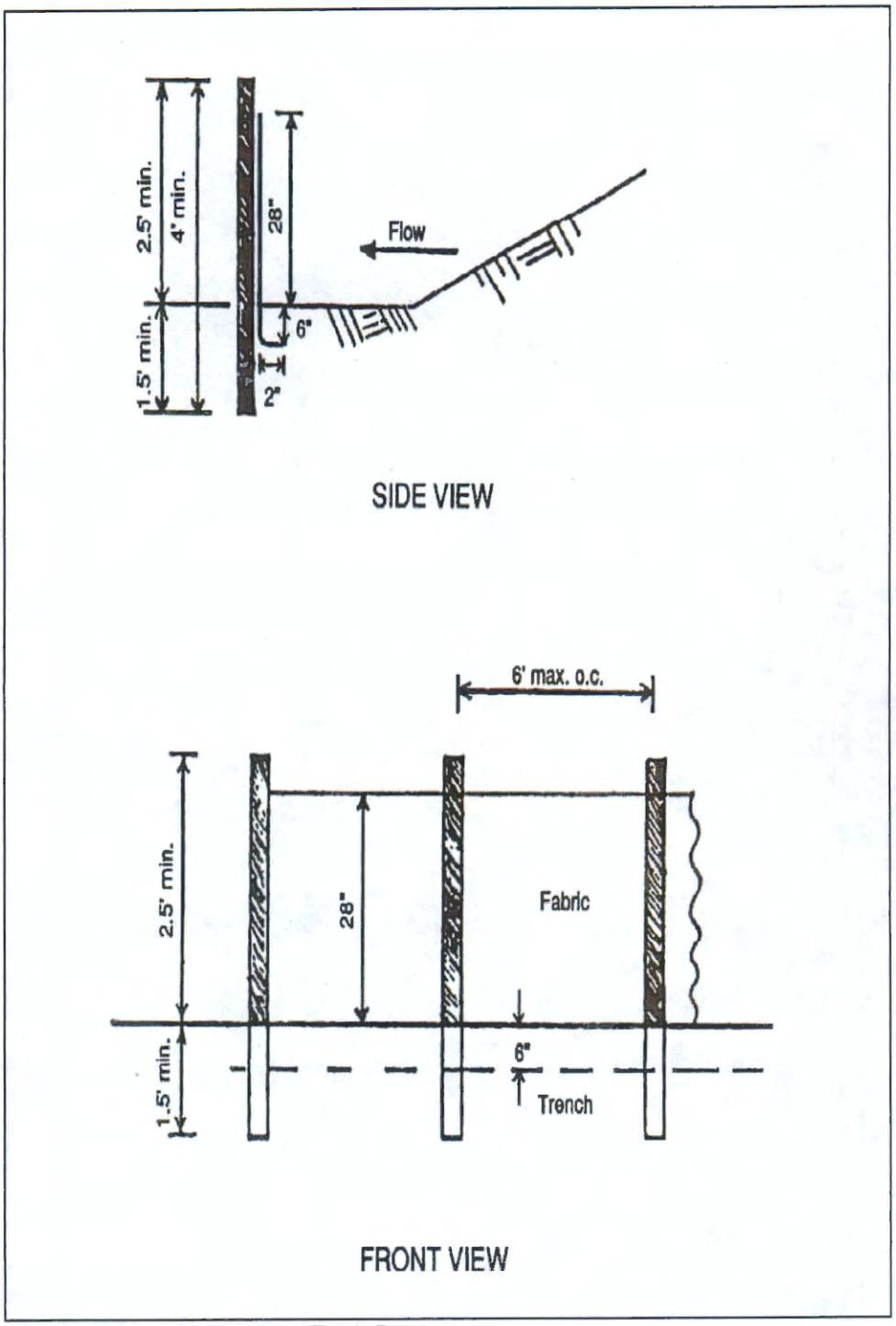


Figure SB-2 Silt Fence - Type B

(1) For fabric material requirements see Table SB-1
(2) For post material requirements see Tables SB-3 and SB-4

