LANCE R. LEFLEUR
DIRECTOR

KAY IVEY
GOVERNOR

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

OCT 2 3 2020

James M. Hurley, IV
President
White Rock Quarries, LLC
101 Sansbury's Way
West Palm Beach, FL 33411

RE: Draft Permit
Vincent Hills Quarry
NPDES Permit No. AL0082066
Shelby County (117)

Dear Mr. Hurley:

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

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

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

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

Should you have any questions concerning this matter, please contact David Hearn by email at david.hearnt@adem.alabama.gov or by phone at (334) 274-4231.

Sincerely,

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

CAM/dnh File: DPER/43260

Enclosure

cc: Ange Boatwright, 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

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

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

Mobile Branch
2204 Perimeter Road
Mobile, AL 36615-1131
(251) 450-3400
(251) 479-2593 (FAX)

Mobile-Coastal
3664 Dauphin Street, Suite B
Mobile, AL 36608
(251) 304-1176
(251) 304-1189 (FAX)

Alabama Department of Environmental Management

NATIONAL POLLUTANT DISCHARGE ELIMINATION SYSTEM INDIVIDUAL PERMIT

PERMITTEE: White Rock Quarries, LLC
101 Sansbury's Way
West Palm Beach, FL 33411

FACILITY LOCATION: Vincent Hills Quarry
4324 Hwy 85
Vincent, AL 35178
Shelby County
T19S, R2E, S13, 14, 23, 24, 25
T19S, R3E, S18, 19

PERMIT NUMBER: AL0082066

DSN & RECEIVING STREAM:

001-1 Coosa River
002-1 Unnamed Tributary to Spring Creek
003-1 Unnamed Tributary to Spring Creek
004-1 Unnamed Tributary to Coosa River
005-1 Unnamed Tributary to Coosa River
006-1 Unnamed Tributary to Locust Creek
007-1 Unnamed Tributary to Locust Creek
008-1 Unnamed Tributary to Locust Creek
009-1 Unnamed Tributary to Locust Creek
010-1 Unnamed Tributary to Spring Creek
011-1 Unnamed Tributary to Spring Creek
012-1 Unnamed Tributary to Spring Creek
013-1 Unnamed Tributary to Spring Creek
014-1 Unnamed Tributary to Spring Creek
015-1 Unnamed Tributary to Coosa River
016-1 Unnamed Tributary to Coosa River
017-1 Unnamed Tributary to Coosa River
018-1 Unnamed Tributary to Locust Creek
019-1 Unnamed Tributary to Locust Creek
020-1 Unnamed Tributary to Locust Creek
021-1 Unnamed Tributary to Locust Creek
022-1 Unnamed Tributary to Locust Creek
023-1 Unnamed Tributary to Spring Creek
024-1 Unnamed Tributary to Spring Creek
025-1 Unnamed Tributary to Locust Creek
026-1 Unnamed Tributary to Locust Creek
027-1 Unnamed Tributary to Locust Creek
028-1 Unnamed Tributary to Locust Creek
029-1 Unnamed Tributary to Spring Creek
030-1 Unnamed Tributary to Spring Creek
031-1 Unnamed Tributary to Spring Creek
032-1 Unnamed Tributary to Spring Creek

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

ISSUANCE DATE:

EFFECTIVE DATE:

EXPIRATION DATE:

** DRAFT **

Alabama Department of Environmental Management

MINING AND NATURAL RESOURCE SECTION

NATIONAL POLLUTANT DISCHARGE ELIMINATION SYSTEM (NPDES) PERMIT

TABLE OF CONTENTS

PART I DISCHARGE LIMITATIONS, CONDITIONS, AND REQUIREMENTS 4

A. DISCHARGE LIMITATIONS AND MONITORING REQUIREMENTS 4

B. REQUIREMENTS TO ACTIVATE A PROPOSED MINING OUTFALL 4

C. DISCHARGE MONITORING AND RECORD KEEPING REQUIREMENTS 5

1. Sampling Schedule and Frequency 5
2. Measurement Frequency 5
3. Monitoring Schedule 6
4. Sampling Location 6
5. Representative Sampling 6
6. Test Procedures 6
7. Recording of Results 7
8. Routine Inspection by Permittee 8
9. Records Retention and Production 8
10. Monitoring Equipment and Instrumentation 8

D. DISCHARGE REPORTING REQUIREMENTS 9

1. Requirements for Reporting of Monitoring 9
2. Requirements for Outfall Certification Summary Submittal 10
3. Noncompliance Notification 11

E. OTHER REPORTING AND NOTIFICATION REQUIREMENTS 13

1. Anticipated Noncompliance 13
2. Termination of Discharge 13
3. Updating Information 13
4. Duty to Provide Information 13

F. SCHEDULE OF COMPLIANCE 14

PART II OTHER REQUIREMENTS, RESPONSIBILITIES, AND DUTIES 15

A. OPERATIONAL AND MANAGEMENT REQUIREMENTS 15

1. Facilities Operation and Management 15
2. Pollution Abatement and/or Prevention Plan 15
3. Best Management Practices (BMPs) 15
4. Biocide Additives 16
5. Facility Identification 17
6. Removed Substances 17
7. Loss or Failure of Treatment Facilities 17
8. Duty to Mitigate 17

B. BYPASS AND UPSET 17

1. Bypass 17
2. Upset 18

C. PERMIT CONDITIONS AND RESTRICTIONS 19

1. Prohibition against Discharge from Facilities Not Certified 19
2. Permit Modification, Suspension, Termination, and Revocation 20
3. Requirements for Metals, Cyanide, and Phenols Monitoring and Reporting 20
4. Automatic Expiration of Permits for New or Increased Discharges 21

5. Transfer of Permit....21
6. Groundwater....21
7. Property and Other Rights....22

D. RESPONSIBILITIES....22
1. Duty to Comply....22
2. Change in Discharge....22
3. Compliance with Toxic or Other Pollutant Effluent Standard or Prohibition....23
4. Compliance with Water Quality Standards and Other Provisions....23
5. Compliance with Statutes and Rules....23
6. Right of Entry and Inspection....24
7. Duty to Reapply or Notify of Intent to Cease Discharge....24

PART III ADDITIONAL REQUIREMENTS, CONDITIONS, AND LIMITATIONS 25

A. CIVIL AND CRIMINAL LIABILITY....25
1. Tampering....25
2. False Statements....25
3. Permit Enforcement....25
4. Relief From Liability....25

B. OIL AND HAZARDOUS SUBSTANCE LIABILITY....25

C. AVAILABILITY OF REPORTS....25

D. DEFINITIONS....25

E. SEVERABILITY....30

F. PROHIBITIONS AND ACTIVIES NOT AUTHORIZED....30

G. DISCHARGES TO IMPAIRED WATERS....30

PART I DISCHARGE LIMITATIONS, CONDITIONS, AND REQUIREMENTS

A. DISCHARGE LIMITATIONS AND MONITORING REQUIREMENTS

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

Parameter	Discharge Limitations			Monitoring Requirements	
	Daily Minimum	Monthly Average	Daily Maximum	Sample Type	Measurement Frequency[1]
pH 00400 (Outfalls 002-032)	6.0 s.u.	-------	8.5 s.u.	Grab	2/Month
pH 00400 (Outfall 001)	6.0 s.u.	-------	9.0 s.u.	Grab	2/Month
Solids, Total Suspended 00530	-------	25.0 mg/L	45.0 mg/L	Grab	2/Month
Nitrogen, Kjeldahl Total (as N) 00625 (Outfalls 001 & 002)	-------	Report mg/L	Report mg/L	Grab	1/Quarter
Nitrite Plus Nitrate Total 1 Det. (as N) 00630 (Outfalls 001 & 002)	-------	Report mg/L	Report mg/L	Grab	1/Quarter
Phosphorus, Total (as P)[2] 00665 (Outfalls 001 & 002)	-------	8.34 lbs/day	Report lbs/day	Grab	2/Month
Phosphorus, Total (as P)[3] 00665 (Outfalls 001 & 002)	-------	Report lbs/day	Report lbs/day	Grab	2/Month
Aluminum, Dissolved (As Al)[4] 01106	-------	Report mg/L	Report mg/L	Grab	2/Month
Flow, In Conduit or Thru Treatment Plant[5] 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.

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

[2] Total Phosphorus (as P) limitations of 8.34 lbs/day and Report are applicable for the months of **April thru October.**

[3] Discharge Limitations for Total Phosphorus (a P) are Report only for the months of **November thru March.**

[4] Monitoring for Dissolved Aluminum is applicable only when aluminum-based coagulants are being used. If monitoring is not applicable during the monitoring period, enter "NODI=9" on the DMR.

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

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

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

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

3. Monitoring Schedule

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

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

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

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

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

4. Sampling Location

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

5. Representative Sampling

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

6. Test Procedures

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

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

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

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

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

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

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

7. Recording of Results

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

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

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

c. The dates and times the analyses were performed;

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

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

f. The results of all required analyses.

8. Routine Inspection by Permittee

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

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

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

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

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

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

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

9. Records Retention and Production

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

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

10. Monitoring Equipment and Instrumentation

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

D. DISCHARGE REPORTING REQUIREMENTS

1. Requirements for Reporting of Monitoring

a. Monitoring results obtained during the previous three (3) months shall be summarized for each month on a Discharge Monitoring Report (DMR) Form approved by the Department, and submitted to the Department so that it is received by the Director no later than the 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 environmental (E2) reporting system for submittal of DMRs. **Except as allowed by Part I.D.1.c. or d., the Permittee shall submit all DMRs required by Part I.D.1.a. by utilizing the E2 reporting system.** The E2 reporting system Permittee Participation Package may be downloaded online at https://e2.adem.alabama.gov/npdes.

c. If the electronic environmental (E2) reporting system is down (i.e. electronic submittal of DMR data is unable to be completed due to technical problems originating with the Department's system; this could include entry/submittal issues with an entire set of DMRs or individual parameters), permittees are not relieved of their obligation to submit DMR data to the Department by the required submittal date. However, if the E2 system is down on the 28th day of the month or is down for an extended period of time as determined by the Department when a DMR is required to be submitted, the facility may submit the data in an alternate manner and format acceptable to the Department. Preapproved alternate acceptable methods include faxing, e-mailing, mailing, or hand-delivery of data such that they are received by the required reporting date. Within five calendar days of the E2 system resuming operation, the Permittee shall enter the data into the E2 reporting system unless an alternate timeframe is approved by the Department. An attachment should be included with the E2 DMR submittal verifying the original submittal date (date of the fax, copy of dated e-mail, or hand-delivery stamped date).

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

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

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

g. The Permittee shall report "No Discharge During Quarterly Monitoring Period" on the appropriate DMR Form for each point source receiving pumped discharges pursuant to Part I.C.1.b. provided that no discharge has occurred at any time during the entire quarterly (three month) monitoring period.

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

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

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

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

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

Certified and Registered Mail shall be addressed to:

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

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

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

2. Requirements for Outfall Certification Summary Submittal

The Permittee shall submit as an attachment to the certification required by Part I.B.1, an Outfall Certification Summary in a format approved or provided by the Department. The Outfall Certification Summary shall indicate whether each outfall identified on Page 1 of

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

3. Noncompliance Notification

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

(1) Potentially threatens human health or welfare;

(2) Potentially threatens fish or aquatic life;

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

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

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

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

The Permittee shall orally or electronically report any of the above occurrences, describing the circumstances and potential effects of such discharge to the Director within 24-hours after the Permittee becomes aware of the occurrence of such discharge. In addition to the oral or electronic report, the Permittee shall submit to the Director a written report as provided in Part I.D.3.c., no later than five (5) days after becoming aware of the occurrence of such discharge.

b. If for any reason, the Permittee's discharge does not comply with any limitation of this Permit, the Permittee shall submit a written report to the Director as provided in Part I.D.3.c. This report must be submitted with the next Discharge Monitoring Report required to be submitted by Part I.D.1. of this Permit after becoming aware of the occurrence of such noncompliance.

c. Any written report required to be submitted to the Director in accordance with Parts I.D.3.a. and b. shall be submitted using a Noncompliance Notification Form (ADEM Form 421) available on the Department's website (http://adem.alabama.gov/DeptForms/Form421.pdf) and include the following information:

(1) A description of the discharge and cause of noncompliance;

(2) The period of noncompliance, including exact dates and times, or if not corrected, the anticipated time the noncompliance is expected to continue; and

(3) A description of the steps taken and/or being taken to reduce or eliminate the noncomplying discharge and to prevent its recurrence.

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

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

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

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

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

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

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

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

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

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

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

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

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

E. OTHER REPORTING AND NOTIFICATION REQUIREMENTS

1. Anticipated Noncompliance

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

2. Termination of Discharge

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

3. Updating Information

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

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

4. Duty to Provide Information

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

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

F. SCHEDULE OF COMPLIANCE

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

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

PART II OTHER REQUIREMENTS, RESPONSIBILITIES, AND DUTIES

A. OPERATIONAL AND MANAGEMENT REQUIREMENTS

1. Facilities Operation and Management

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

2. Pollution Abatement and/or Prevention Plan

The Pollution Abatement and/or Prevention (PAP) Plan shall be prepared and certified by a registered Professional Engineer (PE), licensed to practice in the State of Alabama, and shall include at a minimum, the information indicated in ADEM Admin. Code r. 335-6-9-.03 and ADEM Admin. Code ch. 335-6-9 Appendices A and B. The PAP Plan shall become a part of this Permit and all requirements of the PAP Plan shall become requirements of this Permit pursuant to ADEM Admin. Code r. 335-6-9-.05(2).

3. Best Management Practices (BMPs)

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

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

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

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

e. Spill Prevention, Control, and Management

The Permittee shall prepare, implement, and maintain a Spill Prevention, Control and Countermeasures (SPCC) Plan acceptable to the Department that is prepared and certified by a Professional Engineer (PE), registered in the State of Alabama, for all onsite petroleum product or other pollutant storage tanks or containers as required by applicable state (ADEM Admin. Code r. 335-6-6-.12(r)) and federal (40 C.F.R. §§112.1-.7)

regulations. The Permittee shall implement appropriate structural and/or non-structural spill prevention, control, and/or management sufficient to prevent any spills of pollutants from entering a ground or surface water of the State or a publicly or privately owned treatment works. Careful consideration should be applied for tanks or containers located near treatment ponds, water bodies, or high traffic areas. In most situations this would require construction of a containment system if the cumulative storage capacity of petroleum products or other pollutants at the facility is greater than 1320 gallons. Any containment system used to implement this requirement shall be constructed of materials compatible with the substance(s) contained and shall prevent the contamination of groundwater. Such containment systems shall be capable of retaining a volume equal to 110 percent of the capacity of the largest tank for which containment is provided. The applicant shall maintain onsite or have readily available flotation booms to contain, and sufficient material to absorb, fuel and chemical spills and leaks. Soil contaminated by chemical spills, oil spills, etc., must be immediately cleaned up or be removed and disposed of in an approved manner.

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

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

4. Biocide Additives

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

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

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

(c) Quantities to be used;

(d) Frequencies of use;

(e) Proposed discharge concentrations; and

(f) EPA registration number, if applicable.

b. The use of any biocide or chemical additive containing tributyl tin, tributyl tin oxide, zinc, chromium, or related compounds in any cooling or boiler system(s) regulated by the Permit is prohibited except as exempted below. The use of a biocide or additive containing zinc, chromium or related compounds may be used in special circumstances if (1) the permit contains limits for these substances, or (2) the applicant demonstrates

during the application process that the use of zinc, chromium or related compounds as a biocide or additive will not pose a reasonable potential to violate the applicable State water quality standards for these substances. The use of any additive, not identified in this Permit or in the application for this Permit or not exempted from notification under this Permit is prohibited, prior to a determination by the Department that permit modification to control discharge of the additive is not required or prior to issuance of a permit modification controlling discharge of the additive.

5. Facility Identification

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

6. Removed Substances

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

7. Loss or Failure of Treatment Facilities

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

8. Duty to Mitigate

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

B. BYPASS AND UPSET

1. Bypass

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

b. A bypass is not prohibited if:

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

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

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

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

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

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

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

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

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

2. Upset

a. Except as provided in Parts II.B.2.b. and c., a discharge which results from an upset need not meet the applicable discharge limitations specified in Part I.A. of this Permit if:

(1) No later than 24-hours after becoming aware of the occurrence of the upset, the Permittee orally reports the occurrence and circumstances of the upset to the Director; and

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

(i) An upset occurred;

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

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

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

b. Notwithstanding the provisions of Part II.B.2.a., a discharge which is an overflow from a treatment facility or system, or an excess discharge from a point source associated with a treatment facility or system and which results from a 24-hour precipitation event larger than a 10-year, 24-hour precipitation event is not exempted from the discharge limitations specified in Part I.A. of this Permit unless:

(1) The treatment facility or system is designed, constructed, and maintained to contain the maximum volume of wastewater which would be generated by the facility during a 24-hour period without an increase in volume from precipitation and the maximum volume of wastewater resulting from a 10-year, 24-hour precipitation event or to treat the maximum flow associated with these volumes.

In computing the maximum volume of wastewater which would result from a 10-year, 24-hour precipitation event, the volume which would result from all areas contributing runoff to the individual treatment facility must be included (i.e., all runoff that is not diverted from the mining area and runoff which is not diverted from the preparation plant area); and

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

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

C. PERMIT CONDITIONS AND RESTRICTIONS

1. Prohibition against Discharge from Facilities Not Certified

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

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

2. Permit Modification, Suspension, Termination, and Revocation

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

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

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

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

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

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

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

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

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

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

3. Requirements for Metals, Cyanide, and Phenols Monitoring and Reporting

a. For Outfalls 001-1 and 002-1, the Permittee shall collect a sample of the discharge to be analyzed for antimony, arsenic, beryllium, cadmium, chromium, copper, lead, mercury, nickel, selenium, silver, thallium, zinc, cyanide, and phenols no later six months following the effective date of the Permit. The analyses shall be submitted on EPA Form 2C and received by the Department no later than 28 days following six months after the effective date of the Permit.

b. For Outfalls 001-1 and 002-1, should a discharge not occur within the first six months following the effective date of this Permit, the Permittee shall collect a sample of the discharge to be analyzed for antimony, arsenic, beryllium, cadmium, chromium, copper, lead, mercury, nickel, selenium, silver, thallium, zinc, cyanide, and phenols no later than six months following the date of the first discharge. The analyses shall be submitted on EPA Form 2C and received by the Department no later than 28 days following six months after the first discharge.

c. Parts II.C.3.a. and b. do not apply for any outfall that is represented by analyses conducted at a substantially similar outfall as indicated on EPA Form 2C or 2D.

d. The Permit shall be reopened, if required, to address any new information resulting from the completion and submittal of the data referenced in Parts II.C.3.a. and b.

4. 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.

5. 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.

6. 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.

7. Property and Other Rights

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

D. RESPONSIBILITIES

1. Duty to Comply

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

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

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

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

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

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

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

2. Change in Discharge

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

b. The Permittee shall notify the Director as soon as it knows or has reason to believe that it has begun or expects to begin to discharge any pollutant listed as a toxic pollutant

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

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

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

4. Compliance with Water Quality Standards and Other Provisions

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

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

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

5. Compliance with Statutes and Rules

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

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

6. Right of Entry and Inspection

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

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

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

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

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

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

a. If the Permittee intends to continue to discharge beyond the expiration date of this Permit, the Permittee shall file with the Department a complete permit application for reissuance of this Permit at least 180 days prior to its expiration.

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

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

PART III ADDITIONAL REQUIREMENTS, CONDITIONS, AND LIMITATIONS

A. CIVIL AND CRIMINAL LIABILITY

1. Tampering

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

2. False Statements

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

3. Permit Enforcement

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

4. Relief From Liability

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

B. OIL AND HAZARDOUS SUBSTANCE LIABILITY

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

C. AVAILABILITY OF REPORTS

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

D. DEFINITIONS

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

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

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

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

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

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

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

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

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

9. Crushed stone mine - means an area on or beneath land which is mined, quarried, or otherwise disturbed in activity related to the extraction, removal, or recovery of stone from natural or artificial deposits, including active mining, reclamation, and mineral storage areas, for production of crushed stone.

10. Daily discharge - means the discharge of a pollutant measured during any consecutive 24-hour period in accordance with the sample type and analytical methodology specified by the discharge permit.

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

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

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

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

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

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

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

18. DO - means dissolved oxygen.

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

20. 8HC - means 8-hour composite sample, including any of the following:

    a. The mixing of at least 5 equal volume samples collected at constant time intervals of not more than 2 hours over a period of not less than 8 hours between the hours of 6:00 a.m. and 6:00 p.m. If the sampling period exceeds 8 hours, sampling may be conducted beyond the 6:00 a.m. to 6:00 p.m. period.

b. A sample continuously collected at a constant rate over period of not less than 8 hours between the hours of 6:00 a.m. and 6:00 p.m. If the sampling period exceeds 8 hours, sampling may be conducted beyond the 6:00 a.m. to 6:00 p.m. period.

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

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

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

24. Geometric Mean - means the Nth root of the product of the individual values of any set of values where N is equal to the number of individual values. The geometric mean is equivalent to the antilog of the arithmetic mean of the logarithms of the individual values. For purposes of calculating the geometric mean, values of zero (0) shall be considered one (1).

25. Grab Sample - means a single influent or effluent portion which is not a composite sample. The sample(s) shall be collected at the period(s) most representative of the discharge.

26. Indirect Discharger - means a nondomestic discharger who discharges pollutants to a publicly owned treatment works or a privately owned treatment facility operated by another person.

27. Industrial User - means those industries identified in the Standard Industrial Classification manual, Bureau of the Budget 1967, as amended and supplemented, under the category "Division D – Manufacturing" and such other classes of significant waste producers as, by regulation, the Director deems appropriate.

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

29. MGD - means million gallons per day.

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

31. New Discharger - means a person owning or operating any building, structure, facility or installation:

a. From which there is or may be a discharge of pollutants;

b. From which the discharge of pollutants did not commence prior to August 13, 1979, and which is not a new source; and

c. Which has never received a final effective NPDES Permit for dischargers at that site.

32. New Source - means:

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

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

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

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

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

2. Facilities that discharge into a receiving stream which is listed on the State of Alabama's §303(d) list of impaired waters, and with discharges that contain the pollutant(s) for which the waters are impaired, must within six (6) months of the Final §303(d) list approval, document in its BMP plan how the BMPs will control the discharge of the pollutant(s) of concern, and must ensure that there

will be no increase of the pollutants of concern. A monitoring plan to assess the effectiveness of the BMPs in achieving the allocations must also be included in the BMP plan.

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

ALABAMA DEPARTMENT OF ENVIRONMENTAL MANGEMENT (ADEM)
OUTFALL CERTIFICATION SUMMARY

PERMITTEE NAME: White Rock Quarries, LLC
FACILITY NAME: Vincent Hills Quarry
NPDES PERMIT NO: AL0082066
COUNTY: Shelby County

Outfall Number	Is Outfall Certified?	Date of Certification	Outfall Latitude and Longitude	Date of ADEM Monitoring Release
001-1	☐ YES ☐ NO			
002-1	☐ YES ☐ NO			
003-1	☐ YES ☐ NO			
004-1	☐ YES ☐ NO			
005-1	☐ YES ☐ NO			
006-1	☐ YES ☐ NO			
007-1	☐ YES ☐ NO			
008-1	☐ YES ☐ NO			
009-1	☐ YES ☐ NO			
010-1	☐ YES ☐ NO			
011-1	☐ YES ☐ NO			
012-1	☐ YES ☐ NO			
013-1	☐ YES ☐ NO			
014-1	☐ YES ☐ NO			
015-1	☐ YES ☐ NO			
016-1	☐ YES ☐ NO			
017-1	☐ YES ☐ NO			
018-1	☐ YES ☐ NO			
019-1	☐ YES ☐ NO			
020-1	☐ YES ☐ NO			
021-1	☐ YES ☐ NO			
022-1	☐ YES ☐ NO			
023-1	☐ YES ☐ NO			
024-1	☐ YES ☐ NO			
025-1	☐ YES ☐ NO			
026-1	☐ YES ☐ NO			
028-1	☐ YES ☐ NO			
029-1	☐ YES ☐ NO			
030-1	☐ YES ☐ NO			
031-1	☐ YES ☐ NO			
032-1	☐ YES ☐ NO			

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

Name and Title (Print)	Signature	Date

☐ Responsible Official ☐ Duly Authorized Representative

ALABAMA DEPARTMENT OF ENVIRONMENTAL MANAGEMENT
WATER DIVISION

NPDES INDIVIDUAL PERMIT RATIONALE

Company Name:	White Rock Quarries, LLC
Facility Name:	Vincent Hills Quarry
County:	Shelby
Permit Number:	AL0082066
Prepared by:	David Hearn
Date:	April 23, 2020
Receiving Waters:	Coosa River (Lay Lake), unnamed Tributaries to Coosa River, Unnamed Tributaries to Spring Creek, and Unnamed Tributaries to Locust Creek
Permit Coverage:	Non-Metallic Crushed Stone Mine, Dry and Wet Preparation, Transportation and Storage, and Associated Areas
SIC Code:	1422

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

This proposed permit covers a non-metallic crushed stone mine, wet and dry preparation, transportation and storage, and associated areas which discharge to surface waters of the state. The proposed permit also covers the addition of a newly acquired 24.9 acre parcel of property.

The proposed permit authorizes treated discharges into the Coosa River (Lay Lake), classified as Public Water Supply (PWS), Swimming and Other Whole Body Water-Contact Sports (S), and Fish and Wildlife (F&W), and to Unnamed Tributaries to Spring Creek, and Unnamed Tributaries to Locust Creek which currently have a water quality classification of F&W. (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 stream use classification(s).

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 instream WQS for pH, for streams classified as PWS, S, and F&W, are 6.0 - 8.5 s.u per ADEM Admin Code r. 335-6-10-.09. However, the background flow from the Coosa River (Lay Lake) is substantial enough to provide dilution for discharges with a pH limitation of 9.0 s,u, such that the instream pH does not exceed 8/5 s.u. Therefore, the daily maximum pH limitation of 9.0 s.u. is used for Outfall 001, which discharges to the Coosa River. However, under no circumstances may the discharge 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.