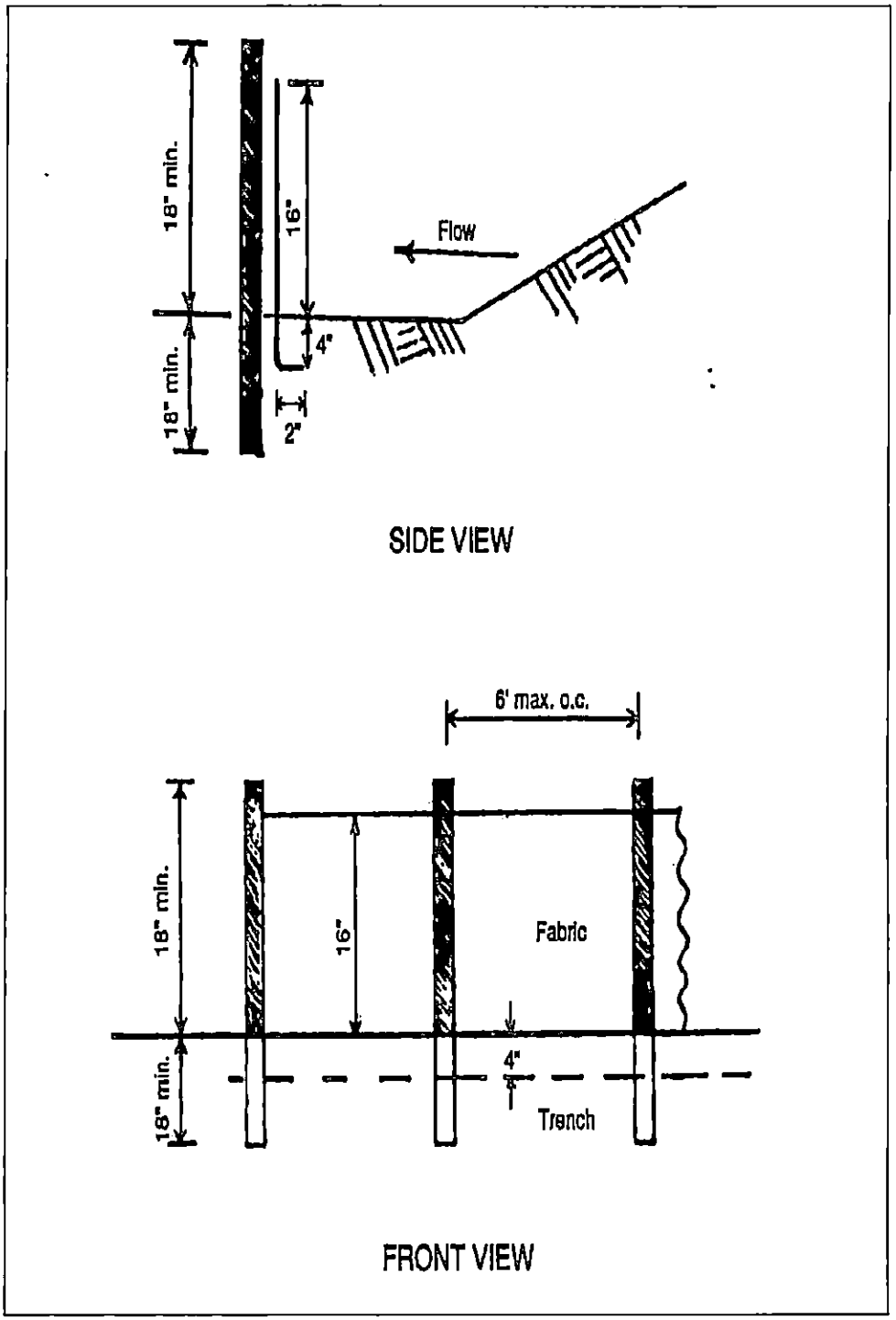


Figure SB-3 Silt Fence – Type C

(1) For fabric material requirements see Table SB-1
(2) For post material requirements see Tables SB-3 and SB-4

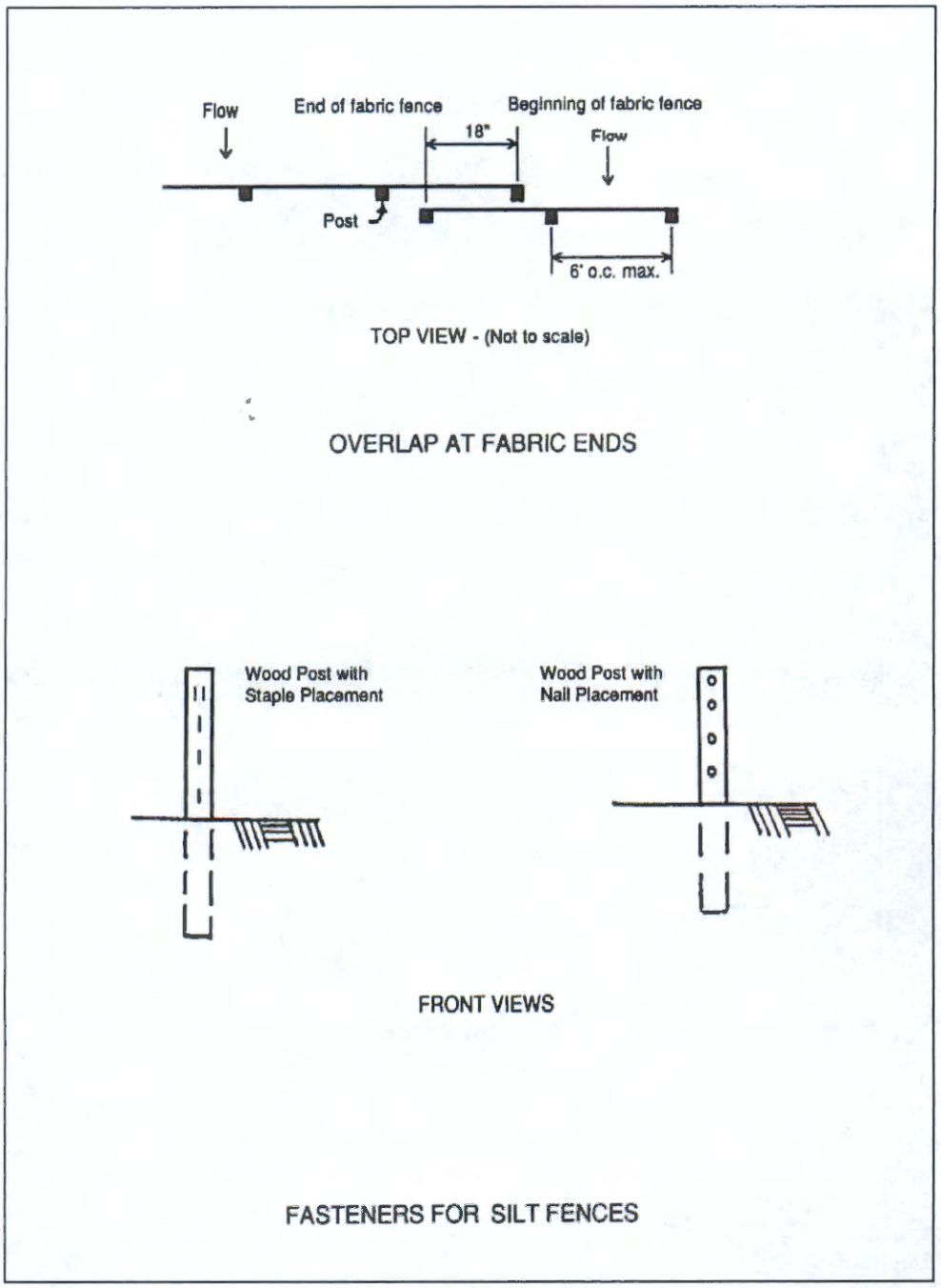


Figure SB-4 Silt Fence Installation Details

4.8. Straw Bale Sediment Trap

Straw Bale Sediment Trap (SST)

Practice Description

A temporary sediment trap is a ponding basin used for smaller drainage areas that is formed by an embankment or excavation and is designed to capture and hold sediment-laden runoff, trapping the sediment. This practice protects receiving streams, lakes, drainage systems and adjacent property from sediment during construction activities. This practice applies where sediment-laden runoff is discharged.

Planning Considerations

In certain situations, straw bales can be used as an alternative to silt fence for trapping sediment. The practice should only be used to trap sediment for a short duration from small drainage areas. Straw bales comparatively low flow rate should be considered before choosing to use this practice. Ponding above the bales can occur rapidly due to the low flow rate. Overtopping and bypass of the bales can cause significant damage to the site.

Design criteria

Drainage Area

For disturbed areas subject to sheet erosion the drainage area should be restricted to ¼ acre per 100 feet of barrier. The slope length behind the barrier should be restricted according to Table SST-1.

If used in minor swales, the swale should be relatively flat in grade (3 percent or less) and the drainage area should be limited to 1 acre.

Table SST-1 Criteria for Straw or Hay Bale Placement

Land Slope (Percent)	Maximum Slope Length Above Bale (Feet)
<2	75
2 to 5	50
5 to 10	35
10 to 20	20
>20	10

Bale Size

Bales should be 14" x 18" x 36".

Anchors

Two 36" long (minimum) 2" x 2" hardwood stakes should be driven through each bale. Alternate anchors can be 2 pieces of no.4 steel rebar, 36" long (minimum). See Figure SST-1 and SST-2 for details on proper installation of straw bales.

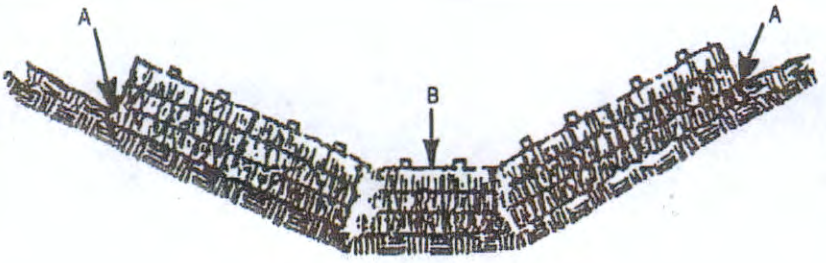
Effective Life

Straw and hay bales have a relatively short period of usefulness and should not be used if the project duration is expected to exceed 3 months. Bale placement should result in the twine or cord being on the side and not the bottom of the bale.

Location

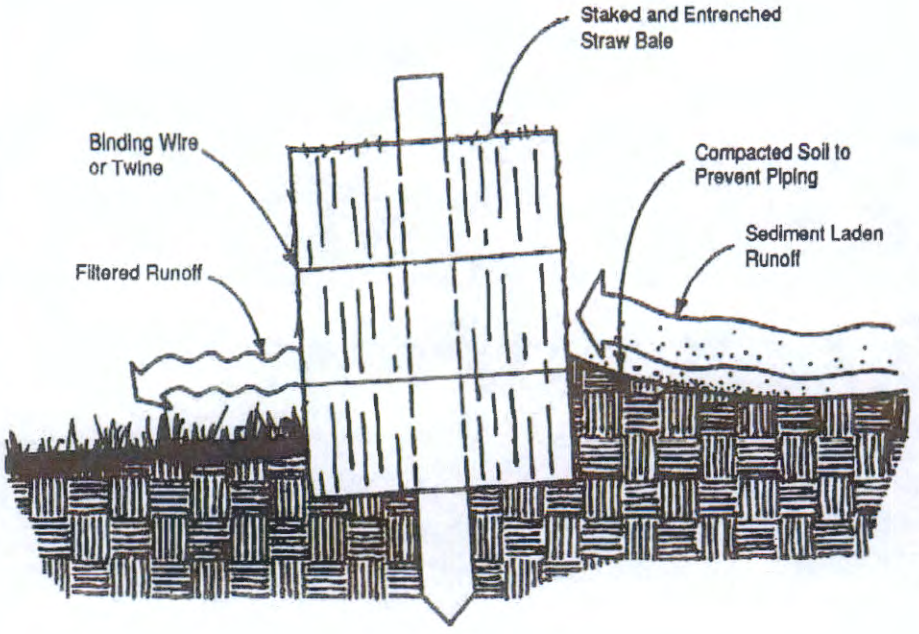
This practice should be used on nearly level ground and be placed at least 10 feet from the toe of any slope. The barrier should follow the land contour.

The practice should never be used in live streams or in swales where there is a possibility of washout. The practice should also not be used in areas where rock or hard surfaces prevents the full and uniform anchoring of the bales.



Points A should be higher than point B

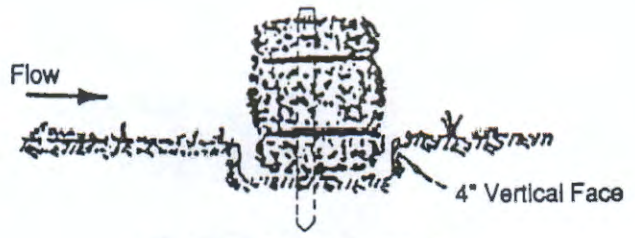
PROPER PLACEMENT OF STRAW BALE BARRIER IN DRAINAGE WAY



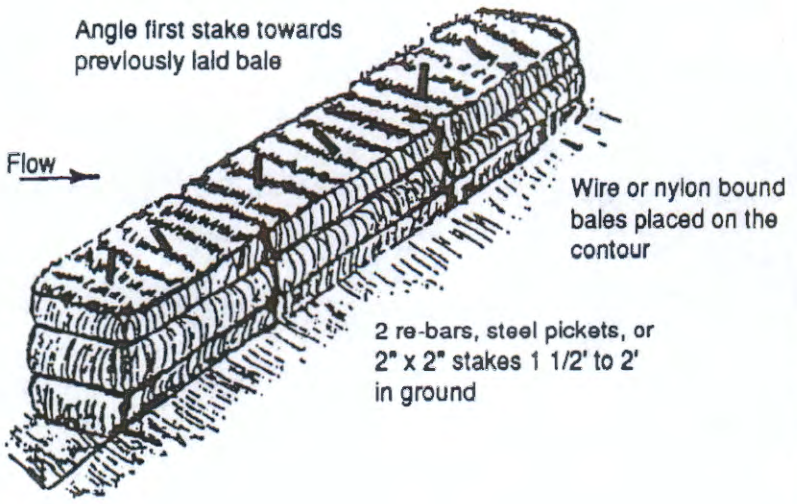
Note: Embed hay bales a minimum of 4 inches.

CROSS-SECTION OF A PROPERLY INSTALLED STRAW BALE

Figure SST-1 Placement of Straw Bale



EMBEDDING DETAIL



ANCHORING DETAIL

NOTE:

- Anchor and embed into soil to prevent washout or water working under barrier
- Repair or replacement must be made promptly as needed

Figure SST-2 Anchoring Technique for Haybales

5. Spill Prevention Control and Countermeasures Plan

5.1. General Applicability

Title 40, Part 112 of the Code of Federal Regulations (40 CFR 112), requires the preparation and implementation of a Spill Prevention Control and Countermeasure (SPCC) Plan for any non-transportation-related facility, which due to its location, could reasonably be expected to discharge oil into or upon the navigable waters of the United States in quantities that may be harmful (as defined in 40 CFR 110) and that has the capacity to store oil in volumes greater than:

- 1,320 gallons in total aboveground storage (counting only containers with an oil storage capacity of 55 gallons or more and including equipment containing oil for ancillary purposes) or
- 42,000 gallons in total completely buried storage (not counting completely buried containers that are currently subject to all of the technical requirements of 40 CFR 280 or all of the technical requirements of a State program approved under 40 CFR 281).

Since National Cement Company of Alabama, Inc. has total aboveground oil storage capacity in excess of 1,320 gallons, the facility is required to prepare and implement a SPCC Plan.