Because all other outfalls may have discharges when the receiving stream does not have sufficient assimilative capacity, the pH limitations for Outfalls 002 through 032 is a range of 6.0 – 8.5 s.u. Again, under no circumstance

may the discharge cause the in-stream pH to deviate more than 1.0 s.u. from the normal or natural pH, nor be less than 6.0 s.u. nor greater than 8.5 s.u.

The 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 Pont Source Category* (July 1979).

Monitor only requirements have been established for Dissolved Aluminum at all outfalls due to the use of an aluminum based coagulant. These requirements apply only when the coagulant is in use. No limitations are proposed as the levels of the pollutant are expected to be controlled through BMP implementation. Monitoring results will be used to develop limitations in the future, if needed to protect water quality.

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

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

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

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

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

The proposed permit authorizes treated discharges into the Coosa River (Lay Lake), a watershed with an approved Total Maximum Daily Loads (TMDLs) for Nutrients. Monitoring and reporting of the nutrient-related parameters Total Kjeldahl (TKN) and Nitrite plus Nitrate-Nitrogen (NO2+NO3-N) are imposed on Outfalls 001 and 002 so that sufficient information will be available regarding the nutrient contribution from these point sources, should it be necessary at some later time to impose additional nutrient limits on these discharges. Monthly average limitations of 8.34 lbs/day for Total Phosphorus (as P) were established for Outfalls 001 and 002 based on the EPA approved Final Lay Lake Nutrient TMDL for the Coosa River Basin developed by the Department. This limitation applies only between the months of April through October. However monitoring is required year around.

The applicant is proposing discharges into the Coosa River (Lay Lake), a stream segment or other State water that is included on Alabama's current CWA §303(d) list. The Coosa River (Lay Lake) from River Mile 89 to Logan Martin

Dam is currently on the CWA §303(d) list for Metals (mercury) and Priority Organics (PCB's). Mercury and PCB's are not pollutants expected in significant concentrations from a quarry operation.

If the requirements of the proposed permit and PAP 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 (Lay Lake).

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

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

TOM JOINER & ASSOCIATES, Inc.

Consulting Geologists & Engineers

Thomas J. Joiner
Chairman

Robert T. Wood
Chief Executive Officer

Ken P. Hanby
President

Joseph E. Patrick
Vice President

March 12, 2019

VIA FEDERAL EXPRESS

RECEIVED
MAR 14 2019
STORM WATER
MANAGEMENT BRANCH

Angie Boatwright
Mining and Non-point Source Section
Water Division
Alabama Department of Environmental Management
1400 Coliseum Blvd.
Montgomery, AL 36110-2059

RE: NPDES Permit Application for Renewal & Modification
NPDES Permit No.: AL0082066
Vincent Hills Quarry
Vincent, Shelby County, Alabama

Dear Angie:

Enclosed, please find a permit application that has been prepared by Tom Joiner & Associates, Inc. (TJA) on behalf of the Vincent Hills Quarry, to renew and modify the NPDES Permit No. AL0082066.

The modification includes the addition of a newly acquired 24.9 acre parcel in Section 23, Township 19 South, Range 2 East.

If you have any question, please call me at 205-345-2311 or via email at jpatrick@tjacge.com.

Sincerely,

Joseph E. Patrick

Enclosures: NPDES Permit Application (2 copies)
ADEM Permits and Services Division - WRQ's Check No. 00142874

xc: Jim Hurley, White Rock Quarries w/Enclosures
Nick Rudanovich, White Rock Quarries w/Enclosures
Rob Fowler, Balch & Bingham w/Enclosures

84-NPDESPermitAppRen&Mod-031219.JEP

White Rock Quarries **ADEM Permits and Services Division**

DATE	INVOICE NO.	DESCRIPTION	INVOICE AMOUNT	DISC TAKEN	TOTAL
03/07/19	3/7/19		6,860.00		6,860.00
		TOTAL.....	**6,860.00**		**6,860.00**

RECEIVED

MAR 14 2019

STORM WATER
MANAGEMENT BRANCH

PLEASE PRESENT FOR PAYMENT PROMPTLY DETACH BEFORE DEPOSITING

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

Instructions: This form should be used to submit an application for an NPDES individual permit to authorize discharges from 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, and reclamation. Please 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 legibly in blue or black ink.

R# 19-48422
$6,860.00

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

RECEIVED
MAR 14 2019
STORM WATER MANAGEMENT BRANCH

I. GENERAL INFORMATION

NPDES Permit Number (Not applicable if initial permit application):	County(s) in which Facility is Located:
AL 0082066	Shelby

Company/Permittee Name:			Facility Name (*e.g.*, Mine Name, Pit Name, etc.):		
White Rock Quarries, LLC			Vincent Hills Quarry		
Mailing Address of Company/Permittee:			Physical Address of Facility (as near as possible to entrance):		
101 Sansbury's Way			4324 Highway 85		
City:	State:	Zip:	City:	State:	Zip:
West Palm Beach	Florida	33411-3670	Vincent	Alabama	35178
Permittee Phone Number:		Permittee Fax Number:		Latitude and Longitude of entrance:	
561-793-2102		561-798-3778		N33.3561559, W86.3944321	

Responsible Official (as described on page 12 of this application):			Responsible Official Title:		
James M. Hurley, IV			President		
Mailing Address of Responsible Official:			Physical Address of Responsible Official:		
101 Sansbury's Way			101 Sansbury's Way		
City:	State:	Zip:	City:	State:	Zip:
West Palm Beach	Florida	33411-3670	West Palm Beach	Florida	33411-3670
Phone Number of Responsible Official:		Fax Number of Responsible Official:		Email Address of Responsible Official:	
561-793-2102		561-798-3778		jhurley@vecelliogroup.com	

Facility Contact:			Facility Contact Title:	
Nick Rudanovich			Operations Manager	
Physical Address of Facility Contact:			Phone Number of Facility Contact:	Fax Number of Facility Contact:
4324 Highway 85			305-215-1483	561-798-3778
City:	State:	Zip:	Email Address of Facility Contact:	
Vincent	Alabama	35178	Nicholas.Rudanovich@WRQuarries.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)
James M. Hurley, IV	President - WRQ	804 Harbour Isles, Cte, North Palm Beach, FL 33410
Christopher S. Vecellio	Vice President - V&G	742 Slope Trail, Palm Beach, FL 33480

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:
South Florida Materials Corp.	Christopher S. Vecellio	President
dba Vecenergy		

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: Vecellio & Grogan (V&G)

D. Land Owner(s): White Rock Quarries, LLC

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

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:

Not Applicable

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 Labor (ADOL), US Army Corp of Engineers (USACE), or other agency, to the applicant, parent corporation, subsidiary, or LLC member for this facility whether presently effective, expired, suspended, revoked, or terminated:

See Attachment V

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

None

VI. PROPOSED SCHEDULE

Anticipated Activity Commencement Date: 2015 Anticipated Activity Completion Date: 2110

VII. ACTIVITY DESCRIPTION & INFORMATION

A. Proposed Total Area of the Permitted Site: 1,018 acres Proposed Total Disturbed Area of the Permitted Site: 750 acres

B. Township(s), Range(s), Section(s): T19S, R2E, Sec 13, 14, 23, 24, 25; T19S, R3E, Sec 18, 19

C. Detailed Directions to Site: From Montgomery, travel I-65N (40 mi), Exit AL-145N (23 mi). Continue onto Co. Rd 61 (2.7 mi), Rt onto AL-25N (11 mi), Rt onto Co. Rd 85 (.7 mi), Rt onto Co. Rd 85 (1.6 mi), VHQ on left

D. Is/ will this facility:

		Yes	No
(1)	an existing facility which currently results in discharges to State waters?	X	
(2)	a proposed facility which will result in a discharge to State waters?		X
(3)	be located within any 100-year flood plain?	X	
(4)	discharge to Municipal Separate Storm Sewer?		X
(5)	discharge to waters of or be located in the Coastal Zone?		X
(6)	need/have ADEM UIC permit coverage?		X
(7)	be located on Indian/ historically significant lands?	X	
(8)	need/have ADEM SID permit coverage?		X
(9)	need/have ASMC permit coverage?		X
(10)	need/have ADOL permit coverage?		X
(11)	generate, treat, store, or dispose of hazardous or toxic waste ? (If "Yes," attach a detailed explanation.)		X
(12)	be located in or discharge to a Public Water Supply (PWS) watershed or be located within ½ mile of any PWS well?	X	

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.**

10% Dirt &/or Chert ____ Sand &/or Gravel ____ Chalk ____ Talc ____ Crushed rock (other)

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

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

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

____ Bauxitic Clay ____ Bauxite Ore 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):

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

B. Primary SIC Code: 1422 NAICS Code: _____ Description: Limestone Mining and Crushing

Secondary SIC Code(s): _____ NAICS Code: _____ Description: _____

C. Narrative Description of the Activity:

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

A. Will fuels, chemicals, compounds, or liquid waste be used or stored onsite? [x] 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 SPCC Plan	_____ 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. [x] 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: NA

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

XII. ASMC REGULATED ENTITIES

A. Is this coal mining operation regulated by ASMC? [ ] Yes [x] 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.

XIII. TOPOGRAPHIC MAP SUBMITTAL See Figure 1

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 See Figure 2

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 XIII (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)
		See Attachment XV								

*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. EPA Form 2C, EPA Form 2D, and/or Modified EPA Form 2C Submittal

☒ Yes, pursuant to 40 CFR §122.21, the applicant requests a waiver for completion of EPA Form 2C, EPA Form 2D, and 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 EPA Form 2C, EPA Form 2D, and/or 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/month	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
001-002P	*	4.6	3 Mil	24**	continuous	29/7.5	6-8	<1	625	1.5	<3.5	NA
003-028P	*	storm	storm	storm	storm	29/7.5	6-8	<1	***	***	***	NA
02-032P	*	storm	storm	storm	storm	29/7.5	68	<1	***	***	***	NA
See	Attachment	XVI										

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

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
	See Attachment XVII							

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, or **(10) Other** (describe below).

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 & PREVENTION (PAP) PLAN SUMMARY (must be completed for all outfalls)

Y	N	N/A	Outfall(s): 001P
X			Runoff from all areas of disturbance is controlled
X			Drainage from pit area, stockpiles, and spoil areas directed to a sedimentation pond
X			Sedimentation basin at least 0.25 acre/feet for every acre of disturbed drainage
X			Sedimentation basin cleaned out when sediment accumulation is 60% of design capacity
X			Trees, boulders, and other obstructions removed from pond during initial construction
X			Width of top of dam greater than 12'
X			Side slopes of dam no steeper than 3:1
X			Cutoff trench at least 8' wide
X			Side slopes of cutoff trench no less than 1:1
X			Cutoff trench located along the centerline of the dam
X			Cutoff trench extends at least 2' into bedrock or impervious soil
X			Cutoff trench filled with impervious material
X			Embankments and cutoff trench 95% compaction standard proctor ASTM
X			Embankment free of roots, tree debris, stones >6" diameter, etc.
X			Embankment constructed in lifts no greater than 12"
X			Spillpipe sized to carry peak flow from a one year storm event
X			Spillpipe will not chemically react with effluent
X			Subsurface withdrawal
X			Anti-seep collars extend radially at least 2' from each joint in spillpipe
X			Splashpad at the end of the spillpipe
		1	Emergency Spillway sized for peak flow from 25-yr 24-hr event if discharge not into PWS classified stream
X			Emergency spillway sized for peak flow from 50-yr 24-hr event if discharge is into PWS classified stream
X			Emergency overflow at least 20' long
X			Side slopes of emergency spillway no steeper than 2:1
X			Emergency spillway lined with riprap or concrete
X			Minimum of 1.5' of freeboard between normal overflow and emergency overflow
X			Minimum of 1.5' of freeboard between max. design flow of emergency spillway and top of dam
X			All emergency overflows are sized to handle entire drainage area for ponds in series
X			Dam stabilized with permanent vegetation
X			Sustained grade of haul road <10%
X			Maximum grade of haul road <15% for no more than 300'
		2	Outer slopes of haul road no steeper than 2:1
X			Outer slopes of haul road vegetated or otherwise stabilized
X			Detail drawings supplied for all stream crossings
X			Short-Term Stabilization/Grading And Temporary Vegetative Cover Plans
X			Long-Term Stabilization/Grading And Permanent Reclamation or Water Quality Remediation Plans

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

1 - Discharge from 001P will be to PWS classified stream.
2 - Haul Roads within the quarry pit may be steeper than 2:1, as determined by WRQ mining engineer.

1st page of 4 of "Page 9 of 12"

XIX. POLLUTION ABATEMENT & PREVENTION (PAP) PLAN SUMMARY (must be completed for all outfalls)

Y	N	N/A	Outfall(s): 002P
X			Runoff from all areas of disturbance is controlled
X			Drainage from pit area, stockpiles, and spoil areas directed to a sedimentation pond
X			Sedimentation basin at least 0.25 acre/feet for every acre of disturbed drainage
X			Sedimentation basin cleaned out when sediment accumulation is 60% of design capacity
X			Trees, boulders, and other obstructions removed from pond during initial construction
X			Width of top of dam greater than 12'
X			Side slopes of dam no steeper than 3:1
X			Cutoff trench at least 8' wide
X			Side slopes of cutoff trench no less than 1:1
X			Cutoff trench located along the centerline of the dam
X			Cutoff trench extends at least 2' into bedrock or impervious soil
X			Cutoff trench filled with impervious material
X			Embankments and cutoff trench 95% compaction standard proctor ASTM
X			Embankment free of roots, tree debris, stones >6" diameter, etc.
X			Embankment constructed in lifts no greater than 12"
X			Spillpipe sized to carry peak flow from a one year storm event
X			Spillpipe will not chemically react with effluent
X			Subsurface withdrawal
X			Anti-seep collars extend radially at least 2' from each joint in spillpipe
X			Splashpad at the end of the spillpipe
X			Emergency Spillway sized for peak flow from 25-yr 24-hr event if discharge not into PWS classified stream
		1	Emergency spillway sized for peak flow from 50-yr 24-hr event if discharge is into PWS classified stream
X			Emergency overflow at least 20' long
X			Side slopes of emergency spillway no steeper than 2:1
X			Emergency spillway lined with riprap or concrete
X			Minimum of 1.5' of freeboard between normal overflow and emergency overflow
X			Minimum of 1.5' of freeboard between max. design flow of emergency spillway and top of dam
X			All emergency overflows are sized to handle entire drainage area for ponds in series
X			Dam stabilized with permanent vegetation
X			Sustained grade of haul road <10%
X		2	Maximum grade of haul road <15% for no more than 300'
			Outer slopes of haul road no steeper than 2:1
X			Outer slopes of haul road vegetated or otherwise stabilized
X			Detail drawings supplied for all stream crossings
X			Short-Term Stabilization/Grading And Temporary Vegetative Cover Plans
X			Long-Term Stabilization/Grading And Permanent Reclamation or Water Quality Remediation Plans

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

1 - Discharge will not be to PWS classified stream.
2 - Haul Roads within the quarry pit may be steeper than 2:1, as determined by WRQ mining engineer.

2nd page of 4 of "Page 9 of 12"

XIX. POLLUTION ABATEMENT & PREVENTION (PAP) PLAN SUMMARY (must be completed for all outfalls)

Y	N	N/A	Outfall(s): 003E, 007E, 009E, 014E, 023E, 026E and 029E
X			Runoff from all areas of disturbance is controlled
X			Drainage from pit area, stockpiles, and spoil areas directed to a sedimentation pond
X			Sedimentation basin at least 0.25 acre/feet for every acre of disturbed drainage
X			Sedimentation basin cleaned out when sediment accumulation is 60% of design capacity
X			Trees, boulders, and other obstructions removed from pond during initial construction
X			Width of top of dam greater than 12'
X			Side slopes of dam no steeper than 3:1
X			Cutoff trench at least 8' wide
X			Side slopes of cutoff trench no less than 1:1
X			Cutoff trench located along the centerline of the dam
X			Cutoff trench extends at least 2' into bedrock or impervious soil
X			Cutoff trench filled with impervious material
X			Embankments and cutoff trench 95% compaction standard proctor ASTM
X			Embankment free of roots, tree debris, stones >6" diameter, etc.
X			Embankment constructed in lifts no greater than 12"
X			Spillpipe sized to carry peak flow from a one year storm event
X			Spillpipe will not chemically react with effluent
X			Subsurface withdrawal
X			Anti-seep collars extend radially at least 2' from each joint in spillpipe
X			Splashpad at the end of the spillpipe
X			Emergency Spillway sized for peak flow from 25-yr 24-hr event if discharge not into PWS classified stream
		1	Emergency spillway sized for peak flow from 50-yr 24-hr event if discharge is into PWS classified stream
X			Emergency overflow at least 20' long
X			Side slopes of emergency spillway no steeper than 2:1
X			Emergency spillway lined with riprap or concrete
X			Minimum of 1.5' of freeboard between normal overflow and emergency overflow
X			Minimum of 1.5' of freeboard between max. design flow of emergency spillway and top of dam
X			All emergency overflows are sized to handle entire drainage area for ponds in series
X			Dam stabilized with permanent vegetation
X			Sustained grade of haul road <10%
X			Maximum grade of haul road <15% for no more than 300'
		2	Outer slopes of haul road no steeper than 2:1
X			Outer slopes of haul road vegetated or otherwise stabilized
X			Detail drawings supplied for all stream crossings
X			Short-Term Stabilization/Grading And Temporary Vegetative Cover Plans
X			Long-Term Stabilization/Grading And Permanent Reclamation or Water Quality Remediation Plans

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

1 - Discharge will not be to a PWS classified stream.
2 - Haul Roads within the quarry pit may be steeper than 2:1, as determined by WRQ mining engineer.

3rd page of 4 of "Page 9 of 12"

XIX. POLLUTION ABATEMENT & PREVENTION (PAP) PLAN SUMMARY (must be completed for all outfalls)

Y	N	N/A	Outfall(s): 004P-006P, 008P, 010P-013P, 015P-022P, 024P, 025P, 027P, 028P and 030P-032P
X			Runoff from all areas of disturbance is controlled
X			Drainage from pit area, stockpiles, and spoil areas directed to a sedimentation pond
X			Sedimentation basin at least 0.25 acre/feet for every acre of disturbed drainage
X			Sedimentation basin cleaned out when sediment accumulation is 60% of design capacity
X			Trees, boulders, and other obstructions removed from pond during initial construction
X			Width of top of dam greater than 12'
X			Side slopes of dam no steeper than 3:1
X			Cutoff trench at least 8' wide
X			Side slopes of cutoff trench no less than 1:1
X			Cutoff trench located along the centerline of the dam
X			Cutoff trench extends at least 2' into bedrock or impervious soil
X			Cutoff trench filled with impervious material
X			Embankments and cutoff trench 95% compaction standard proctor ASTM
X			Embankment free of roots, tree debris, stones >6" diameter, etc.
X			Embankment constructed in lifts no greater than 12"
X			Spillpipe sized to carry peak flow from a one year storm event
X			Spillpipe will not chemically react with effluent
X			Subsurface withdrawal
X			Anti-seep collars extend radially at least 2' from each joint in spillpipe
X			Splashpad at the end of the spillpipe
X			Emergency Spillway sized for peak flow from 25-yr 24-hr event if discharge not into PWS classified stream
		1	Emergency spillway sized for peak flow from 50-yr 24-hr event if discharge is into PWS classified stream
X			Emergency overflow at least 20' long
X			Side slopes of emergency spillway no steeper than 2:1
X			Emergency spillway lined with riprap or concrete
X			Minimum of 1.5' of freeboard between normal overflow and emergency overflow
X			Minimum of 1.5' of freeboard between max. design flow of emergency spillway and top of dam
X			All emergency overflows are sized to handle entire drainage area for ponds in series
X			Dam stabilized with permanent vegetation
X			Sustained grade of haul road <10%
X			Maximum grade of haul road <15% for no more than 300'
		2	Outer slopes of haul road no steeper than 2:1
X			Outer slopes of haul road vegetated or otherwise stabilized
X			Detail drawings supplied for all stream crossings
X			Short-Term Stabilization/Grading And Temporary Vegetative Cover Plans
X			Long-Term Stabilization/Grading And Permanent Reclamation or Water Quality Remediation Plans

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

1 - Discharge will not be to a PWS classified stream.
2 - Haul Roads within the quarry pit may be steeper than 2:1, as determined by WRQ mining engineer.

4th page of 4 of "Page 9 of 12"

XX. POLLUTION ABATEMENT & PREVENTION (PAP) PLAN REVIEW CHECKLIST

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

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

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, or unless the relevant information required by EPA Form(s) 2C and/or 2D are submitted to the Department in an alternative format acceptable to the Department.

Planned/proposed mining sites that are greater than 5 acres, that mine/process coal or metallic mineral/ore, or that have wet or chemical processing, must apply for and obtain coverage under an Individual 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 Labor (ADOL) if conducting non-coal mining operations;
(3) The Alabama Historical Commission for requirements related to any potential historic or culturally significant sites;
(4) The Alabama Department of Conservation and Natural Resources (ADCNR) for requirements related to potential presence of threatened/endangered species; 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. The completed form, supporting documentation, and the appropriate fees must be submitted 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.alabama.gov
www.adem.alabama.gov

XXII. PROFESSIONAL ENGINEER (PE) CERTIFICATION

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

"I certify 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: Tom Joiner & Assoc. Inc. P.O. Box 1490, Tuscaloosa, AL 35403

PE Registration #: AL 22251

Name and Title (type or print): Joseph E. Patrick, Vice President

Phone Number: 205-345-2311

Signature: Joseph E Patrick

Date Signed: 3-12-2019

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) James M. Hurley, IV Official Title President

Signature [signature] Date Signed 3/7/19

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

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

(a) In the case of a corporation, by a principal executive officer of at least the level of vice president, or a manager assigned or delegated in accordance with corporate procedures, with such delegation submitted in writing if required by the Department, who is responsible for manufacturing, production, or operating facilities and is authorized to make management decisions which govern the operation of the regulated facility;

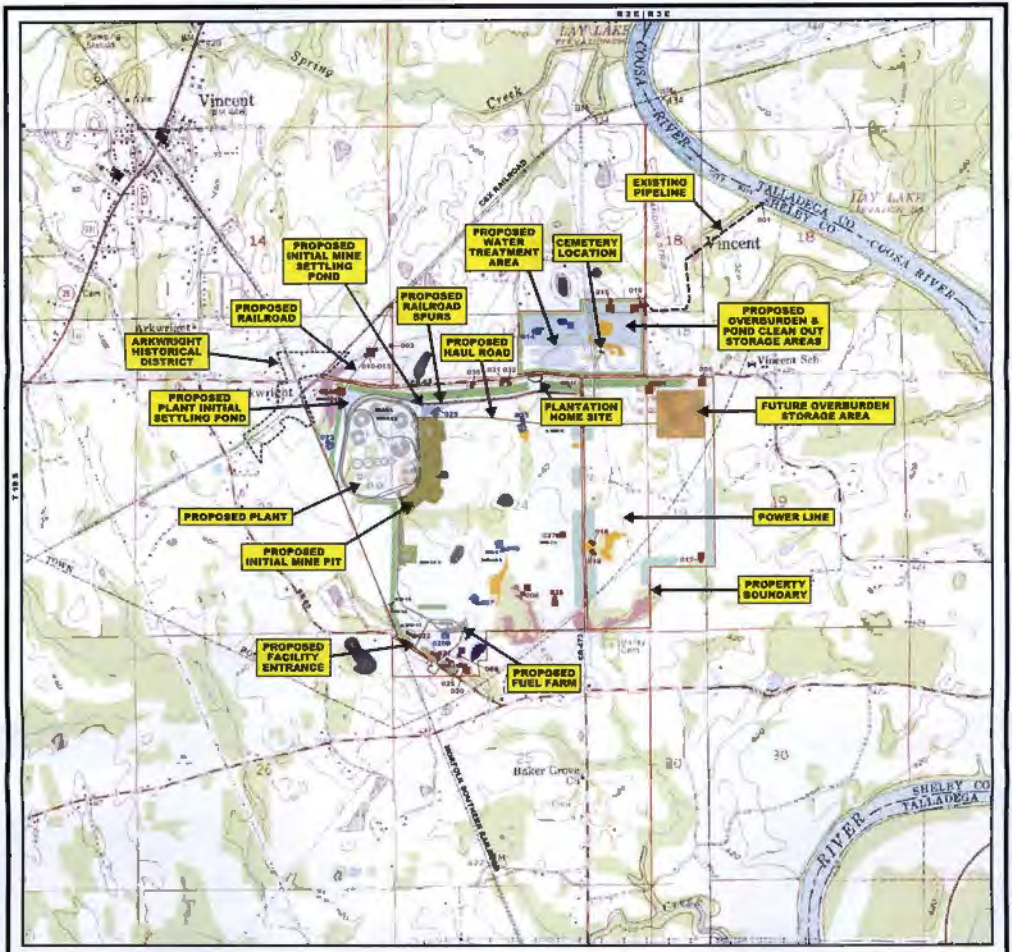
(b) In the case of a partnership, by a general partner;

(c) In the case of a sole proprietorship, by the proprietor; or

(d) In the case of a municipal, state, federal, or other public entity by either a principal executive officer, or ranking elected official.