5.2. Definitions

As a requirement of the Oil Pollution Act of 1990, any SPCC-regulated facility that could cause "substantial harm" to the environment as a result of a discharge of oil, is required to prepare and implement a Facility Response Plan in accordance with 40 CFR § 112, Subpart D. The "Flowchart of Criteria for Substantial Harm", shown as Figure 1-2, shows that the facility does not pose a substantial harm to the environment and, therefore, is not required to prepare and implement a Facility Response Plan.

In 40 CFR § 112.2, the definition of "oil" means oil of any kind and any form, including, but not limited to: fats, oils or greases of animal, fish or marine mammal origin; vegetable oils, including oils from seeds, nuts, fruits or kernels; and other oils and greases, including petroleum, fuel oil, sludge, synthetic oils, mineral oils, oil refuse or oil mixed with wastes other than dredged spoil.

5.3. Purpose

The purpose of this document is to serve as the Spill Prevention Control and Countermeasures (SPCC) Plan for National Cement Company of Alabama, Inc. A complete copy of this SPCC Plan is to be kept and available to regulatory agencies for onsite review during normal working hours (facilities attended at least 4 hours a day) in accordance with 40 CFR 112.3(e).

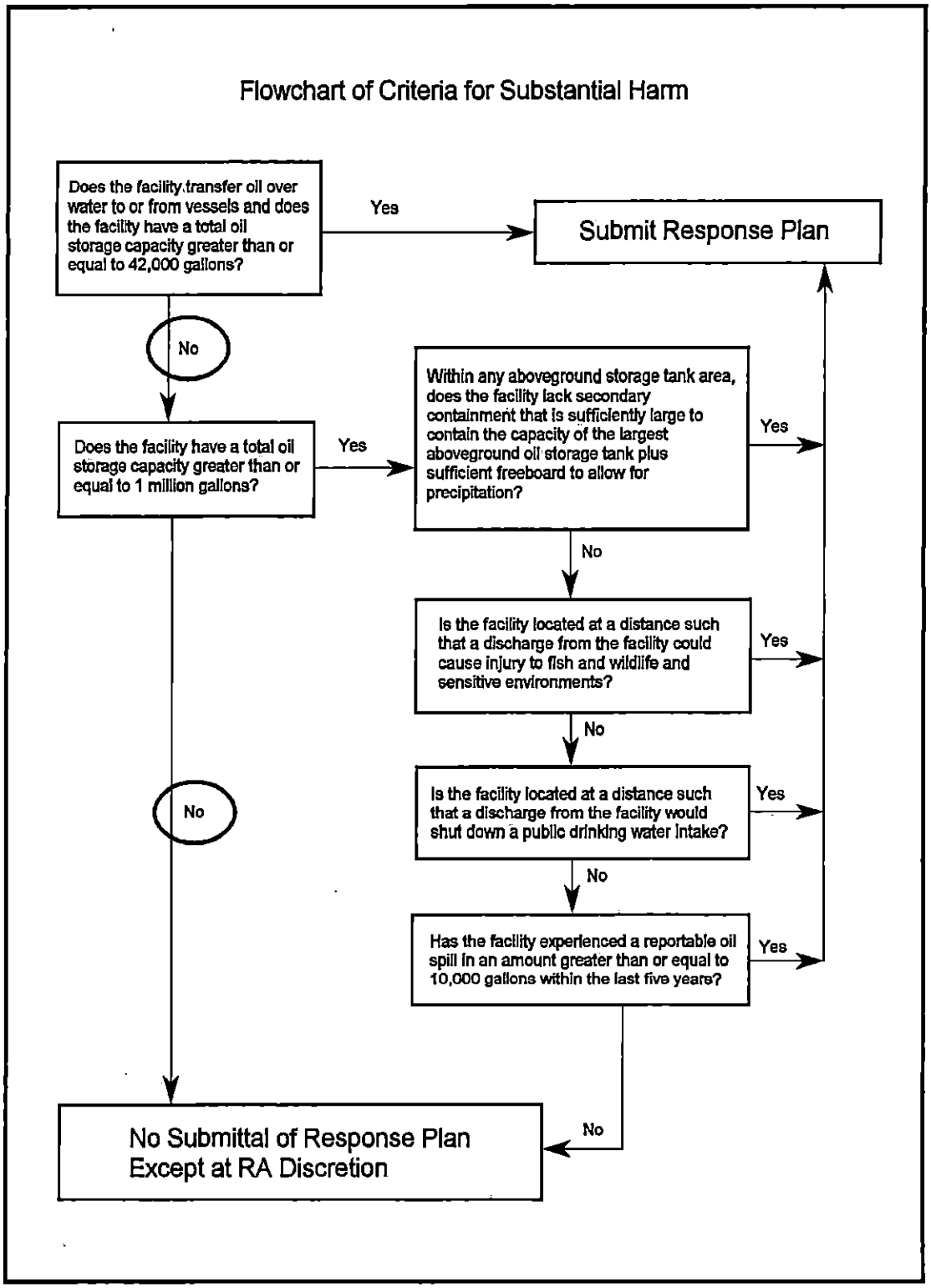


Figure 5-1. Flowchart of Criteria for Substantial Harm.

5.4. Facility Owner, Address, and Telephone

Corporate:

National Cement Company, Inc.
2000 Southbridge Parkway, Suite 600
Birmingham, AL 35209
(205) 423-2600

Blue Spring Fork Facility:

National Cement Co. of Alabama, Inc.
P.O. Box 460 (80 National Cement Drive)
Ragland, AL 35131
(205) 472-2191

Contact and SPCC Coordinator:

Robert L. Gunn III, Manager of Environmental Affairs
(205) 472-2191 Office ; (205) 427-5616 Cell

5.5. Facility Operations

National Cement Company of Alabama, Inc. quarries limestone along with some rock and shale. The plant produces portland cement and masonry products.

5.6. Oil Storage

National Cement Company of Alabama, Inc. stores oil at several locations at the facility

1) Area 1a (Mapped as SPCC A1).
    a. Tank. One 500-gallon steel aboveground kerosene tank.
    b. Containment. Concrete containment, 9.0 ft long x 9.0 ft wide x 3.5 ft deep. Roof. Containment wall provides 0.83 ft for a spill from the largest tank and 2.67 ft freeboard (rainfall not included due to roof).
    c. Release Potential. If a release occurs, from 1 to 500 gallons would flow northerly toward Trout Creek.
2) Area 1b (Mapped as SPCC A1).
    a. Tank. One 1,000-gallon steel aboveground used oil tank.
    b. Containment. Concrete containment, 11.0 ft long x 9.0 ft wide x 3.5 ft deep. Roof. Containment wall provides 1.35 ft for a spill from the largest tank and 2.15 ft freeboard (rainfall not included due to roof).
    c. Release Potential. If a release occurs, from 1 to 1,000 gallons would flow northerly toward Trout Creek.
3) Area 1c (Mapped as SPCC A1).
    a. Drums. 55-gallon steel drums.
    b. Containment. Concrete containment, greater than 10.0 ft long x 10.0 ft wide x 0.5 ft deep. Roof. Containment wall provides 0.07 ft for a spill from the largest tank and 0.43 ft freeboard (rainfall not included due to roof).
    c. Release Potential. If a release occurs, from 1 to 55 gallons would flow northerly toward Trout Creek.

4) Area 2 (Mapped as SPCC A2).
    a. Drums. 55-gallon steel drums.
    b. Containment. Concrete containment, greater than 10.0 ft long x 10.0 ft wide x 0.5 ft deep. Roof. Containment wall provides 0.07 ft for a spill from the largest tank and 0.43 ft freeboard (rainfall not included due to roof).
    c. Release Potential. If a release occurs, from 1 to 55 gallons would flow northerly toward Trout Creek.
5) Area 3 (Mapped as SPCC A3).
    a. Tank. One 1,000-gallon steel aboveground gasoline tank.
    b. Containment. Concrete containment, 12.6 ft long x 6.0 ft wide x 3.0 ft deep. No roof. Containment wall provides 1.77 ft for a spill from the largest tank, 0.57 ft for the 25-yr/24-hr rainfall event, and 0.66 ft freeboard.
    c. Release Potential. If a release occurs, from 1 to 1,000 gallons would flow northerly toward Trout Creek.
6) Area 4a (Mapped as SPCC A4).
    a. Tank. One 10,000-gallon steel aboveground diesel tank.
    b. Containment. Concrete containment, 26.0 ft long x 14.5 ft wide x 4.0 ft deep. Roof. Containment wall provides 3.55 ft for a spill from the largest tank and 0.45 ft freeboard (rainfall not included due to roof).
    c. Release Potential. If a release occurs, from 1 to 10,000 gallons would flow northerly toward Trout Creek.
7) Area 4b (Mapped as SPCC A4).
    a. Tanks. Two 16,000-gallon steel aboveground frac tanks for process oily water.
    b. Containment. Double wall.
    c. Release Potential. If a release occurs, from 1 to 16,000 gallons would flow northerly toward Trout Creek.
8) Area 4c (Mapped as SPCC A4).
    a. Tanks. One 250-gallon steel aboveground hydraulic oil tank, one 500-gallon steel aboveground hydraulic oil tank, and one 500-gallon steel aboveground motor oil tank.
    b. Containment. Concrete containment, 14.5 ft long x 13.0 ft wide x 1.5 ft deep. No roof. Containment wall provides 0.35 ft for a spill from the largest tank, 0.57 ft for the 25-yr/24-hr rainfall event, and 0.58 ft freeboard.
    c. Release Potential. If a release occurs, from 1 to 500 gallons would flow northerly toward Trout Creek.
9) Area 5 (Mapped as SPCC A5).
    a. Tanks. Two 500-gallon steel aboveground hydraulic oil tanks.
    b. Containment. Concrete containment, 17.33 ft long x 6.33 ft wide x 0.75 ft deep. Roof. Containment wall provides 0.61 ft for a spill from the largest tank and 0.14 ft freeboard (rainfall not included due to roof).
    c. Release Potential. If a release occurs, from 1 to 500 gallons would flow northerly toward Trout Creek.
10) Area 6 (Mapped as SPCC A6).
    a. Tanks. Two 1,000-gallon steel aboveground gear oil tanks and one 1,000-gallon steel aboveground hydraulic oil tank.

b. Containment. Concrete containment, 18.75 ft long x 6.0 ft wide x 1.79 ft deep. Roof. Containment wall provides 1.19 ft for a spill from the largest tank and 0.60 ft freeboard (rainfall not included due to roof).
c. Release Potential. If a release occurs, from 1 to 1,000 gallons would flow northerly toward Trout Creek.

11) Area 7 (Mapped as SPCC A7).
a. Tank. One 500-gallon steel aboveground diesel tank.
b. Containment. Concrete containment, 8.0 ft long x 6.0 ft wide x 2.0 ft deep. Roof. Containment wall provides 1.39 ft for a spill from the largest tank and 0.61 ft freeboard (rainfall not included due to roof).
c. Release Potential. If a release occurs, from 1 to 1,000 gallons would flow northerly toward Trout Creek.

12) Area 8 (Mapped as SPCC A8).
a. Tanks. One 10,000-gallon steel aboveground diesel tank, two 500-gallon steel aboveground cooling oil tanks, and one 500-gallon steel aboveground hydraulic oil tank.
b. Containment. Concrete containment, 42.5 ft long x 15 ft wide x 3.0 ft deep. Roof. Containment wall provides 2.10 ft for a spill from the largest tank and 0.90 ft freeboard (rainfall not included due to roof).
c. Release Potential. If a release occurs, from 1 to 10,000 gallons would flow to the quarry (southwesterly pumped discharge to Blue Spring Fork).

13) Area 9 (Mapped as SPCC A9).
a. Tank. One 1,000-gallon portable steel aboveground diesel tank.
b. Containment. Earthen containment, 20.0 ft long x 8.0 ft wide x 1.5 ft deep (minimum dimensions on level ground). No Roof. Containment wall provides 0.84 ft for a spill from the largest tank, 0.57 ft for the 25-yr/24-hr rainfall event, and 0.10 ft freeboard.
c. Release Potential. If a release occurs, from 1 to 1,000 gallons would flow to the quarry (southwesterly pumped discharge to Blue Spring Fork).

14) Area 10 (Mapped as SPCC A10).
a. Tank. One 10,000-gallon steel aboveground liquid fuels tank.
b. Containment. Concrete containment, 46.75 ft long x 16.0 ft wide x 3.0 ft deep. No roof. Containment wall provides 1.79 ft for a spill from the largest tank, 0.57 ft for the 25-yr/24-hr rainfall event, and 0.65 ft freeboard.
c. Release Potential. If a release occurs, from 1 to 10,000 gallons would flow northerly toward Trout Creek.