ADEM Form 315

FIGURES
&
ATTACHMENTS

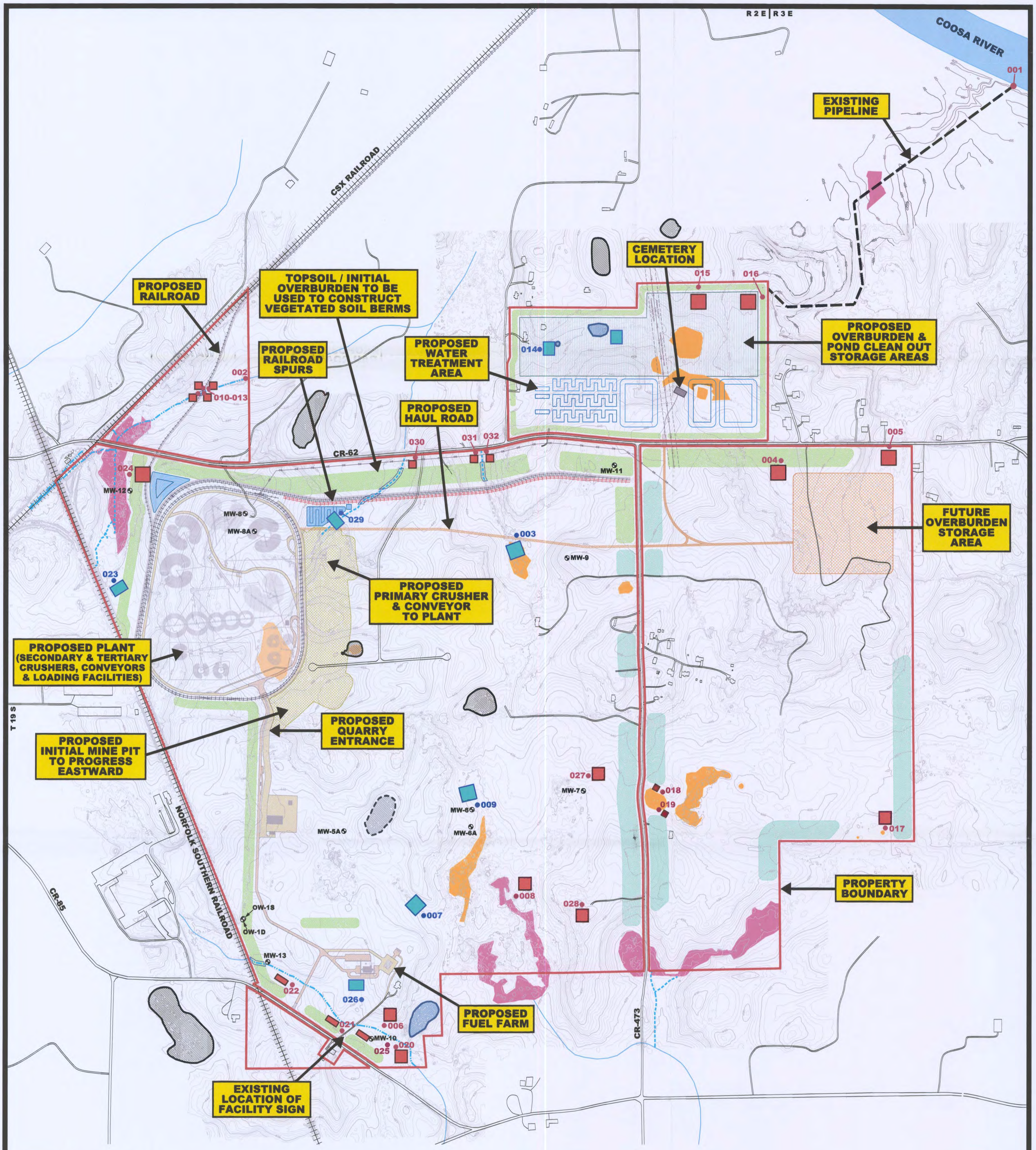


VINCENT HILLS QUARRY
WHITE ROCK QUARRIES, LLC
SHELBY COUNTY, ALABAMA

REVISED 07/1/2014

VINCENT HILLS
Vincent, Alabama

FIGURE 1
FACILITY DIAGRAM



- PROPERTY BOUNDARY
- PROPOSED ROAD (PAVED)
- PROPOSED ROAD (UNPAVED)
- NEW RAIL ACCESS ROAD
- PROPOSED HAUL ROAD
- INITIAL MINE PIT
- FUTURE OVERBURDEN STORAGE AREA
- WTA OVERBURDEN STORAGE AREA
- PROPOSED BERM
- FUTURE BERM
- PROPOSED RAILROAD
- FUTURE RAILROAD

- WETLAND - JURISDICTIONAL
- WETLAND - NON JURISDICTIONAL
- SURFACE DEPRESSION - NON JURISDICTIONAL
- DUG STOCK POND
- INTERMITTENT STREAM
- EPHEMERAL STREAM
- OFFSITE USGS SOLID BLUE-LINE STREAM
- OPEN BOTTOM CULVERT OVER JURISDICTIONAL STREAM

- MONITOR WELL
- EXISTING NPDES OUTFALL
- PROPOSED NPDES OUTFALL
- EXISTING SEDIMENT POND
- PROPOSED SEDIMENT POND

*FINAL POND LAYOUT WILL BE DETERMINED AFTER PERMIT ISSUANCE AND GEOTECHNICAL INVESTIGATION.

N

0 500 1000
SCALE IN FEET

SOURCES:
1-Foot Contour Lidar Survey Provided by AMEC 6/3/2016.
Aerial Photography by Southern Resources Mapping Corporation, Photographed March 19, 2009.
Construction Plans for: White Rock Quarries, Vincent Hills Plant, AMEC Environment & Infrastructures, Inc

VINCENT HILLS QUARRY
WHITE ROCK QUARRIES, LLC
SHELBY COUNTY, ALABAMA

REVISED: 03/11/2019

VINCENT HILLS
Vincent, Alabama

FIGURE 2
SITE MAP

Attachment 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 Labor (ADOL), US Army Corp of Engineers (USACE), or other agency, to the applicant, parent corporation, subsidiary, or LLC member for this facility whether presently effective, expired, suspended, revoked, or terminated:

Permit No.	Permit Name/Description	Status
ALR10BCCF	ADEM General NPDES: Pipeline Construction	Terminated July 2018
SAM-2010-01286-JMT	USACE Nationwide Permit 7, 12 & 44	Terminated May 2018
411-0067-X001	Air Permit (1) Primary & Secondary Crushing, etc.	Permitted – Not Constructed
411-0067-X002	Air Permit (2) Tertiary Crushing, Screening, Baghouses, etc.	Permitted – Not Constructed
411-0067-X003	Air Permit (3) Screening, Blending, Conveying, etc.	Permitted – Not Constructed
30-2002	Federal Energy Regulatory Commission (FERC) Permit, Phase I - Project #P2146	Expired August 2018

Attachment 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)
issue	001 P	Coosa River	33.3815645	-86.3706840	0	*	*	PWS S,F&W	Y	
issue	002 P	Unnamed Tributary to Spring Creek	33.3733979	-86.3960823	5	*	*	F&W	N	
issue	003 E	Unnamed Tributary to Spring Creek	33.3704958	-86.3881921	10	*	*	F&W	N	
issue	004 P	Unnamed Tributary to Coosa River	33.3710049	-86.3785291	5,400	*	*	F&W	N	
issue	005 P	Unnamed Tributary to Coosa River	33.3713583	-86.3749751	1,600	*	*	F&W	N	
issue	006 P	Unnamed Tributary to Locust Creek	33.3556014	-86.3917431	25	*	*	F&W	N	
issue	007 P	Unnamed Tributary to Locust Creek	33.3581742	-86.3896589	1,100	*	*	F&W	N	
issue	008 P	Unnamed Tributary to Locust Creek	33.3591423	-86.3873633	100	*	*	F&W	N	
issue	009 P	Unnamed Tributary to Locust Creek	33.3617136	-86.388634	2,250	*	*	F&W	N	
issue	010 P	Unnamed Tributary to Spring Creek	33.3731442	-86.3974884	5	*	*	F&W	N	
issue	011 P	Unnamed Tributary to Spring Creek	33.3731325	-86.3972849	5	*	*	F&W	N	
issue	012 P	Unnamed Tributary to Spring Creek	33.3730001	-86.3974545	5	*	*	F&W	N	
issue	013 P	Unnamed Tributary to Spring Creek	33.3729921	-86.3976456	5	*	*	F&W	N	
issue	014 E	Unnamed Tributary to Spring Creek	33.3740359	-86.3872222	900	*	*	F&W	N	
issue	015 P	Unnamed Tributary to Coosa River	33.3757865	-86.3811868	3,500	*	*	F&W	N	

Attachment XV.

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)
issue	016 P	Unnamed Tributary to Coosa River	33.3754997	-86.3790923	4,200	*	*	F&W	N	
issue	017 P	Unnamed Tributary to Coosa River	33.3609273	-86.3752292	1,600	*	*	F&W	N	
issue	018 P	Unnamed Tributary to Locust Creek	33.3619668	-86.3825371	2,600	*	*	F&W	N	
issue	019 P	Unnamed Tributary to Locust Creek	33.3614822	-86.3826642	2,400	*	*	F&W	N	
issue	020 P	Unnamed Tributary to Locust Creek	33.3551227	-86.3911967	5	*	*	F&W	N	
issue	021 P	Unnamed Tributary to Locust Creek	33.3565311	-86.3938779	5	*	*	F&W	N	
issue	022 P	Unnamed Tributary to Locust Creek	33.3567168	-86.3943104	5	*	*	F&W	N	
issue	023 P	Unnamed Tributary to Spring Creek	33.3685501	-86.4004924	175	*	*	F&W	N	
issue	024 P	Unnamed Tributary to Spring Creek	33.3708045	-86.3999279	150	*	*	F&W	N	
issue	025 P	Unnamed Tributary to Locust Creek	33.355367	-86.3917344	5	*	*	F&W	N	
issue	026 E	Unnamed Tributary to Locust Creek	33.356521	-86.3936275	5	*	*	F&W	N	
issue	027 P	Unnamed Tributary to Locust Creek	33.3624283	-86.384967	2,300	*	*	F&W	N	
issue	028 P	Unnamed Tributary to Locust Creek	33.3588899	-86.3852098	1,000	*	*	F&W	N	
issue	029 E	Unnamed Tributary to Spring Creek	33.371059	-86.391205	10	*	*	F&W	N	
issue	030 P	Unnamed Tributary to Spring Creek	33.371099	-86.390547	10	*	*	F&W	N	
issue	031 P	Unnamed Tributary to Spring Creek	33.371228	-86.388557	10	*	*	F&W	N	
issue	032 P	Unnamed Tributary to Spring Creek	33.371278	-86.388200	10	*	*	F&W	N	

* See attached Pollution Abatement and/or Prevention (PAP) Plan, Table 1

Attachment XVI.

DISCHARGE CHARACTERIZATION

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):

* onsite groundwater monitoring wells, Geological Survey of Alabama Map 140 (Shelby County)

** the WTA ponds will operate 24 hours/day, 52 weeks/year

*** Discharge will be proportional and vary, depending upon each storm event

Attachment 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
001 P	Pipe	4, 7, 10	yes	no	no	yes	na	na
002 P	Pipe or spillway	4, 7, 10	yes	no	no	yes	na	na
003 E	Pipe or spillway	10	yes	no	no	yes	na	na
004 P	Pipe or spillway	10	yes	no	no	yes	na	na
005 P	Pipe or spillway	10	yes	no	no	yes	na	na
006 P	Pipe or spillway	10	yes	no	no	yes	na	na
007 P	Pipe or spillway	10	yes	no	no	yes	na	na
008 P	Pipe or spillway	10	yes	no	no	yes	na	na
009 E	Pipe or spillway	10	yes	no	no	yes	na	na
010 P	Pipe or spillway	10	yes	no	no	yes	na	na
011 P	Pipe or spillway	10	yes	no	no	yes	na	na
012 P	Pipe or spillway	10	yes	no	no	yes	na	na
013 P	Pipe or spillway	10	yes	no	no	yes	na	na
014 E	Pipe or spillway	10	yes	no	no	yes	na	na
015 P	Pipe or spillway	10	yes	no	no	yes	na	na
016 P	Pipe or spillway	10	yes	no	no	yes	na	na
017 P	Pipe or spillway	10	yes	no	no	yes	na	na
018 P	Pipe or spillway	10	yes	no	no	yes	na	na
019 P	Pipe or spillway	10	yes	no	no	yes	na	na
020 P	Pipe or spillway	10	yes	no	no	yes	na	na
021 P	Pipe or spillway	10	yes	no	no	yes	na	na
022 P	Pipe or spillway	10	yes	no	no	yes	na	na

Attachment XVII.

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
023 E	Pipe or spillway	10	yes	no	no	yes	na	na
024 P	Pipe or spillway	10	yes	no	no	yes	na	na
025 P	Pipe or spillway	10	yes	no	no	yes	na	na
026 E	Pipe or spillway	10	yes	no	no	yes	na	na
027 P	Pipe or spillway	10	yes	no	no	yes	na	na
028 P	Pipe or spillway	10	yes	no	no	yes	na	na
029 E	Pipe or spillway	10	yes	no	no	yes	na	na
030 P	Pipe or spillway	10	yes	no	no	yes	na	na
031 P	Pipe or spillway	10	yes	no	no	yes	na	na
032 P	Pipe or spillway	10	yes	no	no	yes	na	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**: stormwater.

TOM JOINER & ASSOCIATES, Inc.

Consulting Geologists & Engineers

Thomas J. Joiner
Chairman

Robert T. Wood
Chief Executive Officer

Ken P. Hanby
President

Joseph E. Patrick
Vice President

January 31, 2020

VIA FEDERAL EXPRESS

Angie Boatwright
Mining and Non-point Source Section
Water Division
Alabama Department of Environmental Management
1400 Coliseum Blvd.
Montgomery, AL 36110-2059

RECEIVED
FEB 04 2020
STORM WATER
MANAGEMENT BRANCH

RE: Supplemental Information
NPDES Permit Application
NPDES Permit No.: AL0082066
Vincent Hills Quarry
Vincent, Shelby County, Alabama

Dear Angie:

Enclosed, please find an updated Pollution Abatement Plan, prepared by Tom Joiner & Associates, Inc. (TJA) on behalf of the Vincent Hills Quarry.

If you have any question, please call me at 205-345-2311 or via email at jpatrick@tjacge.com.

Sincerely,

Joseph E. Patrick

Enclosures: Pollution Abatement Plan

xc: Nick Rudanovich, White Rock Quarries w/Enclosures
Steve Harbin, White Rock Quarries, w Enclosures
Rob Fowler, Balch & Bingham w/Enclosures

84-AB-SupInfoNPDESPermitApp-013120.JEP

Pollution Abatement and/or Prevention (PAP) Plan

RECEIVED
FEB 04 2020
STORM WATER
MANAGEMENT BRANCH

FOR

Vincent Hills Quarry

a Subsidiary of White Rock Quarries, LLC

Vincent, Alabama

NPDES Permit No: AL0082066

January 2020

Prepared by:
Tom Joiner & Associates, Inc.
P.O. Box 1490
Tuscaloosa, AL 35403
(205) 345-2311

Pollution Abatement and/or Prevention (PAP) Plan

For

Vincent Hills Quarry
Vincent, Alabama

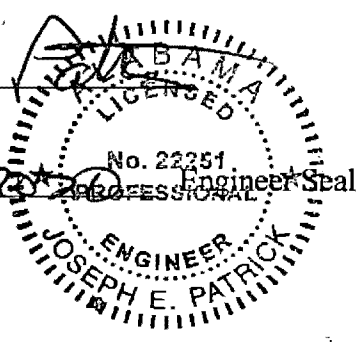
Engineer Certification:

I certify under penalty of law that technical information and data contained in this PAP Plan including any attached SPCC Plan, maps, engineering designs, etc. 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 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."

Certifying Engineer: Joseph E. Patrick, P.E.
Alabama Registration No. 22251

Signature: Joseph E. Patrick

Certification Date: 1-31-2020



Engineer Seal

Table of Contents

I. Introduction
II. General
III. Site Location
IV. Operator Information
V. Topographic Map
VI. Raw Materials, Processes and Products
VII. Water Supply and Use
VIII. Wastewater Sources and Disposal
IX. Outfall Details – Schematic Diagram
X. Water Treatment Facilities
XI. Sampling and Reporting
XII. Sediment Control for Haul and Access Roads
XIII. Location of Streams Adjacent to Mine
XIV. Non-Point Source Pollution
XV. Spill Prevention, Control and Countermeasures (SPCC) Plan
XVI. Runoff Calculations
Table 1 - Summary of Sediment Ponds for Vincent Hills Quarry
XVII. Management Practices and Reclamation Procedures

FIGURES
1. Facility Diagram
2. Site Map
3. Water Balance
4. Cross Sections of Initial Settling Ponds
5. Outfall 002P – Discharge Structure
6. Outfall 003E – Pond Schematic
7. Outfall 007E – Pond Schematic
8. Outfall 009E – Pond Schematic
9. Outfall 014E – Pond Schematic
10. Outfall 023E – Pond Schematic
11. Outfall 026E – Pond Schematic
12. Outfall 029E – Pond Schematic
13. Stormwater Pond Design Diagram (Type A)
14. Stormwater Pond Design Diagram (Type B)

APPENDICES
A. Legal Description of Property
B. Material Safety Data Sheets
C. Spill Prevention, Control And Countermeasures (SPCC) Plan
D. Wood Construction Plans
E. Best Management Practices (BMPs) & Typicals
F. Stream Crossing Details

Pollution Abatement and/or Prevention (PAP) Plan

I. Introduction

This Pollution Abatement and/or Prevention (PAP) Plan has been prepared as part of the permit renewal of the National Pollutant Discharge Elimination System (NPDES) Permit Application for the Vincent Hills Quarry located in Vincent, Alabama (ADEM NPDES Permit No. AL0082066). This plan has been prepared in accordance with the Alabama Department of Environmental Management (ADEM) Admin Code R. 335-6-9-.03.

II. General

The Vincent Hills Quarry ("the Facility") is a subsidiary of White Rock Quarries, LLC (White Rock). This quarry will be operated to produce crushed limestone aggregate. The limestone will be mined and then processed through a rock crusher and conveyor where it will be stockpiled until loaded onto transport vehicles for offsite shipment. The primary transportation will be by rail with minor truck transport.

III. Site Location

The Facility is located in Sections 13, 14, 23, 24 and 25 of Township 19 South, Range 2 East and Sections 18 and 19 of Township 19 South, Range 3 East in Shelby County near Vincent, Alabama. The property boundary of the proposed Facility is shown on Figures 1 and 2.

IV. Operator Information

Names and addresses of officials responsible for the implementation of this PAP Plan are as follows:

Headquarters:
White Rock Quarries, LLC
101 Sansbury's Way
West Palm Beach, Florida 33411-3670
Contact: James M. Hurley, IV, President
Phone: 561-793-2102

Facility/Quarry:
Vincent Hills Quarry
4324 Highway 85
Vincent, Alabama 35178
Contact: Steve Harbin, Mine Manager
Phone: 305-215-1483

The property boundaries of the Facility are shown on Figures 1 and 2 with Figure 2 showing detailed information concerning the areas of planned mining operations, entrance road, gravel storage/loading facilities, water treatment facilities, overburden stockpiles and visual vegetated berms. A legal description of this property is included as Appendix A. Figures 1 and 2 has been updated to include a parcel purchased since the last NPDES permit application, located in Section 25, Township 19 South, Range 2 East.

V. Topographic Map

A 1 inch = 2,000 feet topographic map that indicates the Facility property boundary, areas of mining, location of gravel plant, discharge outfalls (existing and proposed) and adjacent streams is included as Figure 1. A more detailed Facility map (1 inch = 1,000 feet) is included as Figure 2; this map incorporates all the information shown on Figure 1 as well as the location of the Facility entrance and sign, mine office, scales, fuel tanks, water treatment ponds, overburden stockpiles, quarry and the proposed NPDES discharge outfalls.

VI. Raw Materials, Processes and Products

The operations to be performed at the Vincent Hills Quarry will include limestone mining and crushing. The initial quarry will begin in the northwest quarter of Section 24 (See Figure 2). The mine activities will include overburden removal followed by the initial blasting to start the quarry. Once the quarry is started, the primary crusher will be constructed in the northwest corner of the quarry as shown on Figure 2. At the same time, construction of the plant area to the west of the quarry will begin with the construction of the railroad spurs, conveyor systems and load-out facilities. The initial overburden stripped from the quarry operations will be used to construct the vegetated soil berms around the Facility as shown on Figure 2. The soil berm will be planted with vegetation to aid in the absorption of noise as well as to provide a visual barrier. As the quarry operations continue, the quarry will be advanced to the east and south. Following the completion of the vegetated berms that surround the Facility, excess overburden stripped from continued mine activity will be stockpiled in an overburden storage area on the eastern side of the property (See Figures 1 and 2).

During construction of the primary crusher in the initial quarry pit, a portable rock crusher will be used to crush the mined limestone. It is anticipated that all of this rock will be consumed with the construction of the planned Facility. Following the installation of the primary crusher and conveyor systems within the plant, the crushed limestone will be sorted and stockpiled using conveyor systems and limestone screen. The majority of the sorted gravel will be loaded onto train cars and shipped offsite; minor transport will occur to the local markets via trucks. Dust suppression will include water suppression on all crushers and select conveyor belts, conveyor transfer points, and dust collection devices and air cyclones to collect fines at the secondary crushers.

The stormwater and process water from quarrying operations will be managed in accordance with this plan and the ADEM issued NPDES Permit. Process and stormwater/groundwater from the quarry and gravel washing operations will be collected in sediment ponds for holding until it is either reused in the process or pumped to the water treatment facility located north of County Road 62. The water-treatment pond layout has been designed to allow the water to be treated to remove suspended solids. Following treatment and retention, the water will then be reused for process water in the plant and quarry operations or it will be discharged via proposed Outfalls 001P and/or 002P.

Initially, the Facility will employ approximately 31 full-time hourly workers and contractors to begin the Facility construction (entrance roads, offices, gravel plant and mine). After about 1 year of construction, the initial mining operations will begin and it is expected that the employment will increase to 84 persons. After about 2 years when the mine equipment is fully installed and operating, the employment is forecast to increase to 125 persons. The mine production activities at the Facility will operate 16 hours per day, 6 days per week and 52 weeks per year. Safety Data Sheets for significant materials are included as Appendix B.

Virgin Chemicals

A Spill Prevention, Control and Countermeasures (SPCC) Plan (See Appendix C) has been implemented by White Rock for the storage and use of materials at this Facility in accordance with 40 CFR 112.7 and ADEM regulations. Chemicals used at the Facility that may be exposed to process or stormwater flow are identified in the SPCC Plan.

Spillage or Overflow (including, but not limited to sump overflow, rail-car loading and truck loading)

Spillage or overflow of materials was evaluated with respect to fluids and dry materials. Dry material spillage could potentially occur during the loading and unloading of raw or finished materials to/from transport vehicles (rail and truck) at the Facility. Loading facilities will be manned during loading operations and will be conducted on scales that are integrated with a product feed system, stopping the transfer of product when the scale indicates that the transport vessel is fully loaded. As a result, the spillage of product will be minimized. The potential for spillage/overflow of petroleum lubricants and fuels is discussed in the Facility's SPCC Plan (See Appendix C).

Raw-Material Storage

Raw materials include crushed limestone. The crushed limestone will be stockpiled in the plant area where it will be ready for loading onto trains (or trucks) for offsite transport. The gravel plant area will be surrounded by a vegetated soil berm and the stormwater within this area will be contained and recycled with the process water from

the washing operations. All water will drain either to a pond on the plant area or to the quarry where it will be recycled and/or pumped to the water treatment ponds located to the north of County Road 62.

Solid Waste Generation and Management

All regulated solid waste generated at the Facility will be transported offsite for disposal at an ADEM permitted solid waste disposal facility. The quarry operations will typically generate the below-listed wastes:

- Used oils
- Used grease
- Used Antifreeze
- Garbage-Dumpster
- Dust captured from air control Systems

Each solid waste will be handled/disposed of as follows:

Used oils and grease will be stored in a secure area designated for used oil and grease storage ("Used Oil Storage Area"). These items will be stored and managed in accordance with the Facility's SPCC Plan. The used oil will be stored in double-walled Aboveground Storage Tanks (ASTs). Licensed contractors will be used to transport used oil and grease offsite for disposal/recycling.

Industrial solid wastes (solids recovered using the street sweeper, settled solids/sludges from Facility sediment ponds) will be managed by temporarily storing them until they are properly disposed. These materials may also be reworked into the process whenever possible. When events occur that deem these materials as unsuitable for rework, the materials will be shipped offsite to an ADEM permitted waste disposal facility. Stormwater runoff from any storage areas will be contained within the drainage area for the quarry.

Maintenance of mine vehicles will be performed at the maintenance shop. Used oil and grease generated from vehicle maintenance will be transported to tanks at the Fuel Storage area (see Appendix C, figure 3) until pickup for offsite disposal. Other wastes generated during vehicle and equipment maintenance (tires, batteries, etc.) will be managed onsite until they are picked up for offsite disposal by licensed contractors. Vehicle maintenance that is not performed at the maintenance shop will be done offsite at commercial facilities.

VII. Water Supply and Use

Drinking water will be obtained from the City of Vincent and will be used at the office and other buildings. "Plant use" or "service" water will be obtained from the water

treatment ponds north of County Road 62, the quarry, sediment ponds or from an onsite water supply well. A water balance for this Facility is shown as Figure 3.

VIII. Wastewater Sources and Disposal

Sanitary Wastewater

All sanitary wastewater generated at the site will be discharged via an onsite septic tank or via portable toilets supplied by a licensed wastewater company.

Process Wastewater

Process wastewater will be treated in a series of ponds designed for the Facility (See Appendix D). The primary ponds will be located to the north of County Road 62 in the Water Treatment Area (WTA). These ponds have been designed to remove suspended solids using chemical coagulants (as needed) to aid in the removal of solids via gravitational settling. The chemical coagulants will be introduced at the upper-most pond using a dosage pump, based on the real-time flow rate. Safety Data Sheets for chemical coagulants that may be used are included in Appendix B.