15) Area Non-Petroleum 1 (Mapped as SPCC ANP1).
a. Tank. One 10,000-gallon steel aboveground hydrophobe tank and one 15,000-gallon steel aboveground grinding aid tank.
b. Containment. Concrete containment, 44.75 ft long x 40.50 ft wide x 3.08 ft deep. Roof. Containment wall provides 1.11 ft for a spill from the largest tank and 1.97 ft freeboard (rainfall not included due to roof).
c. Release Potential. If a release occurs, from 1 to 15,000 gallons would flow northerly toward Trout Creek.
d. **Non-petroleum tanks not subject to SPCC regulations.**

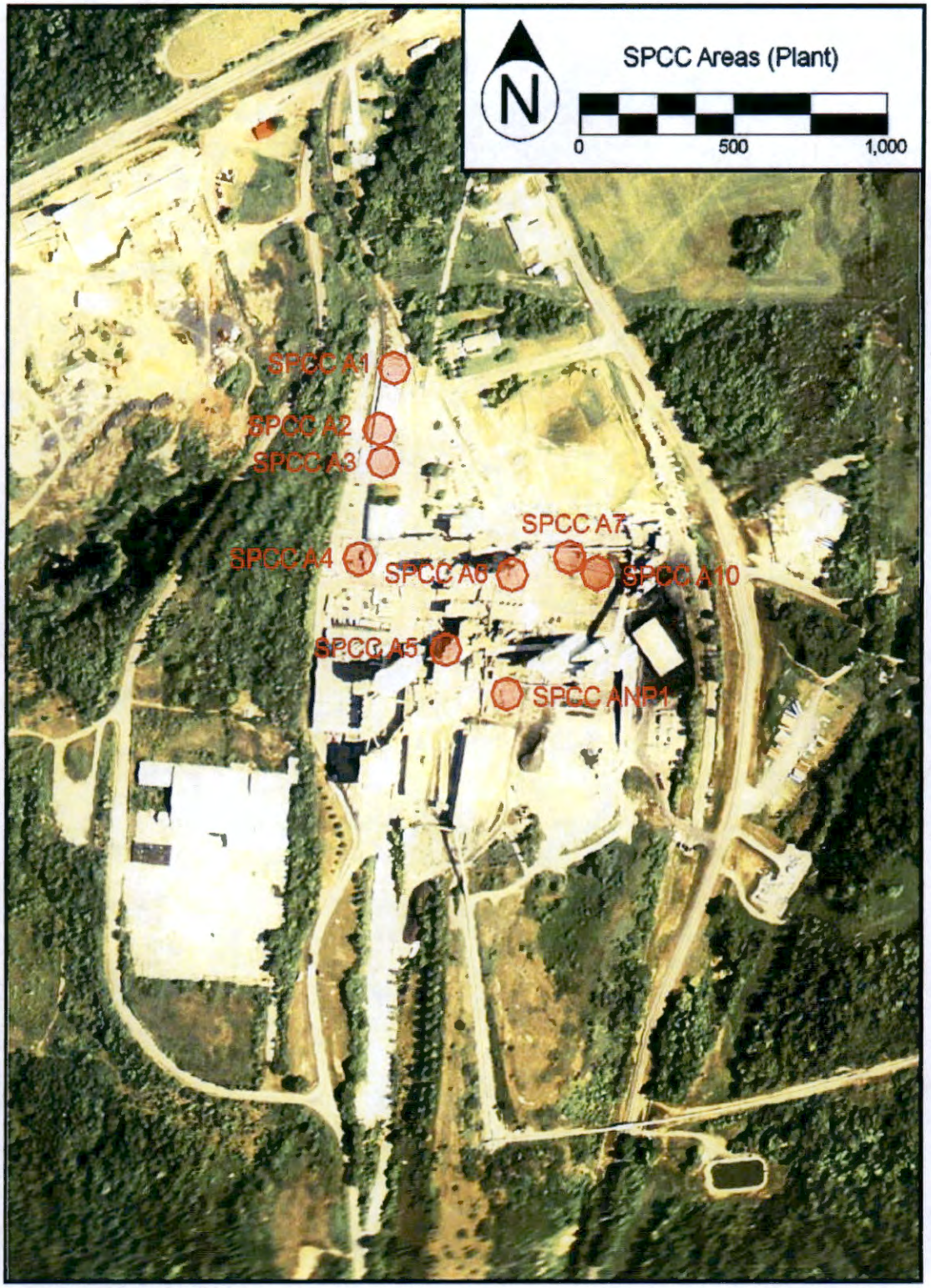


Figure 5-2. SPCC Areas (Plant).

Figure 5-3. SPCC Areas (Quarry).

5.7. Oil Transfer Procedures

In order to lessen the probability of discharges during transfers, the following discharge prevention procedures are utilized:

- Prior to transferring any material into a tank or container, the person transferring the material will make sure that the available volume of the container is greater than the amount that will be transferred to the container.
- During the entire time that material is being transferred to a tank or container, the person transferring the material must continually monitor the transfer process.
- Level gages, if present, will be continuously monitored during transfers.
- No smoking is allowed within 25 feet of a storage or transfer area during transfers.
- No fire, open flames or welding is allowed within 25 feet of a storage and transfer area during transfers.
- The hand brake must be engaged and the wheels chocked on any vehicle that is transferring material.
- Tools that are likely to reduce the effectiveness of the closure of any valve of a storage tank or container will not be used.
- After transferring, any manholes and valves associated with a storage tank or container will be closed and secured.
- Warning signs will be in-place to warn personnel not to move transfer vehicles until all transfer lines have been completely disconnected.
- Prior to the departure of a transfer vehicle, the lower most outlets of the vehicle will be examined for leakage and, if necessary, tightened, adjusted or replaced to prevent leakage.
- During transfer, all associated equipment will be properly grounded to prevent sparking from the discharge of static electricity built up within the transfer line.
- Contractors retained to transfer at this facility will be apprised of their responsibility for discharge prevention and, if necessary, discharge response during such transfers.

5.8. Discharge Prevention Measures

All tanks and containers used for storage at this facility are of a material and construction compatible with the material stored and conditions of storage such as pressure and temperature.

The secondary containment structures are constructed concrete floors and concrete sidewalls, materials sufficiently impervious to contain any discharged material. In each case, any leak or rupture of a tank or container would be contained with no discharge to the environment.

Drainage of uncontaminated storm water from a secondary containment into a storm drain is not allowed unless:

- The bypass valve is normally locked closed;

- The retained storm water is inspected to ensure that no sheen nor discoloration is present;
- The bypass valve is opened, then relocked following draining under responsible supervision; and
- Adequate records are kept of the drainage events (i.e., records required under a National Pollutant Discharge Elimination System permit).

The storage tanks are inspected on a routine basis. Visual inspections include checking the outside of the tanks, supports, gages, valves, fittings, and piping for damage, deterioration, or any accumulation of material inside diked areas.

Visible discharges that result in a loss of material from a tank are promptly corrected. Any material that accumulates within a diked area is promptly removed.

The requirements to provide corrosion protection for completely or partially buried metallic storage containers are not applicable because there are no buried metallic storage containers at this facility. The requirements to protect buried piping are not applicable because there is no buried piping at this facility associated with oil storage. Tanks, aboveground piping, and transfer operations are protected from vehicles.

5.9. Discharge Discovery, Response and Cleanup

In the event of a discharge at this facility, the following actions will be taken, as appropriate, by facility personnel upon discovery of the discharge:

- If safely possible, attempt to stop additional discharge from the tank, piping, hose or other source. Use emergency shut-off if available.
- Follow the facility's emergency response plan and use the facility's emergency notification system to warn facility occupants of the emergency. Contact the SPCC Coordinator and apprise him of the situation.
- Shut off any ignition sources (i.e., motors, electrical circuits, open flames, etc.) that could cause a fire in the vicinity of any discharged oil.
- Secure containment of the discharged material. Make sure secondary containment structures are secure and have temporary containment equipment ready in case the discharged material escapes the secondary containment; priority should be given to containing the discharge on the facility's property and protecting storm drains and other access points to surface water.
- When necessary, the SPCC Coordinator will retain a contractor to clean up and dispose of the discharged material.
- When necessary, the SPCC Coordinator will report the discharge to the appropriate authorities.
-

5.10. Disposal of Recovered Materials

Disposal of recovered discharged materials will take place in accordance with applicable legal requirements.

5.11. Emergency Contact List

Name	Telephone
Robert L. Gunn, III, Manager of Environmental Affairs / SPCC Coordinator	(205) 472-2191, Office (205) 427-5616, Cell
Pascal Lamontagne, Plant Manager / Alternate SPCC Coordinator	(205) 472-2191, Office
National Response Center (NRC)[1]	(800) 424-8802
Alabama Department of Environmental Management (ADEM)[2]	(334) 271-7700
U.S. Environmental Protection Agency (EPA): Spill Reporting Number[3]	(404) 562-8700

5.12. Discharge Reporting Information

In the event of an oil discharge from this facility that reaches navigable waters, the following information will be collected and reported to the individuals and organizations named in the Emergency Contact List above:

- Facility address;
- Facility telephone number;
- Date and time of the oil discharge;
- Type of oil discharged;
- Estimate of the total quantity of oil discharged;
- Source of the discharged oil;
- Description of affected media (i.e., water, shoreline, etc.);
- Cause of the oil discharge;
- Damages and/or injuries resulting from the oil discharge;
- Actions taken to stop, remove or mitigate the effects of the oil discharge:
- Whether an evacuation may be needed; and
- Names of individuals and/or organizations that have been contacted.

1 http://www.nrc.uscg.mil/nrchp.html
2 http://adem.alabama.gov/MoreInfo/emergencyResponse.cnt
3 http://www.epa.gov/region4/home/phonenumbers.html

5.13. Discharge Reporting Deadlines

Notification, by phone, containing the above specific information, must be made to the NRC immediately upon knowledge of whenever the facility has discharged (spilled or released) a harmful quantity of oil (violated water quality standard or caused a film or sheen) into navigable waters.

ADEM requires notification within 24 hours for spills or discharges requiring notification of the NRC.

The SPCC Coordinator must submit specific information to the EPA Regional Administrator within sixty (60) days of either of the following occurrences:

- Whenever the facility has discharged 1,000-gallons or more of oil in a single discharge into navigable waters of the state or adjoining shorelines.
- Whenever the facility has discharged more than 42-gallons of oil in each of two discharges occurring within any twelve-month period.

5.14. Routine Inspections

Conduct routine (normally, once per week) inspections of the tanks and oil-filled equipment as described below:

- Check tanks for leaks. Also look for drip marks; discoloration of tanks; puddles containing spilled or leaked material; corrosion; cracks; and localized dead vegetation.
- Check piping for leaks. Also look for droplets of oil; discoloration; corrosion; bowing of pipe between supports; evidence of oil seepage from valves or seals; and localized dead vegetation.
- Check secondary containment for evidence of leaks. Also look for cracks; settling; discoloration; presence of spilled or leaked material (standing liquid); the level of precipitation inside the dike; and valve condition.

Document the inspections.

5.15. Stormwater Discharges

If necessary, drain stormwater from secondary containment as follows:

- Examine the surface of the water to be drained.
- All oil must be removed prior to draining (there may be no sheen on the water).
- When the water is free of oil, unlock and open the drain valve.
- Stay at the open valve continuously and monitor the water discharge.
- Close and lock the drain valve when the water is drained.
- Document the date, time, condition of water (presence of oil), and volume of water discharged.

Document the stormwater discharges.

5.16. Personnel Training

All oil-handling personnel are trained, at a minimum, with regard to the contents of this SPCC Plan. Supplemental information could include general facility operations, operation and maintenance procedures to prevent discharges, discharge procedure protocols, and applicable pollution control laws and regulations

Discharge prevention briefings are scheduled and conducted for all materials-handling personnel annually to assure adequate understanding of this SPCC Plan. These briefings, at a minimum, highlight and describe known discharges or failures, malfunctioning components and any recently developed precautionary measures.

Document the training.

5.17. Security

Each oil-storage facility is fenced with secure gates. The facility lighting is adequate to assist in the discovery of any discharge occurring during hours of darkness (both by operating personnel and by non-operating personnel, i.e., general public, local police, etc.) and prevention of any discharge occurring through acts of vandalism.

5.18. Contingency Plan: Introduction

All of the National Cement Company of Alabama, Inc. oil storage containers and equipment have secondary containment devices with the exception of a few pieces of equipment that contain oil. Instead of providing secondary containment for all qualified oil-filled operational equipment, an owner or operator may prepare an oil spill contingency plan and a written commitment of manpower, equipment, and materials to quickly control and remove discharged oil. He must also have an inspection or monitoring program for the equipment to detect a failure and/or discharge. An individual impracticability determination for this equipment is not required.

5.19. Contingency Plan: Duties

If National Cement Company of Alabama, Inc. releases oil from its oil-filled equipment at its facility, then National Cement Company of Alabama, Inc. will involve itself in planning and directing oil removal operations described in this Contingency Plan.

5.20. Contingency Plan: Notification

In the event of an oil release, follow the notification procedures described in the previous section. Any water of the State that could be impacted is classified for Fish and Wildlife. During notification advise state and federal authorities if a major disaster or

other circumstances place the situation outside the response capabilities of National Cement Company of Alabama, Inc.