The effluent from these ponds will be used to supply water to the plant; excess water from these ponds will be discharged to the Coosa River via a permitted Outfall 001P under the Facility's NPDES Permit. While the water treatment ponds are being constructed, Outfall 002P may be used. Each outfall is described in Item IX. Other ponds on the plant and quarry area will be utilized for water, as needed, to support the mining and gravel plant operations.

In the mine and plant area, the suspended and settleable solids will be sourced from groundwater flowing into the quarry, the washing and dust suppression related to the crushing operations and conveyor and dust particles on roads within the plant/quarry. The rock crusher will be constructed in the first phase of the quarry near the western end. Crushed rock will then be conveyed to stockpiles on the plant site via a covered conveyor. All gravel loadouts will be within an enclosed building (train loadouts) or will utilize water for dust suppression, as needed, to control any fugitive dust.

Stormwater

Stormwater falling within the quarry or plant will be collected in sump areas and then it will either be pumped to the water treatment ponds located to the north of County Road 62 or to the plant/mine for supply water, as needed. Stormwater outside of the mine and plant area will be managed in accordance with the Facility's Best Management Practices (BMP) Plan. Specifically, land disturbance activities outside of the quarry and plant area will be restricted so that stormwater impacts will be minimized. Surface water runoff will be diverted away from areas of mining and land disturbance using natural topographic features, drainage swales, berms or ponds, as needed. Floc logs will be

placed up stream of stormwater ponds as needed; Appendix B includes Safety Data Sheets of floc logs that may be used.

During construction activities, sediment ponds have been (or will be) constructed to handle stormwater runoff from disturbed areas. The location of these ponds and outfalls are shown on Figure 2.

Prior to land disturbance near streams and jurisdictional wetlands (not within disturbed areas), a land buffer was established and a double row of Type A silt fence will be installed between the proposed disturbed area and buffer zone. Similar protocol will be followed in the future.

Following the start of construction activities, the following BMPs have been (and/or will be) relied upon to control non-point source stormwater runoff and airborne dust accumulation:

- Vegetating disturbed slopes;
- Routine dust control along haul roads;
- Sediment ponds;
- Rock check dams and silt fences in areas that may be subject to stormwater runoff that could cause erosion due to concentrated flows and velocities;
- Hay bales;
- Check dams; and
- Water collection/pumping to quarry/stormwater ponds.

All BMPs will be installed and maintained in accordance with the Alabama Handbook for Erosion Control, Sediment Control and Stormwater Management on Construction Sites and Urban Areas (July 2018, or most recent edition thereof).

Vehicle Wash Water

Washing of vehicle exteriors will be conducted at a wash area located within the drainage area of the quarry to remove dust particles from trucks before they exit the property; vehicle parts that might contain oil and grease will not be rinsed. This water will drain into the quarry where it will be pumped to the WTA ponds for treatment and discharge or reuse. Additionally, dust-suppression water will be sprayed on the entrance road to prevent the tracking of dust offsite. This water will drain to a sediment pond and it will either be pumped to the quarry or discharged to surface water via a permitted outfall in accordance with the Facility's NPDES Permit.

IX. Outfall Details – Schematic Diagram

Figures 1 and 2 show the location of all proposed NPDES discharge outfalls. There are two outfalls (001P and 002P) proposed to handle the water generated from mining

activities, gravel plant operation and associated land disturbance activities. The remaining outfalls are included in the permit application and mine plan for areas that will have stormwater only (no process water). A description of each outfall is discussed below. Prior to beginning pond and outfall construction, initial BMPs will include silt fencing and construction staging. Typical BMPs to be used at this Facility are included as Appendix E.

Outfall No. 001P: Outfall 001P will be located at the eastern end of the pipeline where it terminates in the Coosa River (See Figure 2). Water from the plant area and quarry pit will be pumped to the WTA. This water will then be treated in the WTA prior to being discharged to a 36-inch diameter HDPE discharge pipe, and flow by gravity to the Coosa River. Schematics of the WTA and Outfall 001P are detailed in drawings included as Appendix D.

The 36-inch HDPE pipe was installed across a drainage easement between the WTA and the Coosa River under a construction permit (from August 2017 through June 2018). The site was granted coverage under the General NPDES permit (ALR10BCCF) on July 16, 2017; the permit coverage was later terminated July 6, 2018.

Outfall No. 002P: Outfall 002P is proposed to discharge the initial groundwater within the mine, crusher water and construction related stormwater that falls within the initial quarry and gravel plant during construction activities. The water for this outfall will drain by gravity flow from the Initial Settling Pond located at the gravel plant to the proposed discharge Outfall 002P on Spring Creek (See Figure 1). This pond will be equipped with a chemical coagulant injection system to aid in the removal of the clay-sized particles. The discharge pipe at the pond will be a 30-inch diameter HDPE pipe equipped with a submerged intake. This pipe will also be equipped with a valve on the intake to either lower the pond to create more storage, to allow gravity discharge to Spring Creek, or to divert the flow to the quarry in the event of a storm greater than the 2-year storm event. Discharge to Spring Creek will be accomplished via an open drainage swale as detailed in Figures 5 and 7. The emergency overflow for this pond will drain to the quarry. Once Outfall 001P is constructed and the WTA ponds are built, this outfall will become inactive.

Outfall Nos. 003E, 007E, 009E, 014E, 023E, 026E and 029E: These existing outfalls carry stormwater runoff only. Each outfall has a sediment/construction pond upstream of the discharge structure (each having a submerged intake). The location of each outfall is shown on Figures 1 and 2. Stormwater pond schematics for these ponds are included as Figures 5 through 12. Sediment removal may be accomplished using multiple ponds constructed in series, porous and non-porous baffles, filters socks, flocculation logs and/or chemical coagulant, as needed, and determined by stormwater inspections. Following each outfall's construction, a Professional Engineer's Certification Report was submitted to the Department.

Outfall Nos. 004P - 006P, 008P, 010P-013P, 015P-022P, 024P, 025P, 027P, 028P, and 030P-032P: These proposed outfalls will carry stormwater runoff only. Each outfall will have a sediment/construction pond upstream of the discharge structure (each having

a submerged intake). The proposed location of each outfall is shown on Figures 1 and 2. Generalized stormwater pond schematics for these ponds are included as Figures 13 and 14. Sediment removal may be accomplished using multiple ponds constructed in series, porous and non-porous baffles, filters socks, flocculation logs and/or chemical coagulant, as needed, and determined by stormwater inspections. Following each outfall's construction, a Professional Engineer's Certification Report will be submitted to the Department.

X. Water Treatment Facilities

The water treatment at this Facility is designed to remove suspended solids. Treatment technologies employed will include gravitational settling with chemical sedimentation as discussed for Outfalls 001P and 002P in Section IX.

The process water treatment area (WTA) will be located to the north of County Road 62. Process water will include water used for dust suppression during crushing operations, limestone screening/conveyance operations, loading facilities, and water from quarry dewatering operations. These basins have been designed to allow for the removal of suspended solids using gravitational settling. The water treatment may also be supplemented with chemical coagulants, as needed, to assist in the removal of fine suspended clay particles that can be entrained in the water. The water treatment basins will be constructed in general accordance with the design diagrams included as Appendix D. The initial pond construction will include a geotechnical investigation that will determine the final layout and construction of the ponds within the area to the north of County Road 62. Following their construction and before being put into operation, a Professional Engineer's Certification Report with as-built diagrams will be submitted to the Department. These ponds will be maintained and cleaned out periodically so that the solids will not accumulate to more than 60% of the design volume and their size is sufficient to last for the expected life of this mine (100 years).

XI. Sampling and Reporting

All water discharged from the Facility will be sampled in accordance with the effluent monitoring requirements of the Facility's NPDES Permit. This monitoring data will be retained on site and will be reported to the Department Forms as specified in the NPDES Permit.

XII. Sediment Control for Haul and Access Roads

The proposed access roads are shown on Figure 2. Within the existing quarry, haul roads go to the primary crusher located in the quarry. This will restrain all mine equipment within the quarry and provide for all runoff to drain to the sediment sumps within the quarry. Access roads to the existing quarry will be maintained such that they are

crowned to shed surface runoff to diversion channels or berms that drain back to either sediment sumps or ponds to remove suspended solids.

Access roads within the permit boundary that do not drain to the quarry will be constructed such that all runoff (stormwater and dust suppression water) will drain to sediment ponds prior to discharge.

XIII. Location of Streams Adjacent to Mine

To the east, the dominant stream is the Coosa River located from 0.5 to 1.5 miles from the proposed Facility. Stormwater drainage from the proposed site drains to the Coosa River via several unnamed tributaries. These include an unnamed tributary that drains to Spring Creek (to the north), an unnamed tributary that flows to the Coosa River to the east and an unnamed tributary that drains to Locust Creek (to the south) (See Figure 1). As part of the initial permit application process, a wetlands inventory was performed. This inventory identified the jurisdictional and non-jurisdictional wetlands on the property (See Figure 2). On November 28, 2011, the US Army Corps of Engineers submitted a letter of concurrence to the Vincent Hills Quarry after reviewing this inventory.

The proposed quarry and plant facility include stream crossings at seven locations. These crossings will include open-bottom culverts for the berms and entrance road and closed-bottom box culverts for rail crossings. Typical drawings of these crossings are included as Appendix F; the final construction drawings will be completed prior to construction.

XIV. Non-Point Source Pollution

Due to ground disturbance in the mining process, stormwater from the quarry site and access roads will be contaminated with dust and small particulate matter. Site grading to promote the drainage of stormwater to collection ponds and sumps will prevent these non-point sources of pollution. Additional preventative measures to be employed will include the use of BMPs (See Appendix E).

XV. Spill Prevention, Control and Countermeasures (SPCC) Plan

A detailed SPCC plan for this site is included as Appendix C.

XVI. Runoff Calculations

The stormwater detention ponds located around the Facility have been designed to restrict the flow of the 10-year storm event. Each pond will be constructed within each topographic drainage basin as shown on Figure 2. The proposed outfall locations are shown on Figure 2. Furthermore, the total and disturbed drainage areas for each pond and the specifics of the discharge structures are tabulated in Table 1. Each pond will be constructed prior to or at the beginning of land disturbance activities within each drainage basin.

TABLE 1

Summary of Sediment Ponds for Vincent Hills Quarry

Pond/Outfall	*Drainage Area* *	Disturbed Area	Minimum Storage Volume	Primary Discharge Pipe	Emergency Spillway	
					Width	Depth
	(Acres)	(Acres)	(Acre Ft)	(inches)	(Feet)	(Feet)
001P	NA [1]	NA [1]	NA [1]	36	NA [1]	NA [1]
002P	NA [1]	NA [1]	NA [1]	30	NA [1]	NA [1]
003E	18.42	1.5	0.4	**18**	16	1.5
004P	21.0	21.0	5.3	15	8	1.5
005P	46.8	46.8	11.7	21	10	1.5
006P	8.3	8.3	2.1	12	8	1.5
007E	115	33	8.2	**24**	16	1.5
008P	28.4	2.8	0.7	18	8	1.5
009E	46	16	4	**	14	1.5
010P	8.3	8.3	2.1	12	8	1.5
011P	7.2	7.2	1.8	10	8	1.5
012P	6.0	6.0	1.5	10	8	1.5
013P	9.5	9.5	2.4	12	8	1.5
014E	89.9	30	7.5	**24" (2)**	18	1.5
015P	16.2	16.2	4.1	15	8	1.5
016P	27.1	27.1	6.8	18	8	1.5
017P	157.0	14.4	3.6	18	8	1.5
018P	8.0	2.9	0.7	12	8	1.5
019P	7.2	4.0	1.0	10	8	1.5
020P	1.3	1.3	0.3	6	8	1.5
021P	2.2	2.2	0.6	8	8	1.5
022P	3.5	3.5	0.9	8	8	1.5
023E	18.34	8.6	2.1	**24**	8	1.5
024P	2.6	0.3	0.1	8	8	1.5
025P	3.4	3.4	0.9	8	8	1.5
026E	11.3	11.3	2.8	**12**	12	1.5
027P	21.1	4.2	1.1	15	8	1.5
028P	8.7	2.5	0.6	12	8	1.5
029E	72.5	13.96	3.5	**30**	16	1.5
030P	35	5	1.3	21	20	1.5
031P	85.5	5	1.3	27	20	1.5
032P	0.5	0.5	<0.2	27	20	2

*Drainage areas will change as construction activities progress. The largest drainage area expected is shown.

** Discharge is weir with headwall, for submerged discharge.

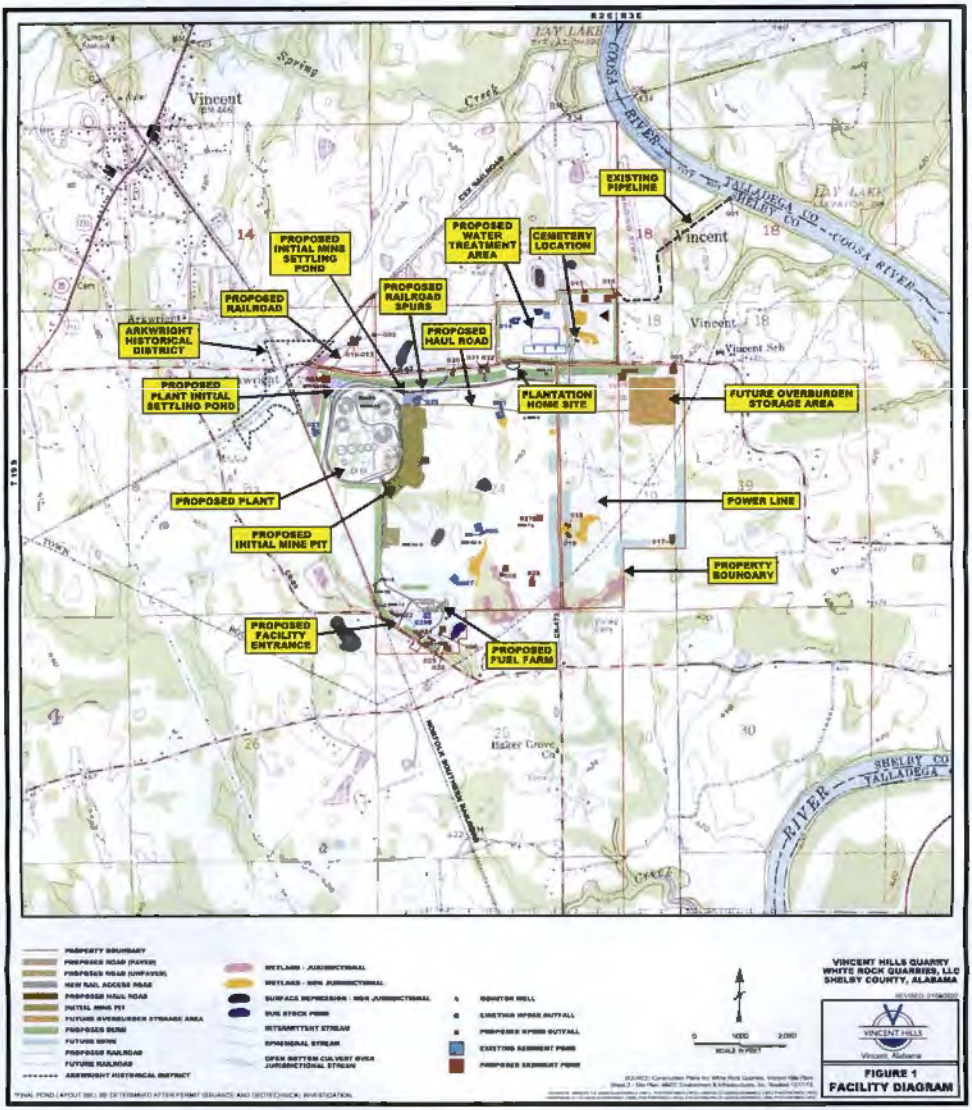
[1] Pond will receive pumped water discharge from a limestone quarry; no stormwater will enter the pond by overland flow; pond freeboard is sufficient to contain incidental rainfall.

XVII. Management Practices and Reclamation Procedures

Routine inspections will be conducted to determine the effectiveness of the Facility's BMPs and sediment pond structures during normal operating times as well as during/after storm events. The inspections will be reviewed by the Mine Manager or his/her designee. Any modifications or improvements will be implemented and any deficiencies will be corrected.

Upon completion of mine operations, the Facility will be reclaimed to stabilize the site with long-term stabilization that will meet or exceed water quality standards establish by ADEM at that time. This will include the removal of all mine equipment (ASTs, fuels, equipment, containers, and debris). Following completion of the reclamation activities, a request for termination of the NPDES Permit will be made to ADEM in accordance with the Facility's NPDES Permit.

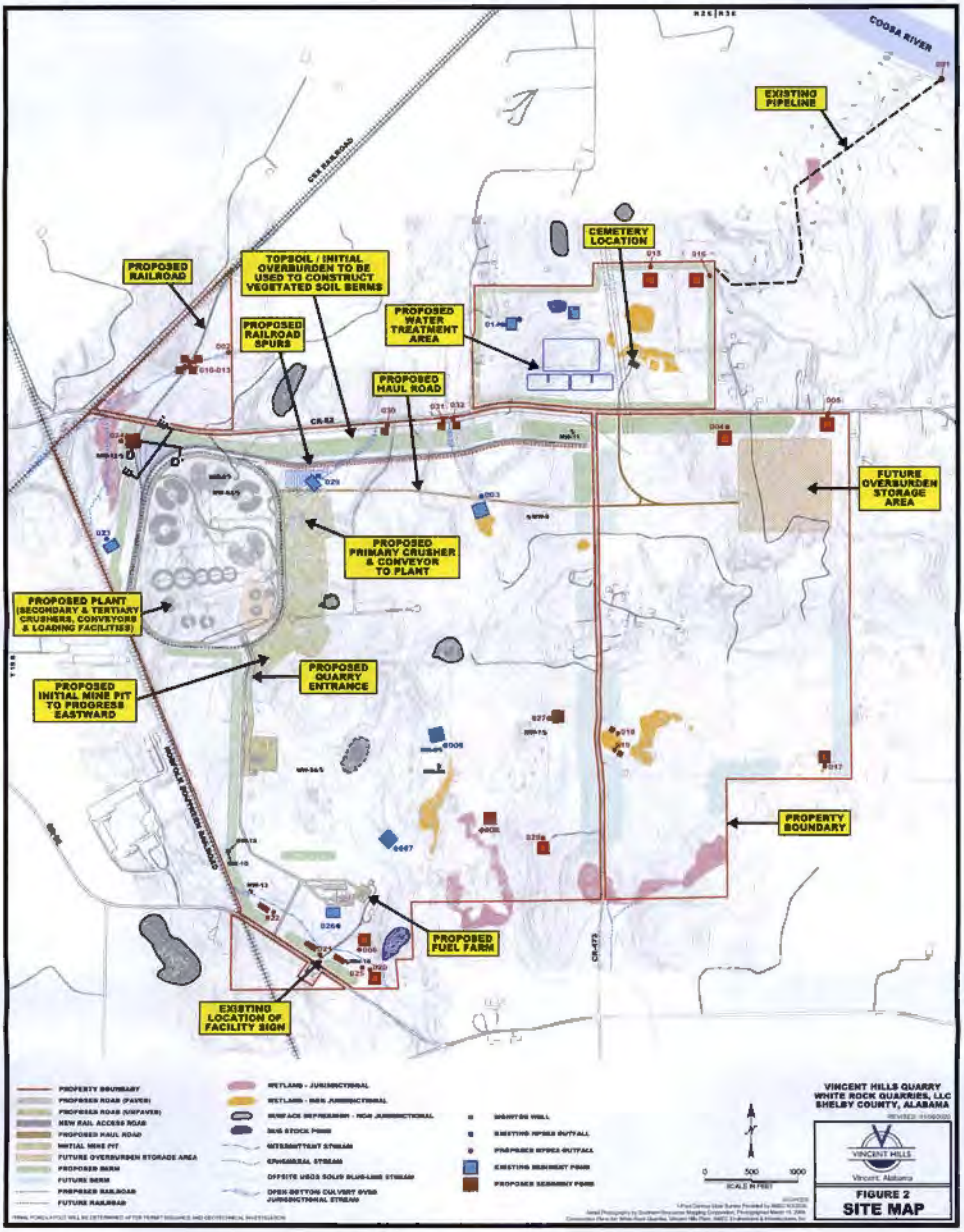
FIGURES



VINCENT HILLS QUARRY
WHITE ROCK QUARRIES, LLC
SHELBY COUNTY, ALABAMA

VINCENT HILLS
Vincent, Alabama

FIGURE 1
FACILITY DIAGRAM


COOSA RIVER
EXISTING PIPELINE
CEMETERY LOCATION
PROPOSED RAILROAD
TOPSOIL / INITIAL OVERBURDEN TO BE USED TO CONSTRUCT VEGETATED SOIL BERMS
PROPOSED RAILROAD SPURS
PROPOSED WATER TREATMENT AREA
PROPOSED HAUL ROAD
CR-62
FUTURE OVERBURDEN STORAGE AREA
PROPOSED PRIMARY CRUSHER & CONVEYOR TO PLANT
PROPOSED PLANT (SECONDARY & TERTIARY CRUSHERS, CONVEYORS & LOADING FACILITIES)
PROPOSED INITIAL MINE PIT TO PROGRESS EASTWARD
PROPOSED QUARRY ENTRANCE
PROPERTY BOUNDARY
PROPOSED FUEL FARM
EXISTING LOCATION OF FACILITY SIGN
CR-373
PROPERTY BOUNDARY
PROPOSED ROAD (PAVED)
PROPOSED ROAD (UNPAVED)
NEW RAIL ACCESS ROAD
PROPOSED HAUL ROAD
INITIAL MINE PIT
FUTURE OVERBURDEN STORAGE AREA
PROPOSED BERM
FUTURE BERM
PROPOSED RAILROAD
FUTURE RAILROAD
WETLAND - JURISDICTIONAL
WETLAND - NON JURISDICTIONAL
SURFACE DEPRESSION - NON JURISDICTIONAL
BIG STOCK POND
INTERMITTENT STREAM
EPHEMERAL STREAM
OFFSITE USGS SOLID BLUE-LINE STREAM
OPEN BOTTOM CULVERT OVER JURISDICTIONAL STREAM
MONITOR WELL
EXISTING NPDES OUTFALL
PROPOSED NPDES OUTFALL
EXISTING SEDIMENT POND
PROPOSED SEDIMENT POND
0
500
1000
SCALE IN FEET
VINCENT HILLS QUARRY
WHITE ROCK QUARRIES, LLC
SHELBY COUNTY, ALABAMA
VINCENT HILLS
Vincent, Alabama
FIGURE 2
SITE MAP

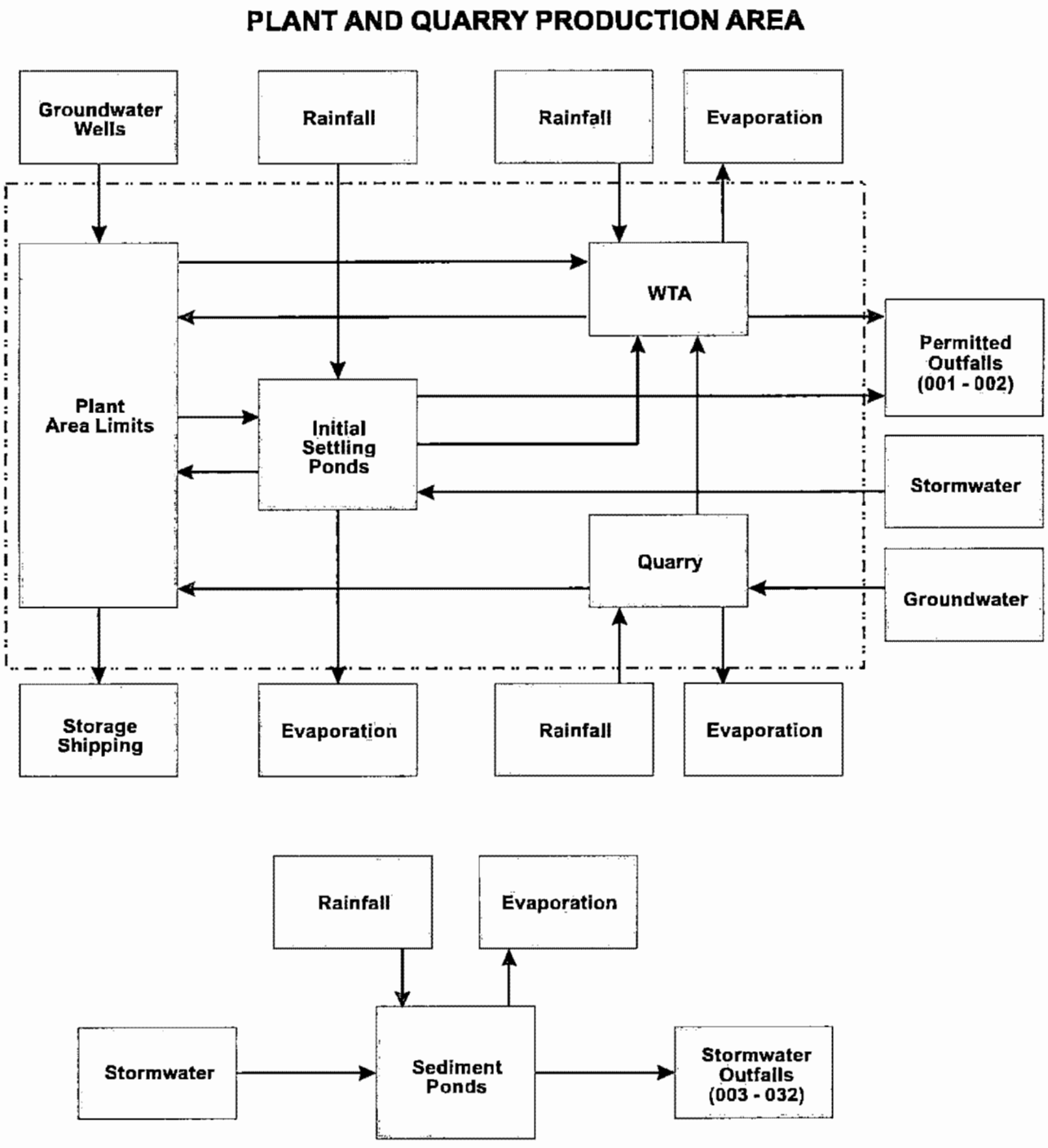
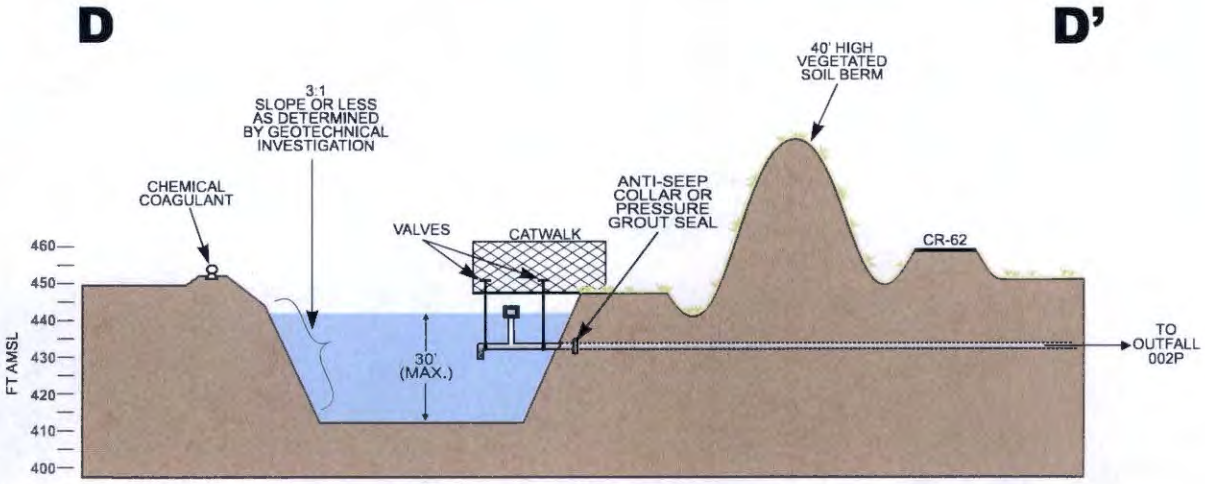


FIGURE 3

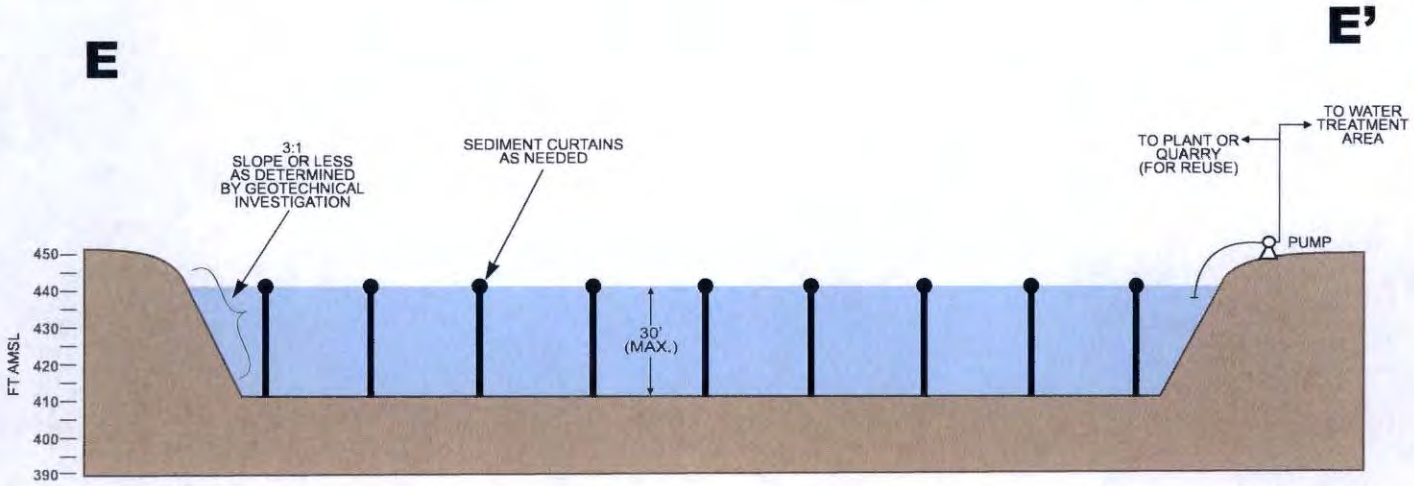
WATER BALANCE

VINCENT HILLS QUARRY - WHITE ROCK QUARRIES, LLC



PLANT INITIAL SETTLING POND

EMERGENCY OUTFLOW WILL FLOW TO THE QUARRY



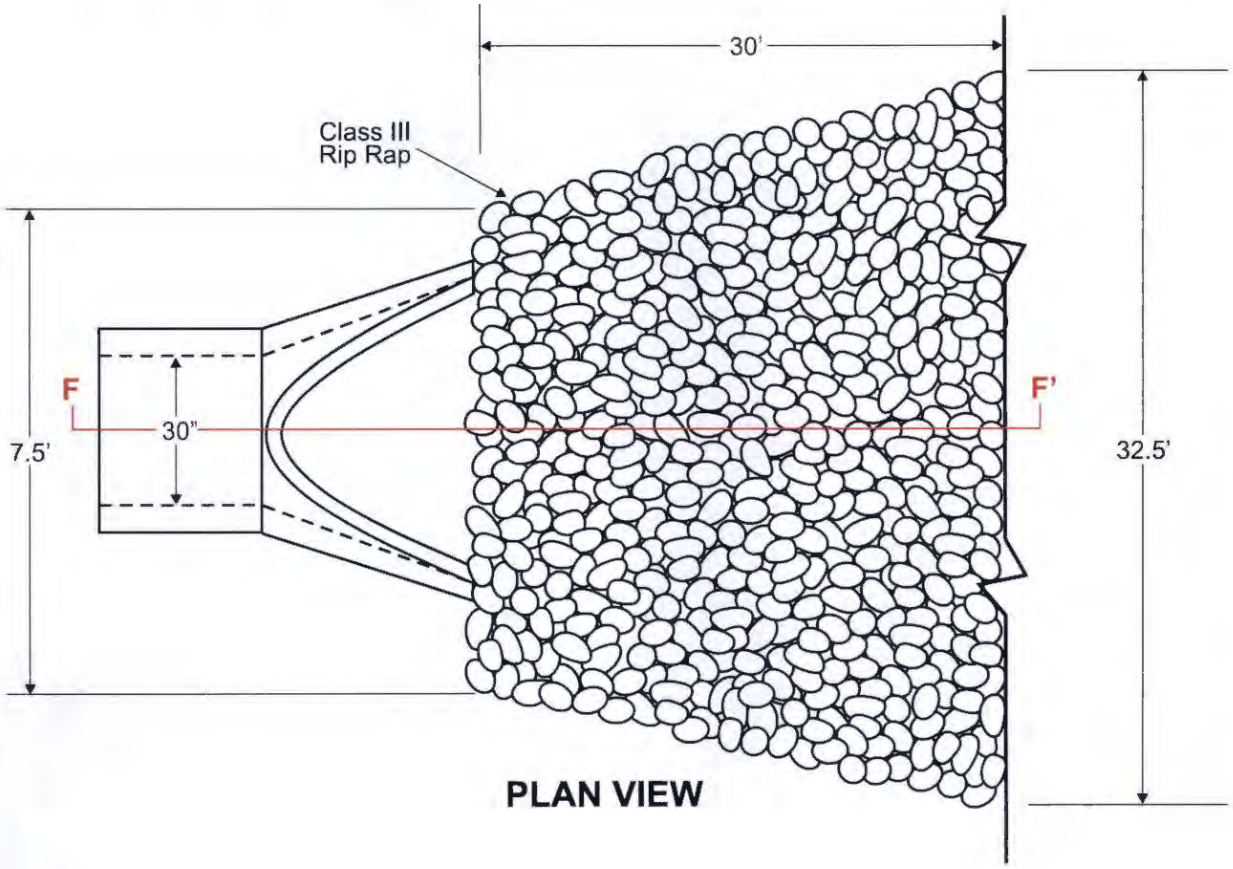
MINE INITIAL SETTLING POND

FIGURE 4

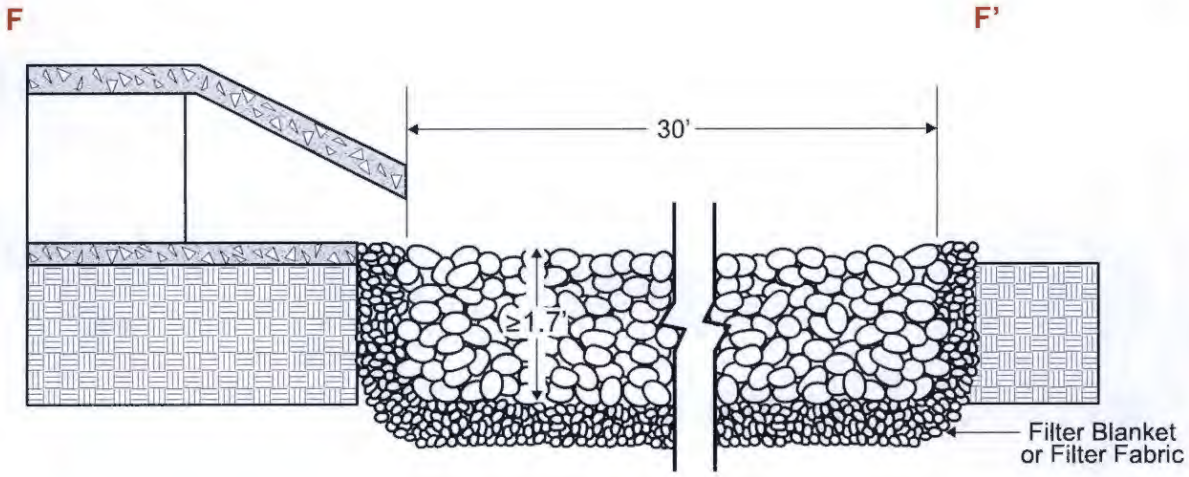
CROSS SECTIONS OF INITIAL SETTLING PONDS

VINCENT HILLS QUARRY - WHITE ROCK QUARRIES, LLC

*CROSS SECTION LINES SHOWN ON FIGURE 2



PLAN VIEW



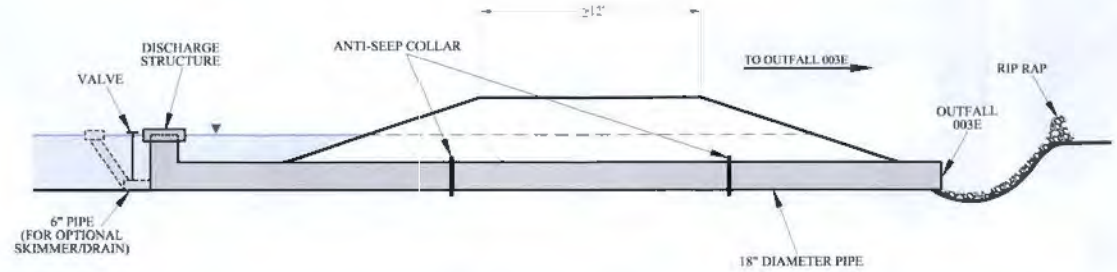
SECTION VIEW

FIGURE 5

OUTFALL 002P DISCHARGE STRUCTURE

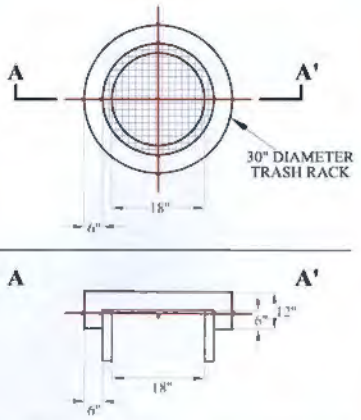
VINCENT HILLS QUARRY - WHITE ROCK QUARRIES, LLC

PROFILE

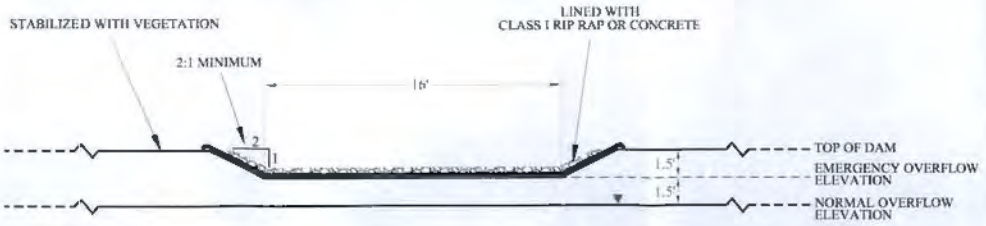


NOT TO SCALE

DISCHARGE STRUCTURE TOP



EMERGENCY SPILLWAY CROSS SECTION



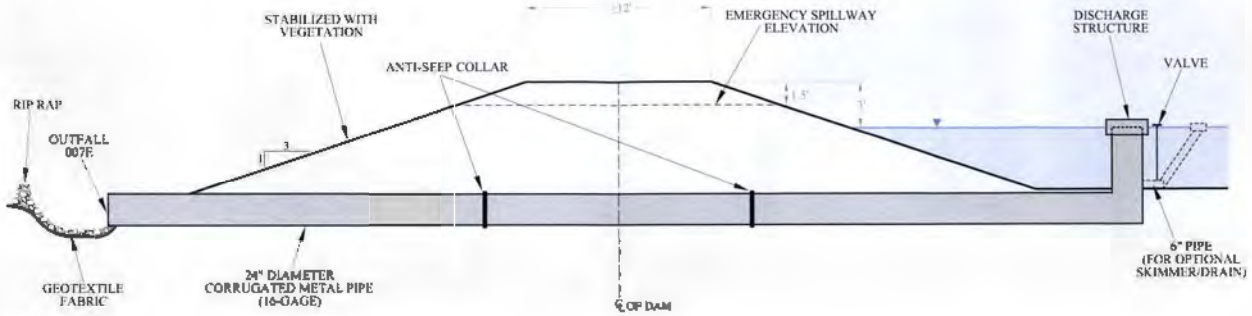
NOT TO SCALE

REVISED: 01/06/2020

VINCENT HILLS QUARRY
WHITE ROCK QUARRIES, LLC
SHELBY COUNTY, ALABAMA
Vincent, Alabama

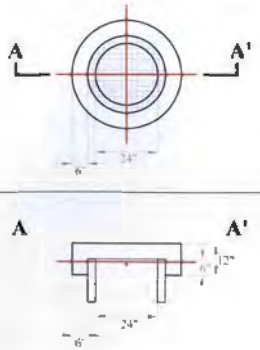
FIGURE 6
OUTFALL 003E POND SCHEMATIC

PROFILE

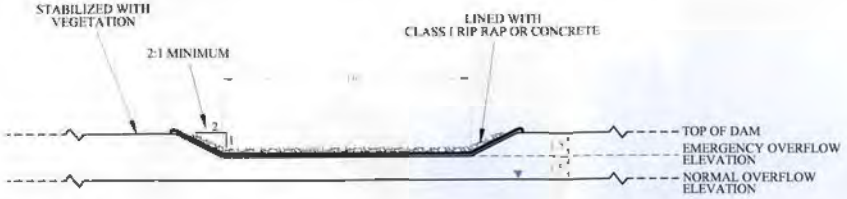


NOT TO SCALE

DISCHARGE STRUCTURE TOP



EMERGENCY SPILLWAY CROSS SECTION



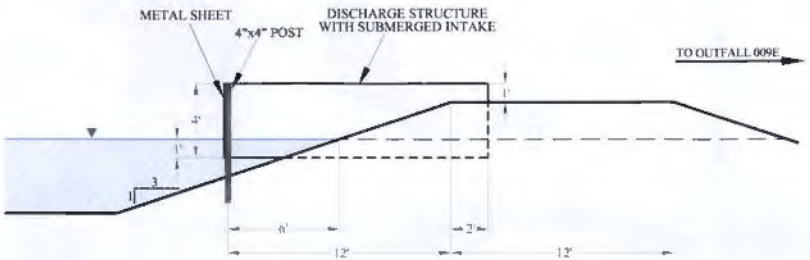
NOT TO SCALE

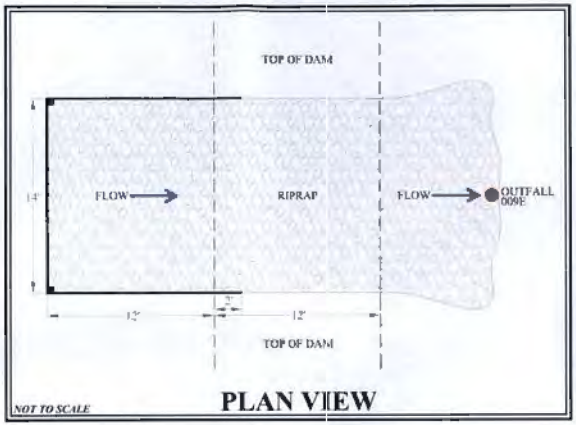
REVISED: 01/08/2020

VINCENT HILLS QUARRY
WHITE ROCK QUARRIES, LLC
SHELBY COUNTY, ALABAMA
Vincent, Alabama

FIGURE 7
OUTFALL 007E POND SCHEMATIC

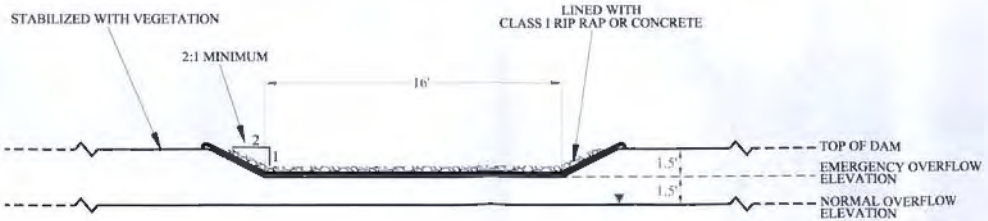
PROFILE





NOT TO SCALE

EMERGENCY SPILLWAY CROSS SECTION



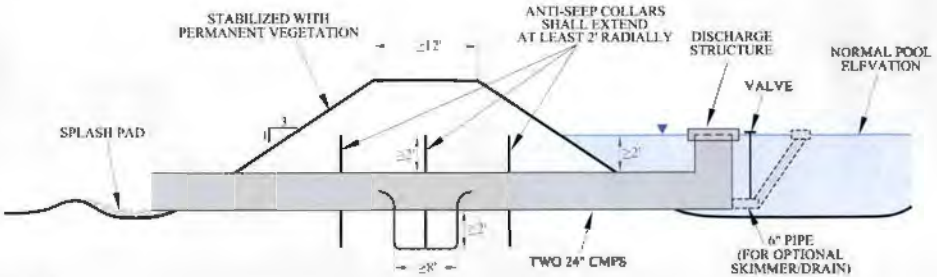
NOT TO SCALE

REVISED: 01/09/2020

VINCENT HILLS QUARRY
WHITE ROCK QUARRIES, LLC
SHELBY COUNTY, ALABAMA
Vincent, Alabama

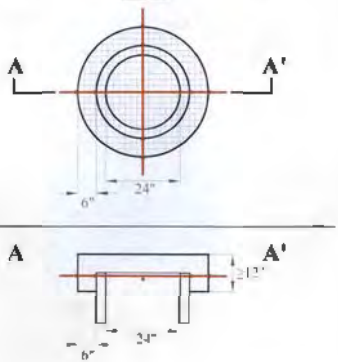
FIGURE 8
OUTFALL 009E
POND SCHEMATIC

PROFILE

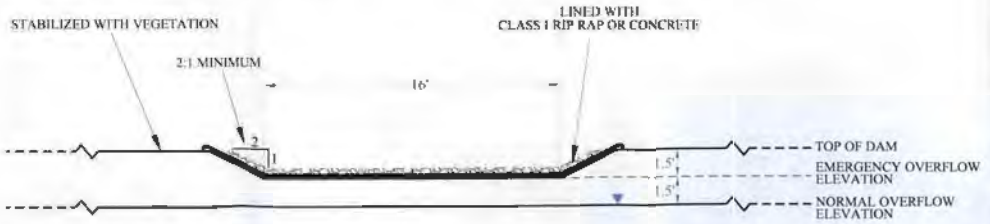


NOT TO SCALE

DISCHARGE STRUCTURE TOP



EMERGENCY SPILLWAY CROSS SECTION



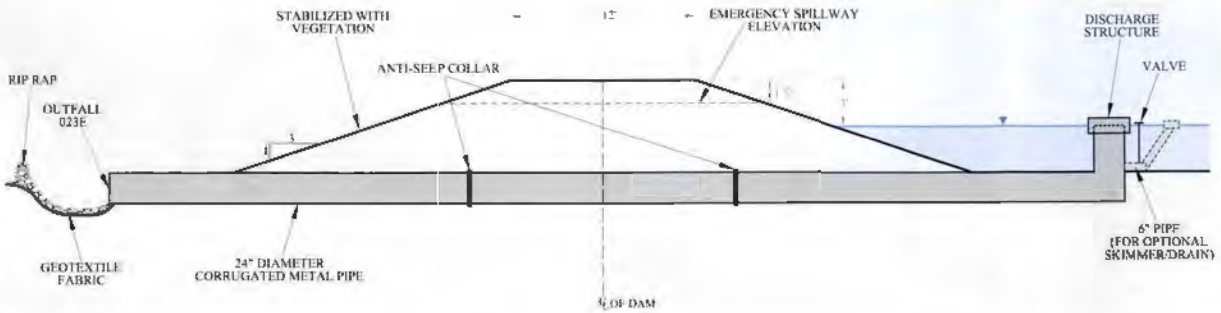
NOT TO SCALE

REVISED: 01/08/2020

VINCENT HILLS QUARRY
WHITE ROCK QUARRIES, LLC
SHELBY COUNTY, ALABAMA
Vincent, Alabama

FIGURE 9
OUTFALL 014E
POND SCHEMATIC

PROFILE

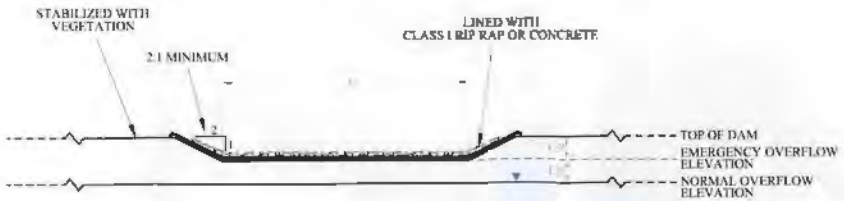


NOT TO SCALE

DISCHARGE STRUCTURE TOP

D = 24" (CMP)
OR
D = 18" (LINED CMP)