5.21. Contingency Plan: Resources

The largest volume of oil in a piece of oil-filled equipment is approximately 200 gallons. Over an unpaved outside surface, oil would cover an area of 1,283 square feet (equivalent to a circular area with a diameter of approximately 40 feet), at a depth of 1/4-inch (accounting for puddling and slight infiltration into the soil). The minimum distance from a release point to a water of the State is more than 300 feet over unpaved surfaces. If there is no rainfall, it is unlikely that a release from a piece of oil-filled equipment would reach a water of the State. If there is rainfall, the depth of puddling and infiltration would be reduced. During a rainfall event, the maximum anticipated release to a water of the State is 40 gallons.

The resources necessary to contain then remove a spill from oil-filled equipment are primarily small tools and equipment. Oil inside a building should be controlled with temporary barriers (e.g., sandbags or other oil barriers) then collected with small tools (e.g., shovels) and placed inside appropriate containers. Oil absorbents would be used to remove some of the remaining oil.

Outside, small earthen embankments could be constructed with hand-tools (e.g., shovels) and equipment (e.g., Bobcat). If a spill reaches a water of the State, efforts must be made to remove all oil from the water. Sufficient oil-absorbent booms (or similar devices or material) should be maintained onsite to remove up to 40 gallons of oil from water.

5.22. Contingency Plan: Actions

If a spill occurs from a piece of oil-filled equipment, take steps to control or eliminate the spill if safe to do so. Notify the SPCC Coordinator as soon as possible.

- If safely possible, attempt to stop additional discharge from the piece of oil-filled equipment. Use emergency shut-off if available.
- Follow the facility's emergency response plan and use the facility's emergency notification system to warn facility occupants of the emergency. Contact the SPCC Coordinator and apprise him of the situation.
- Shut off any ignition sources (i.e., motors, electrical circuits, open flames, etc.) that could cause a fire in the vicinity of any discharged oil.
- Secure containment of the discharged material. Have temporary containment equipment ready; priority should be given to containing the discharge on the facility's property and protecting storm drains and other access points to surface water.
- When necessary, the SPCC Coordinator will retain a contractor to clean up and dispose of the discharged material.
- When necessary, the SPCC Coordinator will report the discharge to the appropriate authorities.

Dispose of recovered discharged materials in accordance with applicable legal requirements.

5.23. Contingency Plan: Recovery of Damages

If a spill reaches a water of the State, then State or local governments might initiate procedures to facilitate recovery of damages and enforcement measures.

6. Forms

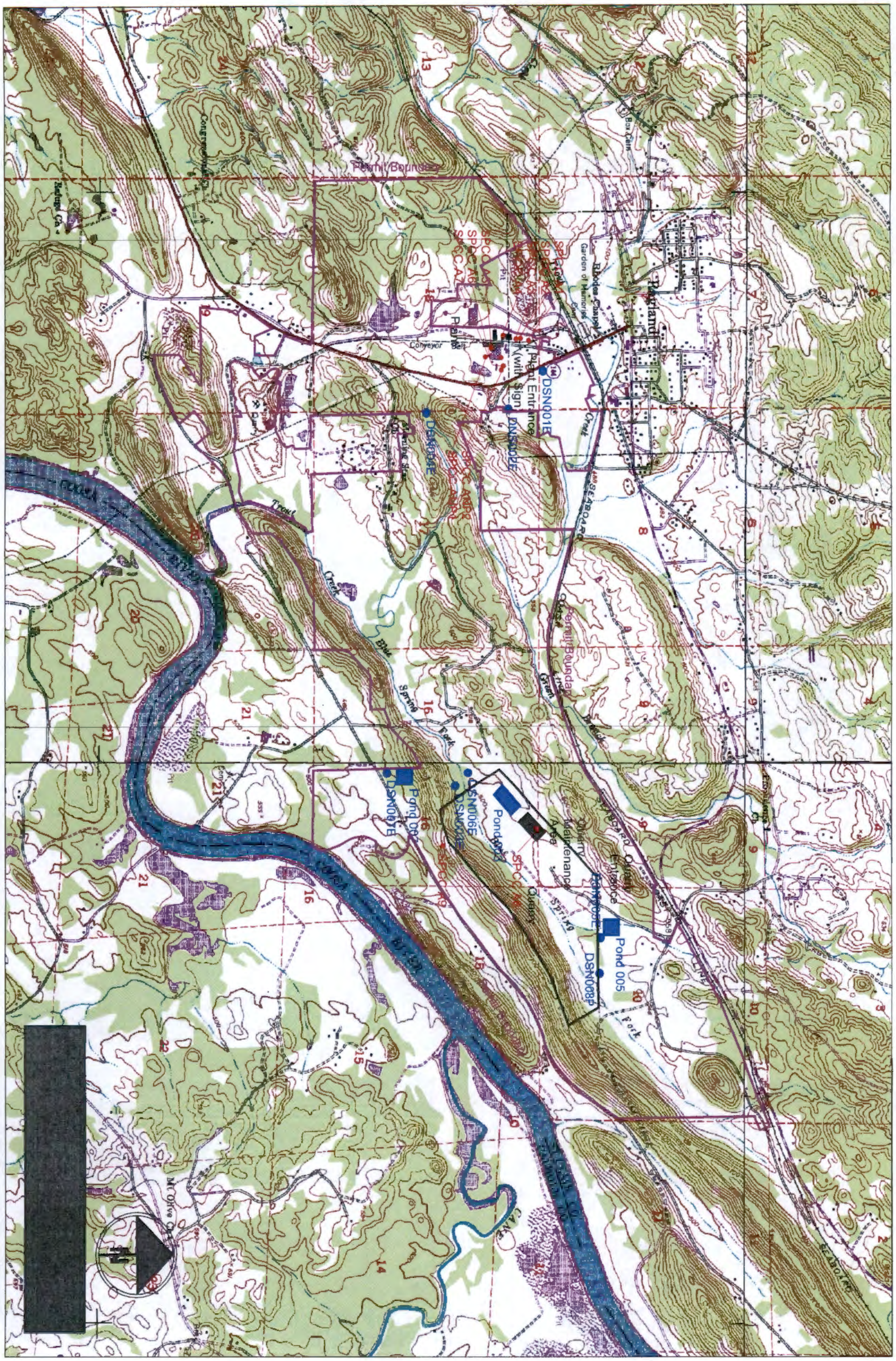
6.1. Introduction

The ADEM forms associated with the application are included in this chapter.

7. Drawings

7.1. Introduction

The drawing of the site is included in this chapter.



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JOB NUMBER: 7517072	SCALE: AS SHOWN
DATE: 03/29/17	
DRAWN BY: RAD	
CHECKED BY:	
SHEET NO. 1 OF 1	
REVISIONS	

NATIONAL CEMENT
PAP/SPCC PLAN FEATURES
BLUE SPRINGS FORK

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