EMERGENCY SPILLWAY CROSS SECTION



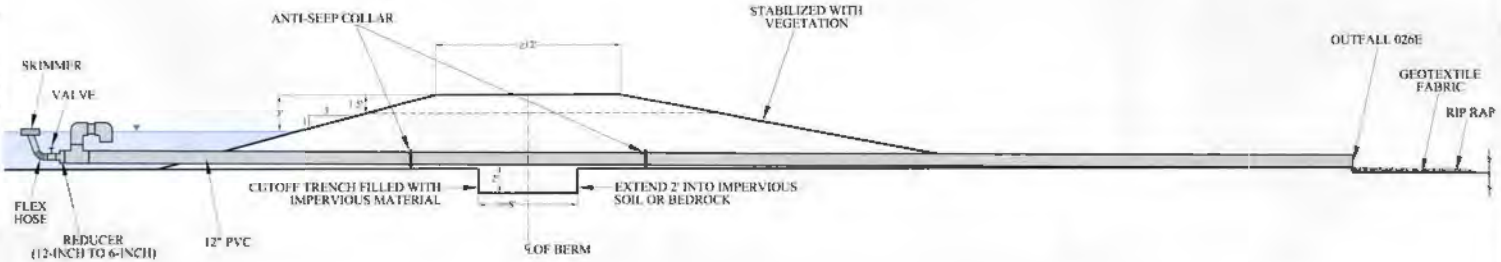
NOT TO SCALE

REVISED: 01/09/2020

VINCENT HILLS QUARRY
WHITE ROCK QUARRIES, LLC
SHELBY COUNTY, ALABAMA
Vincent, Alabama

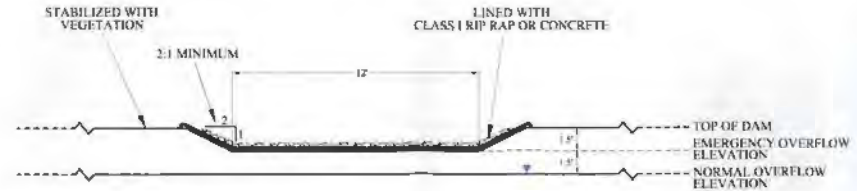
FIGURE 10
OUTFALL 023E
POND SCHEMATIC

PROFILE



NOT TO SCALE

EMERGENCY SPILLWAY CROSS SECTION



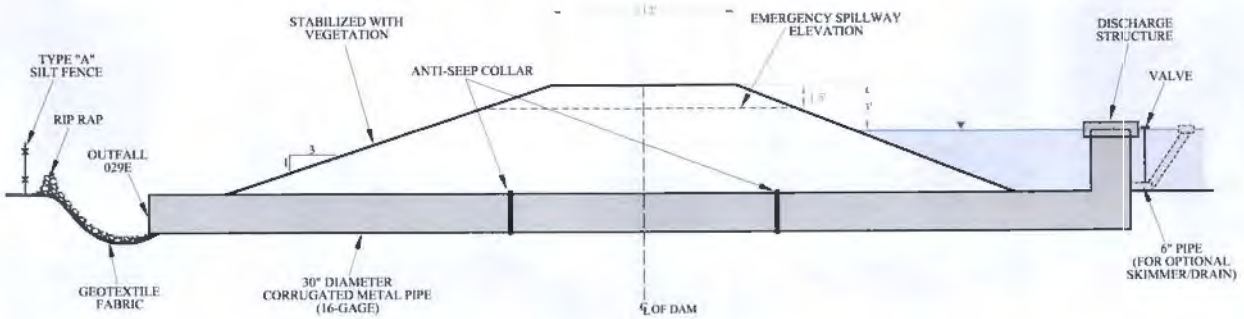
NOT TO SCALE

REVISED 01/06/2020

VINCENT HILLS QUARRY
WHITE ROCK QUARRIES, LLC
SHELBY COUNTY, ALABAMA
Vincent, Alabama

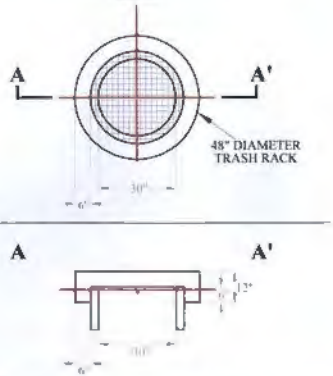
FIGURE 11
OUTFALL 026E POND SCHEMATIC

PROFILE



NOT TO SCALE

DISCHARGE STRUCTURE TOP



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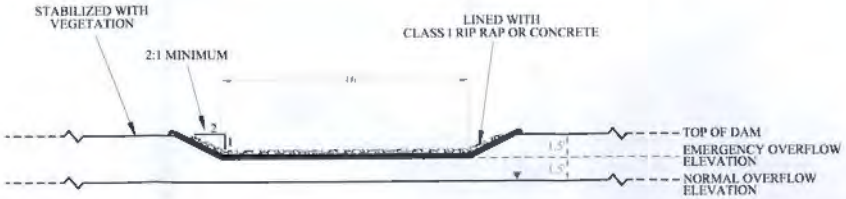
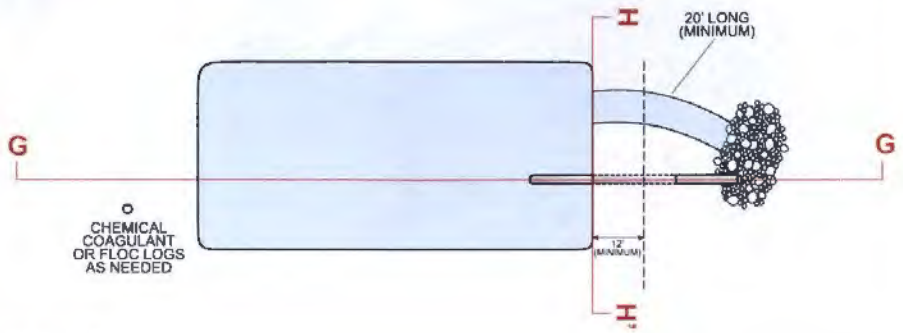


NOT TO SCALE

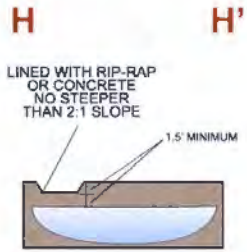
REVISED: 01/08/2020

VINCENT HILLS QUARRY
WHITE ROCK QUARRIES, LLC
SHELBY COUNTY, ALABAMA
Vincent, Alabama

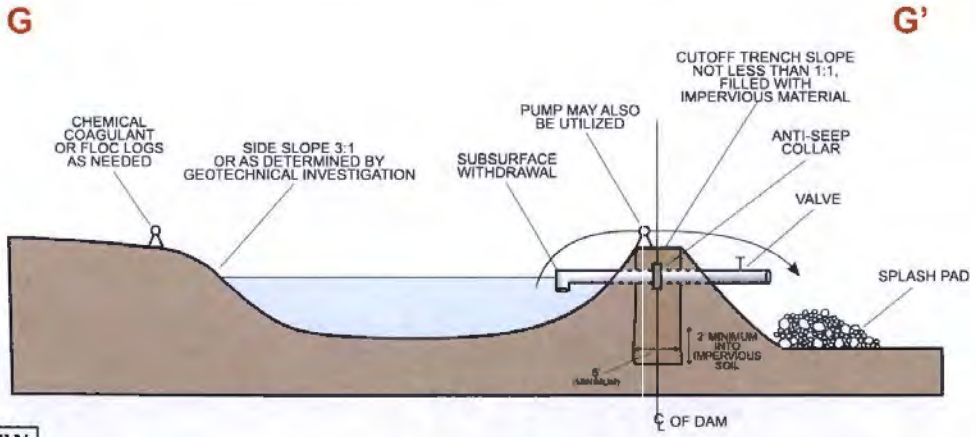
FIGURE 12
OUTFALL 029E POND SCHEMATIC



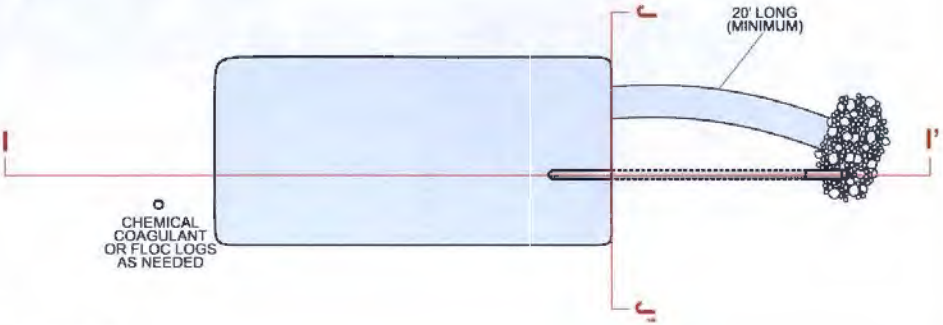
PLAN VIEW



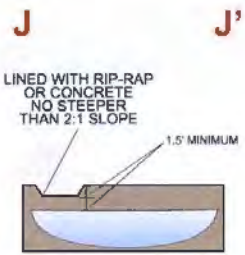
CROSS SECTION VIEW



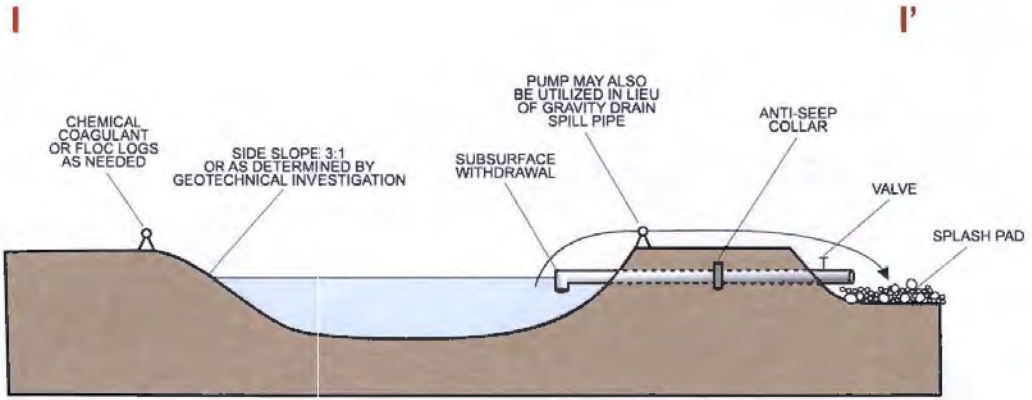
CROSS SECTION VIEW



PLAN VIEW



CROSS SECTION VIEW

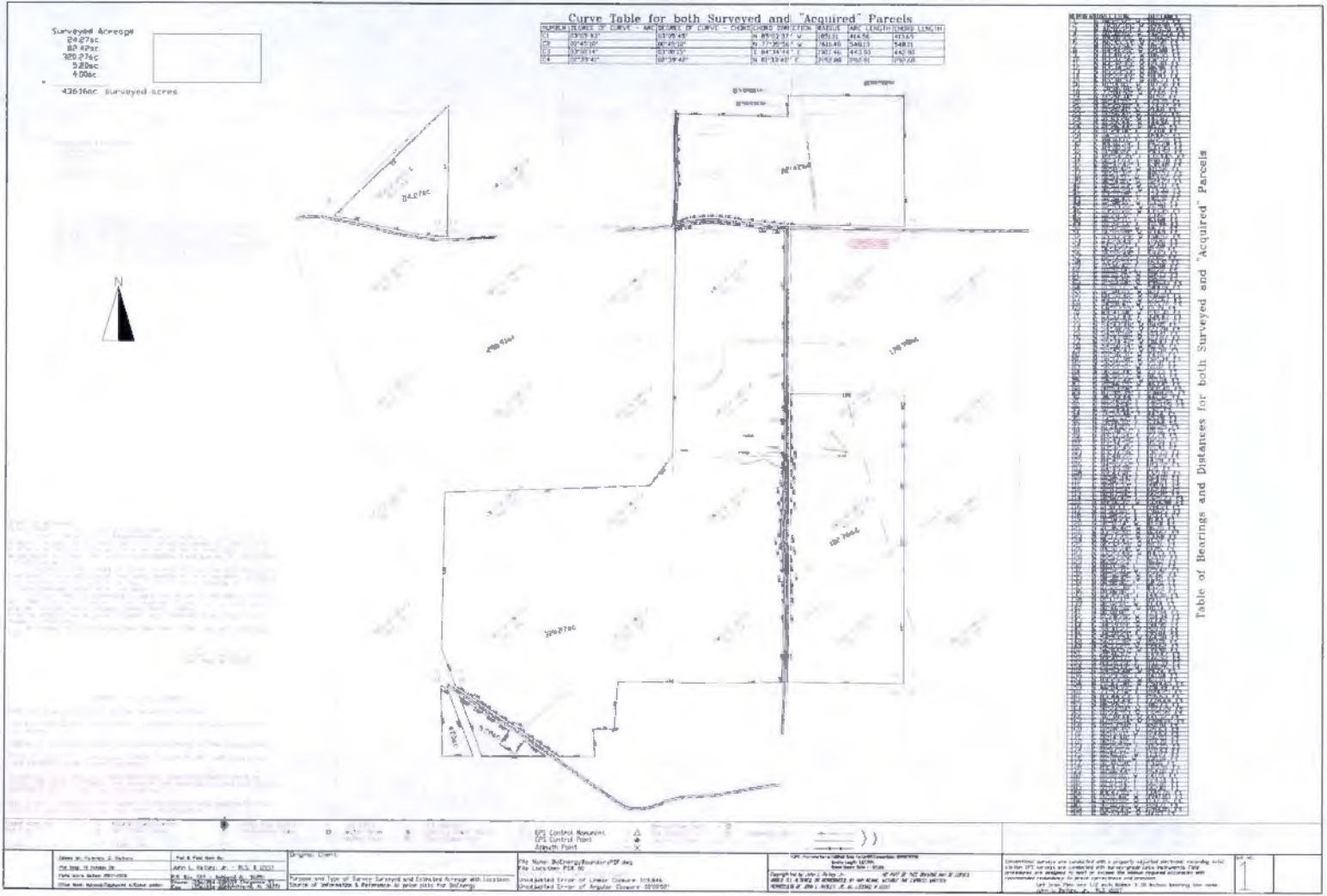


CROSS SECTION VIEW

APPENDICES

Appendix A

Legal Description of Property


Surveyed Acreage
24.27ac
82.42ac
320.27ac
5.20ac
4.00ac
436.16ac Surveyed acres
Curve Table for both Surveyed and "Acquired" Parcels
Table of Bearings and Distances for both Surveyed and "Acquired" Parcels
N
GPS Control Monument
GPS Control Point
Azimuth Point

THIS INSTRUMENT WAS PREPARED BY
AND AFTER RECORDING RETURN TO:
M. Lee Johnsey, Jr.
Balch & Bingham LLP
1901 Sixth Avenue North
Suite 1500
Birmingham, Alabama 35203

SEND TAX NOTICE TO:

White Rock Quarries, LLC
101 Sansburys Way
West Palm Beach, Florida 33411

STATE OF ALABAMA

COUNTY OF SHELBY

20180307000074730 1/4 $328.00
Shelby Cnty Judge of Probate, AL
03/07/2018 03:48:35 PM FILED/CERT

STATUTORY WARRANTY DEED

Shelby County, AL 03/07/2018
State of Alabama
Deed Tax:$304.00

KNOW ALL MEN BY THESE PRESENTS:

That for and in consideration of Ten Dollars ($10.00) and other good and valuable consideration to **EBSCO Investment Services, Inc.**, a Delaware corporation (hereinafter referred to as "Grantor"), in hand paid by **White Rock Quarries, LLC**, a Delaware limited liability company (hereinafter referred to as "Grantee"), the receipt and legal sufficiency of which is hereby acknowledged, Grantor does hereby grant, bargain, sell and convey unto Grantee that certain tract or parcel of land situated in Shelby County, Alabama, more particularly described on **Exhibit "A"** attached hereto and made a part hereof together with all improvements and fixtures thereon and all easements and other appurtenances thereto (the "Property").

TO HAVE AND TO HOLD the said Property unto Grantee, its successors and assigns forever subject to those matters described on **Exhibit "B"** attached hereto and made a part hereof.

Grantor hereby covenants and agrees with Grantee, and its successors and assigns, that Grantor, and its successors and assigns, will warrant and defend the above described Property against the lawful claims (unless otherwise noted above) of all persons claiming by, through, or under Grantor, but not further or otherwise.

IN WITNESS WHEREOF, said Grantor has caused this deed to be executed and delivered as of the 1st day of March, 2018.

GRANTOR:

EBSCO Investment Services, Inc., a Delaware corporation

By: Brooks Knapp
Name: Brooks Knapp
Its: Vice President

1570543.1

STATE OF ALABAMA

COUNTY OF Shelby

I, the undersigned, Notary Public in and for said County in said State, hereby certify that Brooks Knapp whose name as Vice President of **EBSCO Investment Services, Inc.**, a Delaware corporation, is signed to the foregoing instrument and who is known to me, acknowledged before me on this day that, being informed of the contents of the instrument, s/he, as such Vice President and with full authority, executed the same voluntarily for and as the act of said corporation.

Given under my hand this the 7th day of March, 2018.

NOTARY PUBLIC

My Commission Expires: 9-22-20

[NOTARY SEAL]

MICHAEL T. ATCHISON
My Commission Expires
NOTARY PUBLIC
09-22-2020
ALABAMA STATE AT LARGE

20180307000074730 2/4 $328.00
Shelby Cnty Judge of Probate, AL
03/07/2018 03:48:35 PM FILED/CERT

EXHIBIT "A"
Legal Description

BEGIN at the NE Corner of the NE 1/4 of the SE 1/4 of Section 23, Township 19 South, Range 2 East, Shelby County, Alabama, said point being the POINT OF BEGINNING; thence S01°07'02"E, a distance of 2335.21' to the Easterly R.O.W. line of Central of Georgia Railroad, 100' R.O.W.; thence N22°19'10"W and along said R.O.W. line, a distance of 2508.05'; thence N89°04'36"E and leaving said R.O.W. line, a distance of 907.07' to the POINT OF BEGINNING.

20180307000074730 3/4 $329.00
Shelby Cnty Judge of Probate, AL
03/07/2018 03:48:35 PM FILED/CERT

Surveyed Acreage
24.27ac.
82.42ac.
320.27ac.
5.20ac.
4.00ac.
\+ ___________
436.16ac. surveyed acres

Acquired Acreage
258.967ac.
178.19ac.
\+ ___________
437.75ac. Acquired acres

NOTE: no certification is made to the validity of the "acquired" acreage figures or perimeters (bearings and distances) shown on the surface of this plat. The area and boundaries generated for this plat of the "acquired" acreage parcels was compiled using tax maps and deed records.

Curve Table for both Surveyed and "Acquired" Parcels

NUMBER	DEGREE OF CURVE - ARC	DEGREE OF CURVE - CHORD	CHORD DIRECTION	RADIUS	ARC LENGTH	CHORD LENGTH
C1	03°05'43"	03°05'45"	N 85°03'37" W	1851.01	414.56	413.69
C2	00°45'10"	00°45'10"	N 77°35'56" W	7610.48	548.13	548.01
C3	03°00'14"	03°00'15"	S 84°34'44" E	1907.46	443.90	442.90
C4	02°39'41"	02°39'42"	N 81°33'40" E	2152.88	292.91	292.68

NUMBER	DIRECTION	DISTANCE
1	S 00°21'12" W	107.33 ft
2	N 78°07'35" W	399.90 ft
3	N 46°05'23" E	1876.51 ft
4	S 00°30'05" W	1429.74 ft
5	N 89°00'49" W	1284.05 ft
6	N 86°45'33" W	62.58 ft
7	N 85°15'56" W	101.26 ft
8	N 84°41'25" W	121.88 ft
9	N 83°48'22" W	106.55 ft
10	N 83°37'56" W	192.57 ft
11	N 83°32'45" W	121.40 ft
12	N 83°34'52" W	96.96 ft
13	N 85°23'53" W	106.14 ft
14	S 89°22'49" W	94.83 ft
15	S 85°38'57" W	106.73 ft
16	S 81°14'05" W	107.56 ft
17	S 78°06'10" W	56.47 ft
18	S 77°08'50" W	27.55 ft
19	N 01°28'34" E	81.52 ft
20	N 02°41'15" E	173.70 ft
21	N 02°25'00" E	174.37 ft
22	N 01°20'41" W	21.68 ft
23	N 01°56'41" W	181.27 ft
24	N 01°03'26" W	147.87 ft
25	N 01°26'44" W	144.46 ft
26	N 01°26'44" W	90.75 ft
27	N 01°29'18" E	73.04 ft
28	N 04°51'33" E	169.65 ft
29	S 88°03'11" E	372.70 ft
30	N 89°00'59" E	267.28 ft
31	N 89°00'59" E	533.95 ft
32	N 01°08'09" E	243.52 ft
33	N 89°54'35" E	1323.45 ft
34	S 00°37'03" E	898.78 ft
35	S 00°37'42" E	530.48 ft
36	S 00°01'42" W	411.58 ft
37	S 00°21'32" E	482.57 ft
38	S 00°04'11" W	413.62 ft
39	S 00°14'05" W	324.23 ft
40	S 00°05'03" W	352.11 ft
41	S 00°35'29" W	174.35 ft
42	S 00°21'08" E	134.32 ft
43	S 00°50'43" E	140.30 ft
44	S 02°08'01" W	53.55 ft
45	S 02°53'22" W	76.58 ft
46	S 03°20'20" W	135.35 ft
47	S 00°20'32" E	73.62 ft
48	S 00°52'11" E	83.68 ft
49	S 00°52'13" E	101.98 ft
50	S 00°12'00" W	56.77 ft
51	S 06°05'08" W	83.69 ft
52	S 05°57'29" W	158.57 ft
53	S 03°25'49" E	119.81 ft
54	S 04°51'21" E	52.68 ft
55	S 06°32'23" E	81.50 ft
56	S 06°55'49" E	59.63 ft
57	S 02°17'25" E	71.82 ft
58	S 03°22'51" E	163.31 ft
59	S 01°36'41" E	55.38 ft
60	S 00°51'14" E	80.22 ft
61	S 00°15'26" W	108.13 ft
62	S 00°19'39" W	105.01 ft
63	S 01°03'04" W	298.33 ft
64	S 01°01'17" W	589.18 ft
65	S 02°08'05" W	8.17 ft
66	S 88°50'40" W	596.03 ft
67	N 87°07'05" W	1211.62 ft
68	S 04°08'41" W	555.72 ft
69	S 68°53'55" W	25.39 ft
70	S 89°41'08" W	232.30 ft
71	S 03°57'49" E	334.47 ft
72	N 89°00'08" W	423.02 ft
73	N 54°47'48" W	98.90 ft
74	N 54°38'26" W	127.28 ft
75	N 54°13'58" W	103.41 ft
76	N 54°47'00" W	127.87 ft
77	N 55°34'42" W	118.43 ft
78	N 54°50'34" W	40.34 ft
79	N 55°45'47" W	116.38 ft
80	N 55°56'31" W	74.16 ft
81	N 56°17'38" W	202.34 ft
82	N 56°20'52" W	75.91 ft
83	N 56°21'51" W	50.02 ft
84	N 56°10'39" W	73.73 ft
85	N 56°02'17" W	96.33 ft
86	N 56°27'42" W	155.04 ft
87	N 20°46'15" E	463.41 ft
88	N 00°53'58" E	1831.40 ft
89	N 87°55'35" E	2388.25 ft
90	N 36°39'44" E	441.32 ft
91	N 00°24'03" E	1325.20 ft
92	N 00°24'04" E	1323.29 ft
93	N 00°39'44" E	1.92 ft
94	N 76°55'46" E	44.14 ft
95	N 77°11'07" E	55.28 ft
96	N 78°06'10" E	53.64 ft
97	N 81°14'05" E	102.29 ft
98	N 85°38'57" E	101.10 ft
99	N 89°17'54" E	77.79 ft
100	S 85°49'58" E	112.22 ft
101	S 83°34'52" E	95.39 ft
102	S 83°32'45" E	121.41 ft
103	S 83°37'56" E	192.75 ft
104	S 83°48'22" E	107.29 ft
105	S 84°41'25" E	14.28 ft
106	S 84°55'32" E	183.72 ft
107	S 84°45'18" E	0.21 ft
108	S 89°47'01" E	1321.91 ft
109	S 00°06'44" E	264.00 ft
110	S 00°06'07" E	264.21 ft
111	S 00°07'33" E	200.93 ft
112	S 00°07'04" E	662.81 ft
113	S 00°07'04" E	662.81 ft
114	S 00°06'42" E	1325.73 ft
115	N 89°16'31" W	1334.98 ft
116	N 01°01'13" E	594.09 ft
117	N 01°03'05" E	298.27 ft
118	N 01°08'27" E	123.73 ft
119	N 00°18'23" E	91.83 ft
120	N 00°51'14" W	81.24 ft
121	N 01°36'42" W	56.70 ft
122	N 03°22'51" W	163.67 ft
123	N 02°17'25" W	73.68 ft
124	N 06°55'47" W	71.52 ft
125	N 06°32'29" W	80.76 ft
126	N 04°51'24" W	51.05 ft
127	N 03°25'49" W	114.13 ft
128	N 05°57'29" E	153.12 ft
129	N 06°07'23" E	86.62 ft
130	N 00°11'56" E	70.97 ft
131	N 00°52'11" W	123.42 ft
132	N 00°52'08" W	52.62 ft
133	N 00°30'42" W	71.42 ft
134	N 00°00'00" E	54.70 ft
135	N 07°22'38" E	45.23 ft
136	N 00°00'00" E	33.72 ft
137	N 03°49'54" E	144.30 ft
138	N 01°17'37" E	89.11 ft
139	N 00°02'01" W	71.44 ft
140	N 00°46'58" W	181.14 ft
141	N 00°00'00" E	179.94 ft
142	N 01°28'20" W	204.34 ft
143	N 54°20'21" W	313.45 ft
144	S 34°19'09" W	194.90 ft
145	N 55°41'27" W	209.91 ft
146	N 34°18'29" E	195.04 ft
147	N 54°53'54" W	164.38 ft
148	N 56°17'38" W	202.01 ft
149	N 56°17'21" W	199.62 ft
150	N 56°03'57" W	139.90 ft
151	S 20°46'07" E	749.47 ft
152	N 89°41'17" E	746.92 ft
153	N 89°31'20" E	357.39 ft
154	N 20°50'19" W	848.26 ft
155	N 59°53'48" W	89.74 ft
156	S 01°29'58" E	841.04 ft
157	N 89°25'38" W	907.10 ft
158	N 20°47'38" W	2509.45 ft
159	N 46°04'22" E	508.39 ft
160	S 77°57'18" E	1024.25 ft
161	N 85°44'23" E	206.63 ft
162	N 86°33'49" E	1778.49 ft
163	N 86°26'57" E	380.73 ft
164	S 00°24'04" W	1323.29 ft
165	S 00°24'"03 W	1325.20 ft
166	S 36°39'44" W	441.32 ft
167	S 87°55'34" W	2388.26 ft
168	N 00°53'58" E	450.18 ft
169	S 00°08'35" W	125.63 ft
170	S 00°15'21" W	124.63 ft
171	S 00°14'48" E	156.93 ft
172	S 00°16'40" E	204.70 ft
173	S 00°25'59" E	342.25 ft
174	S 00°07'07" E	220.43 ft
175	S 00°40'12" W	173.27 ft
176	S 00°10'01" W	530.18 ft
177	S 00°46'58" E	23.00 ft
178	S 89°47'01" E	1321.91 ft
179	S 00°06'44" E	264.00 ft
180	S 00°00'00" W	241.01 ft
181	S 00°13'59" E	224.14 ft
182	S 00°07'04" E	662.81 ft
183	S 00°07'04" E	662.81 ft
184	S 89°47'05" E	1340.76 ft
185	N 00°01'48" W	3941.83 ft
186	N 90°00'00" W	1137.76 ft
187	N 90°00'00" W	209.71 ft
188	N 89°00'49" W	1284.05 ft
189	N 86°53'18" W	34.03 ft

Table of Bearings and Distances for both Surveyed and "Acquired" Parcels

STATE OF ALABAMA
CLAY COUNTY GPS CERTIFICATION

I John L. Ratley, Jr. a Registered Land Surveyor in the State of Alabama, hereby certify that the GPS information shown on this plat is a true and correct representation of the property indicated, and was drawn from an actual GPS and/or conventional field survey by me on the referenced date(s);

I further certify that all parts of this survey and plat have been completed in accordance with the requirements of the current Standards for the Practice of Land Surveying in the State of Alabama to the best of my knowledge, information, and belief.

Further, the GPS parameters used are: datum = 1983 NAD;Ellipsoid = WGS 1984; Coordinate System = East Alabama State Plane as computed from precise latitude and longitude; Geoidal Model = Global.
Baseline length, minimum ratio closures, and combined scale factor are shown in title block.

According to my signature and seal this _13th_ day of __October__ 2009,

____
John L. Ratley, Jr.
Ala. Reg. No. 12157

WARRANTY AND DISCLAIMERS

This Plat is warranted only to the original purchasor.

The warranty on this survey plat is limited to the purpose named in the title block.

Liability is accepted only for the monetary amount of the survey costs.

Plats stating GPS corner and/or point location DO NOT necessarily have lines between corners/points marked.

All surveys are done on a time basis only;, additional work in field or office AND COURT TESTIMONY are done at the same daily rates and are not included in the cost of the initial survey.

Only Original surveys are warranted to be correct and must be in color, and must show original clear seal marks and signature.

Legend

Found Iron Pin	– ○	Found Stone Corner	– ◉	Utility Pole Anchor	– ←	Gas Valve	Ⓖ	Fire Hydrant	– ⌖	Drop Inlet	⇅	Percolation Test	– ⊖
Set Iron Pin	– ⊕	Set Stone Corner	– ⌖	Transmission Tower	– ⊠	Water Meter	– ⊞	Sanitary Sewer ManHle.	– ◎	GPS Control Monument	– △	Soil Boring Test	– ⊘
Set Lightard Knot	–	Found Concrete Monument	– ⊗	Telephone Jct. Box	–	Water Valve	– ⋈	Storm Sewer Inlet	– □	GPS Control Point	– ⌖	Electrical Lines	—E—
Found Lightard Knot	– ⚲	Utility Pole	– ⌀	Gas Meter	–	Water Pump		Storm Drain Manhole		Azimuth Point	– ✕		

Fence Line – ——; Property Line – —PL—PL—; Sewer Line – ————; Telephone Line – —T—T—

BEARINGS BASED ON TRUE NORTH AS DETERMINED BY DUAL SOLUTION STATIC & RTK GPS

DRAWN BY: Patrick S. Ratley	Plat & Field Work By:
Plat Date: 18 October 09	John L. Ratley, Jr. - RLS. # 12157
Field Work Dates: 2007-2009	P.O. Box 727 - Ashland AL. 36251
Office Work: Autocad/Eaglepoint w/Epson plotter	Phone: (256)354-2009 Fax : (256)354-2009 19 Cheyenne St. Ashland, Al. 36251

Original Client: Bio Fuels Holdings LLC.

Purpose and Type of Survey: Surveyed and Estimated Acreage with Locations
Source of Information & Reference: All prior plats for BioEnergy

Method of Survey: Conventional And Dual Solution GPS
File Name: BioEnergyBoundaryPDF.dwg
File Location: PSR 80
Scale: 1" = 747' (on 17"x22" paper)
Unadjusted Error of Linear Closure: 1:19,846
Unadjusted Error of Angular Closure: 00°00'02"

PROJECT /GPS Parameters: Combined Scale Factor(SPC)Conventional= 0.999977757719
Baseline Length: 3,617.79ft.
Minimum Closure Ratio: 1 : 822,226

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Conventional surveys are conducted with a properly adjusted electronic recording total station. GPS surveys are conducted with survey-grade Leica instruments. Field procedures are designed to meet or exceed the minimum required accuracies with recommended redundancy to prove correctness and precision

Set Iron Pins are 1/2 inch Rebar X 18 inches bearing the name John L. Ratley, Jr, RLS 12157

SHT. NO. 1

Appendix B

Safety Data Sheets

MATERIAL SAFETY DATA SHEET

Version: August 16, 2007

1. PRODUCT AND COMPANY IDENTIFICATION

PRODUCT NAME: **Used Antifreeze**

SUPPLIER:

Atlantic Industrial Services, Inc.
6600 NW 12TH AVENUE, SUITE 205
FORT LAUDERDALE, FL 33309

Product and MSDS Information: (800) 256-9900 or (318) 688-1191

CHEMTREC: (800) 424-9300 or (202) 483-7616

2. MATERIAL COMPOSITION

Identity:	USED ANTIFREEZE/COOLANT
Synonyms:	AUTOMOTIVE COOLANT; ETHYLENE GLYCOL SOLUTION; ENGINE COOLING FLUID
Family Chemical Name:	GLYCOLS AND GLYCOL COMPOUNDS
NFPA Rating (scale 0-4):	1-HEALTH 0-FIRE 0-REACTIVITY
MSDS Form No:	USED ANTIFREEZE 8-16-07

3. HAZARDS IDENTIFICATION

This material is a solution of ethylene and diethylene glycols with water and stabilizing additives – usually complex salts.

TYPICAL INGREDIENTS:	TYPICAL VOLUME %:	CAS NUMBER:
Ethylene Glycol	40-60	107-21-1
Diethylene Glycol	0-2.5	111-46-6
Tolytriazole, Sodium salt	0.0-<0.25	64665-57-2
Water	40-60	7732-18-5

EXPOSURE LIMITS IN AIR

OSHA TLV – TWA	(ppm)	50
OSHA TLV – STEL	(ppm)	50

4. FIRST AID MEASURES

EYE CONTACT: Immediately flush eyes with large amounts of water for a minimum of 15 minutes. If redness or irritation is present, continue flushing until the irritation subsides. If the material is hot, seek medical attention immediately for thermal burns.

SKIN CONTACT: Wash contact area with soap and water. If clothing is contaminated, minimize contact time on skin by removing contaminated clothing (if applicable) and washing contact area thoroughly with soap and water. If material is hot, flush or submerge affected area in cold water, and seek medical attention immediately for thermal burns. Seek medical attention if contact dermatitis

and/or surface irritation occurs.
INHALATION: This material is of low vapor pressure and is not expected to present an inhalation exposure hazard at ambient conditions. If exposure to vapor does occur, remove victim to fresh air immediately. If breathing is difficult, give oxygen until victim's respiration rate returns to normal, and seek immediate medical attention.

INGESTION: Call a physician immediately. Induce vomiting by administering ipecac or follow physician's instructions. NOTE: if available, ethanol may be administered *in very small quantities* as an antidote; if the victim becomes pale and weak, cease administration immediately. Get victim to a hospital as soon as possible.

5. FIRE PROTECTION & FIRE FIGHTING MEASURES

FLASH POINT: 240 – 250 F (lowest component) TEST METHOD: TAG Closed Cup

AUTOIGNITION TEMP: 750 F (lowest component)

FLAMMABLE LIMITS IN AIR (% by vol): LOWER: 1.5 (lowest component) UPPER: 15.3

FLAMMABILITY CLASSIFICATION: Class IIIB

EXTINGUISHING MEDIA: Use Dry Chemical, Foam, or Carbon Dioxide (CO_2) NFPA Class IIIB Fire Extinguishers.

SPECIAL FIRE FIGHTING PROCEDURES: Water spray may be ineffective on fire, but can be used to cool firefighting personnel and to cool containers exposed to heat or flame. Use high-velocity fog nozzles if water is used. Do not enter confined fire space without full bunker gear: helmet with face shield, bunker coats, gloves and rubber boots.

SPECIAL PROTECTIVE EQUIPMENT: Use Self-Contained Breathing Apparatus (SCBA) in enclosed areas.

UNUSUAL FIRE AND EXPLOSION HAZARDS: Closed containers at the fire site may rupture and explode when exposed to heat. Use caution when closed, heated containers are present.

NFPA HAZARD ID:
Health: 1
Flammability: 1
Reactivity: 0

HAZARDOUS COMBUSTION PRODUCTS: Carbon Dioxide and Carbon Monoxide may be generated as products of combustion.

6. ACCIDENTAL RELEASE MEASURES

NOTIFICATION PROCEDURES: Immediately contact and notify local safety personnel, including, but not limited to the local Fire Department and/or Police Department. STAY CALM at all times. In addition, contact the US Coast Guard National Response Center at 1-800-424-8802 if a spill of any amount is made into or upon U.S. navigable waterways, contiguous waterways, drainage ways, and/or adjoining shorelines.

PROCEDURES IF MATERIAL IS RELEASED OR SPILLED: Contain spill immediately. If possible, do not allow spill to enter sewers or watercourses. Remove all sources of heat and ignition. Immediately apply an absorbent material such as sand, clay, diatomaceous earth, vermiculite, etc. to the spilled area. Large, voluminous spills should be diked far ahead so they may be picked up using vacuum pumps, shovels, buckets, or other means and placed in drums or other suitable containers.

ENVIRONMENTAL PRECAUTIONS: Disposal of collected material must comply with federal, state, and local regulations. The material, if spilled or discarded, may be a regulated waste – refer to state and local regulations.
Materials should be recycled if possible.

PERSONAL PRECAUTIONS: Refer to section 3 (Hazards Identification), section 4 (First Aid Measures), section 8 (Exposure Controls / Personal protection) and section 11 (Health Hazard Information) for necessary information.

7. HANDLING AND STORAGE

HANDLING: Always keep away from sources of heat or flame, incompatible materials (e.g., oxidizers and strong acids), foodstuffs and personal effects.

STORAGE: Store in closed containers away from sources of heat and oxidizing chemicals. Do not store in, or transfer material to, unmarked containers. Always maintain Class IIIB fire extinguishers & keep readily available wherever this material is stored. See NFPA 30 and OSHA 1910.106 – Flammable and Combustible Liquids.

This material is not classified as hazardous under DOT regulations unless transported in bulk quantities of 3500 gallons or greater.

8. EXPOSURE CONTROLS/PERSONAL PROTECTION

VENTILATION: Adequate ventilation in accordance with Good Engineering Practice must be provided to maintain concentrations below the specified exposure or flammable limits. Local exhaust recommended near heated product.

RESPIRATORY PROTECTION If mist or aerosol is present, use a NIOSH-approved organic-vapor respirator with an organic mist filter.

EYE PROTECTION: Wear protective goggles with chemical-proof safety lenses or a chemical-resistant face shield. Eye protection should meet the requirements of 29 CFR 1910.133 (OSHA eye and face protection regulations).

SKIN PROTECTION: For prolonged and/or repeated exposures, wear impervious clothing (e.g., boots, gloves, aprons, smocks, etc.) over parts of the body subject to exposure. For hand protection, wear latex, nitrile rubber, neoprene or equivalent gloves to prevent contact with the skin. All clothing should be properly laundered in hot water & detergent to remove traces of material. If clothing is disposable, overly contaminated or cannot be decontaminated properly (i.e., leather articles, including shoes), these should be properly disposed of in closed appropriate containers.

OTHER HYGIENIC AND WORK PRACTICES: Never eat, drink, or smoke when handling this material. Practice good personal hygiene and cleanliness procedures after using this material, especially before eating, drinking, smoking, applying cosmetics or skin preparations, and using the toilet.

EXPOSURE LIMITS: Caution should be exercised to not exceed the exposure limits listed in section (3) of this document.

9. PHYSICAL AND CHEMICAL PROPERTIES

APPEARANCE: Slightly viscous liquid, oily to the touch.
COLOR: Yellow-green to dark green; some brands may vary in color (e.g. pink-red)
ODOR: mild, non-offensive
pH: range of 9.0 -11.0
BOILING RANGE, C (F): 77-79C (170-175 F)
MELTING POINT C(F): N/A
FLASH POINT C (F): 115-121 C (240-250 F)
VAPOR PRESSURE-mmHg 20 C: 0.08
VAPOR DENSITY: 2.1 (Air=1)
EVAPORATION RATE: > 5 (Ether=1)
DENSITY: 9.3 Lbs/Gal
SPECIFIC GRAVITY, 60F: 1.1 to 1.2
API GRAVITY, 60 F: N/A
SOLUBILITY IN WATER: 100% (very soluble)
POUR POINT C (F): -12 C (10 F)
FREEZING POINT C (F): < -15 C (5 F)
VOLATILE ORGANIC COMPOUNDS: 97-99% (by vol)
REFRACTIVE INDEX: 1.43 +/- 0.01
WATER ABSORPTION: Very High
ACID ABSORPTION: Very High (85% H_2SO_4)

Note: N/A=NOT APPLICABLE; NE=NOT ESTABLISHED

10. STABILITY AND REACTIVITY

STABILITY (THERMAL, LIGHT, ETC.): Stable
CONDITIONS TO AVOID: Keep away from sources of heat and flame.
INCOMPATIBILITY (MATERIALS TO AVOID): Strong Oxidizers (e.g., peroxide compounds, chromates and permanganates)
HAZARDOUS DECOMPOSITION PRODUCTS: No decomposition products under normal product conditions. Under certain conditions of combustion carbon monoxide may be produced.

HAZARDOUS POLYMERIZATION: Will not occur.

11. HEALTH HAZARD INFORMATION

ACUTE SYMPTOMS OF EXPOSURE

INHALATION: Under normal exposure conditions, may cause systemic irritation of the nose and throat with accompanying headache. In a highly concentrated vapor environment, exposure may additionally produce nausea, vomiting, dizziness, severe headaches, and possibly unconsciousness.

SKIN: Prolonged and/or repeated exposure may cause mild skin irritation to sensitive individuals, including redness, burning, temporary drying/cracking, and dermatitis. Contact with hot material may cause thermal burns.

EYES: Contact may cause slight to moderate irritation, including burning, redness, and tearing. Contact with hot material may cause thermal burns.

INGESTION: MAY BE FATAL IF SWALLOWED. May cause abdominal pain, dizziness, malaise, lumbar pain, oliguria, uremia, and CNS depression. **Severe kidney damage, and subsequent renal collapse and failure, follows the ingestion of large volumes of ethylene glycol.**

CHRONIC SYMPTOMS OF EXPOSURE

INHALATION: Prolonged exposure to vapor may lead to severe pulmonary distress, including pneumonia, emphysema and possible pulmonary idiopathic fibrosis.

SKIN: Cracking, drying and chronic dermatitis with sensitive individuals. In most cases, no evidence of adverse effects on the skin should occur with proper personal protection

EYES: Possible transient conjunctivitis. Serious corneal injury is not anticipated.

12. STATEMENT OF CARCINOGENICITY

OSHA, NTP or IARC lists no ingredients in this material as suspected carcinogens.

13. DISPOSAL CONSIDERATIONS

WASTE DISPOSAL: Disposal of collected material must comply with federal, state, and local regulations. The material, if spilled or discarded, may be a regulated waste – refer to federal, state and local regulations for regulated waste transport and disposal.

14. TRANSPORT INFORMATION

USA DOT: This material is not classified as hazardous under DOT regulations unless transported in bulk quantities of over 3500 gallons.

15. REGULATORY INFORMATION

Governmental Inventory Status (TSCA): Components of this material are listed in the TSCA Inventory.

U.S. Superfund Amendments and Reauthorization Act (SARA) Title III: This material contains the following chemical or chemicals subject to the reporting requirements of Section 313 of Title III of the Superfund Amendments and Reauthorization Act of 1986, and 40 CFR Part 372: **ETHYLENE GLYCOL.**

HAZARDOUS CLASSIFICATION: This material meets the following hazard definition as defined by the Occupational Safety and Health Hazard Communication Standard (29 CFR 1910.1200): **HEALTH HAZARD (Section VI)**

SARA (311/312) REPORTABLE HAZARD CATEGORIES:

Immediate (Acute) Health Effects: YES
Delayed (Chronic) Health Effects: NO
Fire Hazard: YES - SLIGHT
Sudden Release of Pressure Hazard: NO
Reactivity Hazard: NO

STATE OF CALIFORNIA REPORTING REQUIREMENTS: This material does not appear in the California State Health and Safety Code, section 2549.5 (California Prop. 66: Listing of Chemicals Under the Act).
California Prop. 65: This material may contain chemicals known to the State of California to cause cancer. (See also section 11 (Health Hazard Information) and section 12 (Statement of Carcinogenicity).

16. OTHER INFORMATION

USE: Automotive fluids coolants

Legally required information is given in accordance with applicable regulations. Information given herein is offered in good faith as accurate, but without guarantee. Conditions of use and suitability of the product for particular uses are beyond our control; all risks of use of the product are therefore assumed by the user and WE EXPRESSLY DISCLAIM ALL WARRANTIES OF EVERY KIND AND NATURE, INCLUDING WARRANTIES OF MERCHANTABILITY AND FITNESS FOR A PARTICULAR PURPOSE IN RESPECT TO THE USE OR SUITABILITY OF THE PRODUCT. Nothing is intended as recommendation for uses, which infringe valid patents, or as extending any license under valid patents. Appropriate warnings and safe handling procedures should be provided to handlers and users. Use or re-transmission of the information contained herein in any other format than the format as presented is strictly prohibited. AISI neither represents nor warrants that the format, content or product formulas contained in this document comply with the laws of any other country except the United States of America.

USED OIL

MATERIAL SAFETY DATA SHEET

safety-kleen.

SECTION 1: PRODUCT AND COMPANY IDENTIFICATION

PRODUCT NAME: **USED OIL**

SYNONYMS: Waste oil; Used lubricating oil; Oil and water mixture

PRODUCT PART NUMBER(S): Not applicable.

PRODUCT USE: Oil or water mixture for re-refining or reprocessing.
If this product is used in combination with other products, refer to the Material Safety Data Sheets for those products.

These numbers are for emergency use only. If you desire non-emergency product information, please call a phone number listed below.

24-HOUR EMERGENCY PHONE NUMBERS MEDICAL AND TRANSPORTATION (SPILL):

1-800-468-1760

MANUFACTURER/ SUPPLIER: Safety-Kleen Systems, Inc.
5400 Legacy Drive
Cluster II, Building 3
Plano, Texas 75024
USA
1-800-669-5740
www.Safety-Kleen.com

TECHNICAL INFORMATION: 1-800-669-5740 Press 1 then 1 then Extension 7500

MSDS FORM NUMBER: 81451 **ISSUE:** September 20, 2007

ORIGINAL ISSUE: January 15, 1990 **SUPERSEDES:** June 11, 2007

PREPARED BY: Product MSDS Coordinator **APPROVED BY:** MSDS Task Force

SECTION 2: COMPOSITION/INFORMATION ON INGREDIENTS

				OSHA PEL		ACGIH TLV®			
WT%	NAME	SYNONYM	CAS NO.	TWA	STEL	TWA	STEL	LD[a]	LC[b]
80 to 100	Lubricating oils, used	Used oil	70514-12-4	N. Av.	N. Av.	N. Av.	N. Av.	N. Av.	N. Av.
0 to 20*	Water/solids	N. Av.	N. Av.	N. Av.	N. Av.	N. Av.	N. Av.	N. Av.	N. Av.
0 to 10*	Hydrocarbon solvents. May include gasoline, diesel fuel, jet fuel, mineral spirits, etc.	N. Av.	N. Av.	N. Av.	N. Av.	N. Av.	N. Av.	N. Av.	N. Av.
0 to 1.5*	Metals. May include lead, iron, zinc, copper, chromium, arsenic, nickel, and others: each below 1.0 WT%.	N. Av.	N. Av.	N. Av.	N. Av.	N. Av.	N. Av.	N. Av.	N. Av.
0 to 1.0*	Polynuclear aromatics. May include naphthalene, fluoranthene, phenanthrene, pyrene, and others: each below 0.3 WT%.	N. Av.	N. Av.	N. Av.	N. Av.	N. Av.	N. Av.	N. Av.	N. Av.
0 to 0.5*	Chlorinated solvents.	N. Av.	N. Av.	N. Av.	N. Av.	N. Av.	N. Av.	N. Av.	N. Av.

N.Av. = Not Available

*Even though the concentration range does not fall under the ranges prescribed by WHMIS, this is the actual range which varies with each batch of the product.

[a] Oral-Rat LD_{50} (mg/kg)

[b] Inhalation-Rat LC_{50}

SECTION 3: HAZARDS IDENTIFICATION

EMERGENCY OVERVIEW

APPEARANCE
Liquid, black and viscous (thick), petroleum odor.

WARNING!
PHYSICAL HAZARDS
Combustible liquid.

HEALTH HAZARDS
May be harmful if inhaled.
May be harmful if absorbed through skin.
May be harmful or fatal if swallowed.
May irritate the respiratory tract (nose, throat, and lungs), eyes, and skin.
Suspect cancer hazard. Contains material which can cause cancer. Risk of cancer depends on duration and level of exposure.
Contains material which can cause birth defects.
Contains material which can cause central nervous system damage.

ENVIRONMENTAL HAZARDS
Product may be toxic to fish, plants, wildlife, and/or domestic animals.

POTENTIAL HEALTH EFFECTS

Effects may vary depending on material composition. Typical effects may include:

INHALATION (BREATHING): High concentrations of vapor or mist may be harmful if inhaled. High concentrations of vapor or mist may irritate the respiratory tract (nose, throat, and lungs). High concentrations of vapor or mist may cause nausea, vomiting, headaches, dizziness, loss of coordination, numbness, and other central nervous system effects. Massive acute overexposure may cause rapid central nervous system depression, sudden collapse, coma, and/or death.

EYES: May cause irritation.

SKIN: May cause irritation. Product may be absorbed through the skin and cause harm as noted under **INHALATION (BREATHING)**.

INGESTION (SWALLOWING): May be harmful or fatal if swallowed. May cause throat irritation, nausea, vomiting, and central nervous system effects as noted under **INHALATION (BREATHING)**. Breathing product into the lungs during ingestion or vomiting may cause lung injury and possible death.

MEDICAL CONDITIONS AGGRAVATED BY EXPOSURE: Individuals with pre-existing cardiovascular, liver, kidney, respiratory tract (nose, throat, and lungs), central nervous system, eye, and/or skin disorders may have increased susceptibility to the effects of exposure.

CHRONIC: Prolonged or repeated inhalation may cause oil pneumonia, lung tissue inflammation, fibrous tissue formation, and/or toxic effects as noted under **INHALATION (BREATHING)**. Prolonged or repeated eye contact may cause inflammation of the membrane lining the eyelids and covering the eyeball (conjunctivitis). Prolonged or repeated skin contact may cause drying, cracking, redness, itching, and/or swelling (dermatitis).

CANCER INFORMATION: This product contains mineral oils, untreated or mildly treated, which can cause cancer. This product may contain hydrocarbon and chlorinated solvents; metals, and polynuclear aromatics which can cause cancer. Risk of cancer depends on duration and level of exposure. For more information, see **SECTION 11: CARCINOGENICITY**.

POTENTIAL ENVIRONMENTAL EFFECTS

Product may be toxic to fish, plants, wildlife, and/or domestic animals.
Also see **SECTION 12: ECOLOGICAL INFORMATION.**

SECTION 4: FIRST AID MEASURES

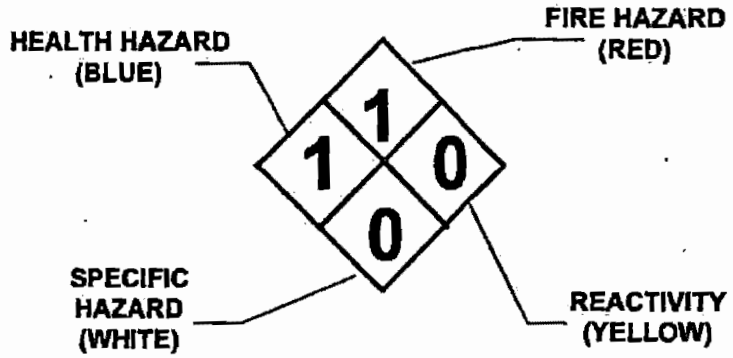
INHALATION: (BREATHING)	Remove to fresh air. If not breathing, give artificial respiration. If breathing is difficult, give oxygen. Oxygen should only be administered by qualified personnel. Someone should stay with victim. Get medical attention if breathing difficulty persists.
EYES:	If irritation or redness from exposure to vapor develops, move away from exposure into fresh air. Upon contact, immediately flush eyes with plenty of lukewarm water, holding eyelids apart, for 15 minutes. Get medical attention.
SKIN:	Remove affected clothing and shoes. Wash skin thoroughly with soap and water. Get medical attention if irritation or pain develops or persists.
INGESTION: (SWALLOWING)	Do NOT induce vomiting. Immediately get medical attention. Call 1-800-468-1760 for additional information. If spontaneous vomiting occurs, keep head below hips to avoid breathing the product into the lungs. Never give anything to an unconscious person by mouth.
NOTE TO PHYSICIANS:	Treat symptomatically and supportively. Treatment may vary with condition of victim and specifics of incident. Call 1-800-468-1760 for additional information.

SECTION 5: FIRE FIGHTING MEASURES

FLASH POINT:	>200°F (93°C) (minimum) Pensky-Martens Closed Cup
FLAMMABLE LIMITS IN AIR:	Not available.
AUTOIGNITION TEMPERATURE:	Not available.
HAZARDOUS COMBUSTION PRODUCTS:	Decomposition and combustion materials may be toxic. Burning may produce phosgene gas, nitrogen oxides, carbon monoxide, and unidentified organic compounds.
CONDITIONS OF FLAMMABILITY:	Heat, sparks, or flame. Product may burn but does not ignite readily.
EXTINGUISHING MEDIA:	Use carbon dioxide, regular foam, dry chemical, water spray, or water fog.

NFPA 704 HAZARD IDENTIFICATION:

This information is intended solely for the use by individuals trained in this system.



FIRE FIGHTING INSTRUCTIONS:

Keep storage containers cool with water spray. A positive-pressure, self-contained breathing apparatus (SCBA) and full-body protective equipment are required for fire emergencies.

FIRE AND EXPLOSION HAZARDS:

Heated containers may rupture. "Empty" containers may retain residue and can be dangerous. Product is not sensitive to mechanical impact. Product may be sensitive to static discharge, which could result in fire or explosion.

SECTION 6: ACCIDENTAL RELEASE MEASURES

Remove all ignition sources. Do not touch or walk through spilled product. Stop leak if you can do it without risk. Wear protective equipment and provide engineering controls as specified in **SECTION 8: EXPOSURE CONTROLS/PERSONAL PROTECTION.** Isolate hazard area. Keep unnecessary and unprotected personnel from entering. Ventilate area and avoid breathing vapor or mist. A vapor suppressing foam may be used to reduce vapors. Contain spill away from surface waters and sewers. Contain spill as a liquid for possible recovery, or sorb with compatible sorbent material and shovel with a clean, sparkproof tool into a sealable container for disposal.

Additionally, for large spills: Water spray may reduce vapor, but may not prevent ignition in closed spaces. Dike far ahead of liquid spill for collection and later disposal.

There may be specific federal regulatory reporting requirements associated with spills, leaks, or releases of this product. Also see **SECTION 15: REGULATORY INFORMATION.**

SECTION 7: HANDLING AND STORAGE

HANDLING: Keep away from heat, sparks, or flame. Where flammable mixtures may be present, equipment safe for such locations should be used. Use clean, sparkproof tools and explosion-proof equipment. When transferring product, storage tanks, tanker trucks, and rail tank cars should be grounded and bonded. Do not breathe vapor or mist. Use in a well ventilated area. Avoid contact with eyes, skin, clothing, and shoes. Do not smoke while using this product.

SHIPPING AND STORING: Keep container tightly closed when not in use and during transport. Do not pressurize, cut, weld, braze, solder, drill, or grind containers. Keep containers away from heat, flame, sparks, static electricity, or other sources of ignition. Empty product containers may retain product residue and can be dangerous. See **SECTION 14: TRANSPORT INFORMATION** for Packing Group information.

SECTION 8: EXPOSURE CONTROLS/PERSONAL PROTECTION

ENGINEERING CONTROLS: Use general ventilation, process enclosures, local exhaust ventilation, or other engineering controls to control air-borne levels. Where explosive mixtures may be present, equipment safe for such locations should be used.

PERSONAL PROTECTIVE EQUIPMENT

RESPIRATORY PROTECTION: A respiratory protection program which meets USA's OSHA General Industry Standard 29 CFR 1910.134 or Canada's CSA Standard Z94.4-M1982 requirements must be followed whenever workplace conditions warrant a respirator's use. Consult a qualified Industrial Hygienist or Safety Professional for respirator selection guidance.

EYE PROTECTION: Wearing chemical goggles is recommended.
Contact lens may be worn with eye protection.

SKIN PROTECTION: Where prolonged or repeated skin contact is likely, wear neoprene, nitrile (4 mil minimum), PVC (polyvinyl chloride), or equivalent protective gloves; wearing natural rubber or equivalent gloves is not recommended.

When product is heated and skin contact is likely, wear heat-insulating gloves, boots, and other protective clothing.

To avoid prolonged or repeated contact with product where spills and splashes are likely, wear appropriate chemical-resistant faceshield, boots, apron, whole body suits, or other protective clothing.

PERSONAL HYGIENE:	Wash thoroughly with soap and water after handling product and before eating, drinking, or using tobacco products. Clean affected clothing, shoes, and protective equipment before reuse. Discard affected clothing, shoes, and/or protective equipment if they cannot be thoroughly cleaned. Discard leather articles, such as shoes, saturated with the product.
OTHER PROTECTIVE EQUIPMENT:	Where spills and splashes are likely, facilities storing or using this product should be equipped with an emergency eyewash and shower, both equipped with clean water, in the immediate work area.

SECTION 9: PHYSICAL AND CHEMICAL PROPERTIES

PHYSICAL STATE, APPEARANCE, AND ODOR:	Liquid, black and viscous (thick), petroleum odor.
ODOR THRESHOLD:	Not available.
MOLECULAR WEIGHT:	Not applicable.
SPECIFIC GRAVITY:	0.8 to 1.0 at 60°F (15.6°C) (water = 1)
DENSITY:	6.7 to 8.3 LB/US gal (800 to 1000 g/l) (approximately)
VAPOR DENSITY:	greater than 1 (air = 1) (based on kerosene)
VAPOR PRESSURE:	Not available.
BOILING POINT:	Not available.
FREEZING/MELTING POINT:	Not available.
pH:	Not applicable.
EVAPORATION RATE:	less than 1 (butyl acetate = 1)
SOLUBILITY IN WATER:	Slight.
FLASH POINT:	>200°F (93°C) (minimum) Pensky-Martens Closed Cup
FLAMMABLE LIMITS IN AIR:	Not available.
AUTOIGNITION TEMPERATURE:	Not available.

SECTION 10: STABILITY AND REACTIVITY

STABILITY: Stable under normal temperatures and pressures. Avoid heat, sparks, or flame.

INCOMPATIBILITY: Avoid acids, alkalies, oxidizing agents, reducing agents, reactive halogens, or reactive metals.

REACTIVITY: Polymerization is not known to occur under normal temperatures and pressures. Not reactive with water.

HAZARDOUS DECOMPOSITION PRODUCTS: None under normal temperatures and pressures. Also see **SECTION 5: HAZARDOUS COMBUSTION PRODUCTS.**

SECTION 11: TOXICOLOGICAL INFORMATION

SENSITIZATION: Based on best current information, there may be known human sensitization associated with this product.

MUTAGENICITY: Based on best current information, there may be mutagenicity associated with this product.

CARCINOGENICITY: Mineral oils, untreated or mildly treated are listed by IARC as a known carcinogen. Mineral oils, untreated or mildly treated are classified by NTP as having limited evidence of carcinogenicity in humans or sufficient evidence of carcinogenicity in experimental animals.

There may be hydrocarbon and chlorinated solvents; metals, and polynuclear aromatics present in this product which are listed by OSHA as known carcinogens. There may be hydrocarbon and chlorinated solvents; metals, and polynuclear aromatics present in this product which are listed by IARC as known, probable, or possible carcinogens. There may be hydrocarbon and chlorinated solvents; metals, and polynuclear aromatics present in this product which are classified by NTP as known carcinogens or as having limited evidence of carcinogenicity in humans or sufficient evidence of carcinogenicity in experimental animals. There may be hydrocarbon and chlorinated solvents; metals, and polynuclear aromatics present in this product which are recognized by ACGIH as confirmed or suspected human carcinogens.

Also see **SECTION 3: CANCER INFORMATION.**

REPRODUCTIVE TOXICITY: Based on best current information, there may be reproductive toxicity associated with this product.

TERATOGENICITY: Based on best current information, there may be teratogenicity associated with this product.

TOXICOLOGICALLY SYNERGISTIC PRODUCT(S): Based on best current information, there may be toxicologically synergistic products associated with this product.

SECTION 12: ECOLOGICAL INFORMATION

ECOTOXICITY: Not available.

OCTANOL/WATER PARTITION COEFFICIENT: Not available.

VOLATILE ORGANIC COMPOUNDS: Not available.
As per 40 CFR Part 51.100(s).

SECTION 13: DISPOSAL CONSIDERATIONS

Dispose in accordance with federal, state, provincial, and local regulations. Regulations may also apply to empty containers. The responsibility for proper waste disposal lies with the owner of the waste. Contact Safety-Kleen regarding proper recycling or disposal.

SECTION 14: TRANSPORT INFORMATION

DOT: Not regulated.

TDG: Not regulated.

EMERGENCY RESPONSE GUIDE NUMBER: Not applicable.
Reference *North American Emergency Response Guidebook*

SECTION 15: REGULATORY INFORMATION

USA REGULATIONS SARA SECTIONS 302 AND 304: Based on the ingredient(s) listed in **SECTION 2**, this product does not contain any "extremely hazardous substances" listed pursuant to Title III of the Superfund Amendments and Reauthorization Act of 1986 (SARA) Section 302 or Section 304 as identified in 40 CFR Part 355, Appendix A and B.

SARA SECTIONS 311 AND 312:	This product poses the following physical and health hazards as defined in 40 CFR Part 370 and is subject to the requirements of sections 311 and 312 of Title III of the Superfund Amendments and Reauthorization Act of 1986 (SARA): Immediate (Acute) Health Hazard Delayed (Chronic) Health Hazard
SARA SECTION 313:	This product may contain "toxic" chemicals subject to the requirements of section 313 of Title III of the Superfund Amendments and Reauthorization Act of 1986 (SARA) and 40 CFR Part 372.
CERCLA:	This product may contain "hazardous substances" listed pursuant to Comprehensive Environmental Response, Compensation and Liability Act of 1980 (CERCLA) in 40 CFR Part 302, Table 302.4.
TSCA:	Not available.
CALIFORNIA:	This product is not for sale or use in the State of California.

CANADIAN REGULATIONS

WHMIS:	Not regulated
CANADIAN ENVIRONMENTAL PROTECTION ACT (CEPA):	Not available.

SECTION 16: OTHER INFORMATION

REVISION INFORMATION: Change from MSIS to MSDS.

LABEL/OTHER INFORMATION: Not available.

User assumes all risks incident to the use of this product. To the best of our knowledge, the information contained herein is accurate. However, Safety-Kleen assumes no liability whatsoever for the accuracy or completeness of the information contained herein. No representations or warranties, either express or implied, or merchantability, fitness for a particular purpose or of any other nature are made hereunder with respect to information or the product to which information refers. The data contained on this sheet apply to the product as supplied to the user.

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MATERIAL SAFETY DATA SHEET

QUAKER STATE® PEAK PERFORMANCE CONVENTIONAL MOTOR OIL - ALL GRADES

1. PRODUCT AND COMPANY IDENTIFICATION

MSDS Number: 14938
Version Date: 07/16/02

Product Name: QUAKER STATE® PEAK PERFORMANCE CONVENTIONAL MOTOR OIL - ALL GRADES
Product Use: Engine oil
Synonyms: 5W-30, 10W-30, 10W-40, 20W-50, 15W-40

Company Information
SOPUS Products
P.O. Box 4427
Houston, TX 77210-4427
USA

Phone Numbers
Medical Emergency: 1-800-546-6040
Transportation Emergency (USA): 1-800-424-9300
Transportation Emergency (International): 1-703-527-3887 (Call Collect)
MSDS Assistance: 1-800-546-6227
Fax On Demand: 1-800-546-6227
Technical Assistance: 1-800-458-4998
Customer Service: 1-800-468-8397
Fax Number: 713-217-3181
Internet Address: www.MSDS.PZLQS.com

2. COMPONENT INFORMATION

Component	CAS No.	Weight Percent Range	Hazardous in Blend
HYDROTREATED HEAVY PARAFFINIC PETROLEUM DISTILLATES	64742-54-7	< 70	No
SOLVENT-DEWAXED HEAVY PARAFFINIC DISTILLATE	64742-65-0	< 70	No
DETERGENT/DISPERSANT	MIXTURE	5 - 10	No
VISCOSITY MODIFIER	9003-29-6	< 10	No
POUR POINT DEPRESSANT	MIXTURE	< 2	No

Under normal conditions of use or in a foreseeable emergency, this product does not meet the definition of a hazardous chemical when evaluated according to the OSHA Hazard Communication Standard, 29 CFR 1910.1200.

Other: No information available

3. HAZARDS IDENTIFICATION

Emergency and Hazards Overview
CAUTION: Contains Petroleum Lubricant. Repeated skin contact can cause skin disorders.

ATTENTION: Used motor oil is a possible skin cancer hazard based on animal data. Repeated exposure to oil mist in excess of the OSHA limit (5mg/m3) can result in accumulation of oil droplets in pulmonary tissue.

NFPA Ratings: **Health** 1 **Flammability** 1 **Reactivity** 0

Primary Route of Exposure: **Skin** X **Inhalation** – **Eye** X

Health Effect Information

Eye Contact: This product is practically non-irritating to the eyes upon direct contact. Based on testing of similar products and/or components.

Skin Contact: Avoid skin contact. This product is minimally irritating to the skin upon direct contact. Based on testing of similar products and/or components. Prolonged or repeated contact may result in contact dermatitis which is characterized by dryness, chapping, and reddening. Prolonged or repeated contact may result in oil acne which is characterized by blackheads with possible secondary infection. Avoid prolonged and repeated skin contact with used motor oils. See Section 11 - Toxicological Information.

Inhalation: This product has a low vapor pressure and is not expected to present an inhalation hazard at ambient conditions. Caution should be taken to prevent aerosolization or misting of this product. On rare occasions, prolonged and repeated exposure to oil mist poses a risk of pulmonary disease such as chronic lung inflammation. Signs of respiratory effects vary with concentration and length of exposure and include nasal discharge, sore throat, coughing, bronchitis, pulmonary edema and difficulty breathing. Shortness of breath and cough are the most common symptoms.

Ingestion: Do not ingest. This product is relatively non-toxic by ingestion. This product has laxative properties and may result in abdominal cramps and diarrhea. Exposure to a large single dose, or repeated smaller doses, may lead to lung aspiration, which can lead to lipid pneumonia or chronic lung inflammation. These are low-grade, chronic localized tissue reactions.

Medical Conditions Aggravated by Exposure: Drying and chapping may make the skin more susceptible to other irritants, sensitizers and disease.

Other: No information available

4. FIRST AID INFORMATION

Eye Contact: Immediately flush eyes with large amounts of water and continue flushing until irritation subsides. If material is hot, treat for thermal burns and seek immediate medical attention.

Skin Contact: No treatment is necessary under ordinary circumstances. Remove contaminated clothing. Wash contaminated area thoroughly with soap and water. If material is hot, submerge injured area in cold water. If victim is severely burned, remove to a hospital immediately.

Inhalation: This material has a low vapor pressure and is not expected to present an inhalation exposure at ambient conditions. If vapor or mist is generated when the material is heated, and the victim experiences signs of respiratory tract irritation, remove to fresh air.

Ingestion: No treatment is necessary under ordinary circumstances. Do not induce vomiting. If victim exhibits signs of lung aspiration such as coughing or choking, seek immediate medical assistance.

Notes to Physician: No information available

Other: No information available

5. FIRE AND EXPLOSION INFORMATION

Flammable Properties

Flash Point: 415 F, 212.8 C — **Test Method:** ASTM 3278 - Closed Cup

Flammable Limits in Air

Upper Percent: No data available

Lower Percent: No data available

Autoignition Temperature: No data available — **Test Method:** No information available

NFPA Classification: Class III-B combustible liquid

Extinguishing Media: Use dry chemical, foam, or carbon dioxide.

Fire Fighting Measures

Special Fire Fighting Procedures and Equipment: Water may be ineffective but can be used to cool containers exposed to heat or flame to prevent vapor pressure buildup and possible container rupture. Caution should be exercised when using water or foam as frothing may occur, especially if sprayed into containers of hot, burning liquid.

Unusual Fire and Explosion Conditions: Dense smoke may be generated while burning. Carbon monoxide, carbon dioxide, and other oxides may be generated as products of combustion.

Hazardous Combustion By-Products: None

Other: No information available

6. ACCIDENTAL RELEASE MEASURES

Personnel Safeguards: Consult Health Effect Information in Section 3, Personal Protection Information in Section 8, Fire and Explosion Information in Section 5, and Stability and Reactivity Information in Section 10.

Regulatory Notifications: Notify appropriate authorities of spill.

Containment and Clean up: Contain spill immediately. Do not allow spill to enter sewers or watercourses. Absorb with appropriate inert material such as sand, clay, etc. Large spills may be picked up using vacuum pumps, shovels, buckets, or other means and placed in drums or other suitable containers.

Other: No information available

7. HANDLING AND STORAGE INFORMATION

Handling: Fire extinguishers should be kept readily available. See NFPA 30 and OSHA 1910.106--Flammable and Combustible Liquids.

Storage: Do not transfer to unmarked containers. Store in closed containers away from heat, sparks, open flame, or oxidizing materials.

Empty Container Warnings

Drums: Empty drums should be completely drained, properly bunged and promptly returned to a drum reconditioner, or properly disposed.

Plastic: Empty container may retain product residues.

Other: No information available

8. EXPOSURE CONTROLS / PERSONAL PROTECTION INFORMATION

Exposure Limits and Guidelines

This product does not contain any components with OSHA or ACGIH exposure limits.

Personal Protective Equipment

Eye/Face Protection: Eye protection is not required under conditions of normal use. If material is handled such that it could be splashed into eyes, wear plastic face shield or splash-proof safety goggles.

Skin Protection: No skin protection is required for single, short duration exposures. For prolonged or repeated exposures, use impervious clothing (boots, gloves, aprons, etc.) over parts of the body subject to exposure. If handling hot material, use insulated protective clothing (boots, gloves, aprons, etc.). Launder soiled clothes. Properly dispose of contaminated leather articles including shoes, which cannot be decontaminated.

Respiratory Protection: Respiratory protection is not required under conditions of normal use. If vapor or mist is generated when the material is heated or handled, use an organic vapor respirator with a dust and mist filter. All respirators must be NIOSH certified. Do not use compressed oxygen in hydrocarbon atmospheres.

Personal Hygiene: Consumption of food and beverage should be avoided in work areas where hydrocarbons are present. Always wash hands and face with soap and water before eating, drinking, or smoking.

Engineering Controls / Work Practices

Ventilation: If vapor or mist is generated when the material is heated or handled, adequate ventilation in accordance with good engineering practice must be provided to maintain concentrations below the specified exposure or flammable limits.

Other: The OSHA permissible exposure limit (PEL) and ACGIH threshold limit value (TLV) for oil mist is 5 mg/m3. The ACGIH short-term exposure limit (STEL) for oil mist is 10 mg/m3.

9. PHYSICAL AND CHEMICAL PROPERTIES

Appearance: Amber to dark amber	
Odor: Hydrocarbon - mild	**Vapor Pressure:** No data available
Physical state: Liquid	**Vapor Density (air=1):** No data available
pH: No data available	**Percent Volatile by Volume:** No data available
Boiling Point: No data available	**Volatile Organic Content:** No data available
Melting Point: No data available	**Molecular Weight:** No data available
Specific Gravity: 0.88 - 0.9 @ 16 C / 60 F	**Average Carbon Number:** No data available
Pour Point: -15 F, -26.1 C	**Viscosity @ 100 F:** No data available
	Viscosity @ 40 C: No data available
Solubility in Water: Negligible in water	
Octanol / Water Coefficient: Log K_{ow} = No data available	

10. STABILITY AND REACTIVITY INFORMATION

Chemical Stability: Stable

Conditions to Avoid: High heat and open flames.

Incompatible Materials to Avoid: May react with strong oxidizing agents.

Other: No information available

11. TOXICOLOGICAL INFORMATION

Primary Eye Irritation: No information available

Primary Skin Irritation: No information available

Acute Dermal Toxicity: No information available

Subacute Dermal Toxicity: No information available

Dermal Sensitization: No information available

Inhalation Toxicity: No information available

Inhalation Sensitization: No information available

Oral Toxicity: No information available

Mutagenicity: No information available

Carcinogenicity: The International Agency for Research on Cancer (IARC) has concluded that there is inadequate data to evaluate the carcinogenicity to experimental animals of this class of product. IARC has concluded there is sufficient evidence that used gasoline-engine motor oils produce skin tumors in experimental animals. Also, IARC has determined this class of products belongs to Group 3-"not classifiable as to its carcinogenicity to humans".

Reproductive and Developmental Toxicity: No information available

Teratogenicity: No information available

Immunotoxicity: No information available

Neurotoxicity: No information available

Other: No information available

12. ECOLOGICAL INFORMATION

Aquatic Toxicity: No information available

Terrestrial Toxicity: No information available

Chemical Fate and Transport: No information available

Other: No information available

13. DISPOSAL INFORMATION

Regulatory Information: All disposals must comply with federal, state, and local regulations. The material, if spilled or discarded, may be a regulated waste. Refer to state and local regulations. Caution! If regulated solvents are used to clean up spilled material, the resulting waste mixture may be regulated. Department of Transportation (DOT) regulations may apply for transporting this material when spilled.

Waste Disposal Methods: Waste material may be landfilled or incinerated at an approved facility. Materials should be recycled if possible.

Other: No information available

14. TRANSPORTATION INFORMATION

U.S. Department of Transportation (DOT)
Highway / Rail (Bulk): Not Regulated
Highway / Rail (Non-Bulk): Not Regulated

For US shipments, US DOT law requires the shipper to determine the proper shipping description of the material that is being shipped. The shipping information and description contained in this section may not be suitable for all shipments of this material, but may help the shipper determine the proper shipping description for a particular shipment.

International Information

Vessel:	**IMDG Regulated:**	–	**IMDG Not Regulated:**	X
Air:	**ICAO Regulated:**	–	**ICAO Not Regulated:**	X

Other: No information available

15. Regulatory Information

Regulatory Lists Searched: The components listed in Section 2 of this MSDS were compared to substances that appear on the following regulatory lists. Each list is numerically identified. See Regulatory Search Results below.

Health & Safety: 10 - IARC carcinogen, 11 - NTP carcinogen, 12 - OSHA carcinogen, 15 - ACGIH TLV, 16 - OSHA PEL, 17 - NIOSH exposure limit, 20 - US DOT Appendix A, Hazardous substances, 22 - FDA 21 CFR Total food additives, 23 - NFPA 49 or 325

Environmental: 30 - CAA 1990 Hazardous air pollutants, 31 - CAA Ozone depletors, 33 - CAA HON rule, 34 - CAA Toxic substance for accidental release prevention, 35 - CAA Volatile organic compounds (VOC's) in SOCMI, 41 - CERCLA / SARA Section 302 extremely hazardous substances, 42 - CERCLA / SARA Section 313 emissions reporting, 43 - CWA Hazardous substances, 44 - CWA Priority pollutants, 45 - CWA Toxic pollutants, 46 - EPA Proposed test rule for hazardous air pollutants, 47 - RCRA Basis for listing - Appendix VII, 48 - RCRA waste, 49 - SDWA - (S)MCLs

International: 50 - Canada - WHMIS Classification of substance, 54 - Mexico - Drinking water - ecological criteria, 55 - Mexico - Wastewater discharges, 56 - US -TSCA Section (12)(b) - export notification

State Lists: 60 - CA - Proposition 65, 61 - FL - Substances, 62 - MI - Critical materials, 63 - MA - RTK, 64 - MA - Extraordinarily hazardous substances, 65 - MN - Hazardous substances, 66 - PA - RTK, 67 - NJ - RTK, 68 - NJ - Environmental hazardous substances, 69 - NJ - Special hazardous substances

Inventories: 80 - Canada - Domestic substances , 81 - European - EINECS, 82 - Japan - ENCS, 83 - Korea - Existing and evaluated chemical substances, 84 - US - TSCA , 85 - China Inventory

Regulatory Search Results:
HYDROTREATED HEAVY PARAFFINIC PETROLEUM DISTILLATES: 80, 81, 83, 84, 85
SOLVENT-DEWAXED HEAVY PARAFFINIC DISTILLATE: 80, 81, 83, 84, 85
VISCOSITY MODIFIER: 35, 80, 83, 84, 85

U.S. TSCA Inventory: All components of this material are on the US TSCA Inventory.

SARA Section 313: This product is not known to contain any SARA, Title III, Section 313 Reportable Chemicals at or greater than 1.0% (0.1% for carcinogens).

IARC: No information available

SARA 311 / 312 Categories
Acute: __ **Chronic:** __ **Fire:** __ **Pressure:** __ **Reactive:** __
Not Regulated: X

Canadian WHMIS Classification
Not a controlled substance under WHMIS

European Union Classification
Hazard Symbols:
No classification recommended
Risk Phrases:
No classification recommended
Safety Phrases:
No classification recommended

Other: No information available

16. OTHER INFORMATION

Health and Environmental Label Language

WARNING: Continuous contact with used gasoline engine oils has caused skin cancer in animal tests.
ATTENTION: Prolonged or repeated skin contact may cause oil acne or dermatitis. Repeated exposure to oil mist in excess of the OSHA limit (5mg/m3 can result in accumulation of oil droplets in pulmonary tissue.

Precautionary Measures: Avoid prolonged or repeated contact with eyes, skin and clothing. Avoid generation and inhalation of oil mists.

First Aid: Skin Contact: Wash skin with soap and water. Launder soiled clothes and discard oil-soaked shoes. If irritation persists seek medical attention. Eye Contact: Flush with water. If irritation persists seek medical attention. Ingestion: Do not induce vomiting. In general, no treatment is necessary unless large quantities of product are ingested. If discomfort persists seek medical assistance.

Instructions in Case of Fire or Spill: In case of fire, use water fog, foam, dry chemical or carbon dioxide. Water spray may be ineffective, but can be used to cool containers. Do not use a direct stream of water. Material will float and can be reignited on surface of water.

Spill or Leak: Dike and contain spill. Do not use water; soak up with absorbent material such as clay, sand or other suitable material. Place in non-leaking container and seal tightly for proper disposal.

Contains: highly refined petroleum distillate, mixture; zinc compounds, mixture; polymer additives, mixture.

KEEP OUT OF REACH OF CHILDREN. (If intended for retail also)

MSDS Revisions
Previous Version Date: 06/01/01

Previous Version Information
Revised Section 1 - Product Name

Other

No information available

Prepared By:

SOPUS Products
P.O. Box 4427
Houston, TX 77210-4453 USA

Disclaimer of Warranty: The information contained herein is based upon data and information available to us, and reflects our best professional judgment. This product may be formulated in part with components purchased from other companies. In many instances, especially when proprietary or trade secret materials are used, SOPUS Products must rely upon the hazard evaluation of such components submitted by that product's manufacturer or importer. No warranty of merchantability, fitness for any use, or any other warranty is expressed or implied regarding the accuracy of such data or information, the results to be obtained from the use thereof, or that any such use do not infringe any patent. Since the information contained herein may be applied under conditions of use beyond our control and with which we may be unfamiliar, we do not assume responsibility for the results of such application. This information is furnished upon the condition that the person receiving it shall make his own determination of the suitability of the material for his particular use.

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Cover Sheet

micromeritics®
INSTRUMENT CORPORATION
ONE MICROMERITICS DR.
NORCROSS, GA 30093-1877 U.S.A.

REV	REVISION DESCRIPTION	BY	DATE	CHK	REL. NO.		
						DWN BY	J. Pittman
						ENGR	J. Mocny
C	Revision	JAP	6/25/04		040265	ENGR SIG	P. Hendrix
B	Revision	MD	04/02/03	JM	030200	HR SIG	J. Mocny
A	New format and numbering system	C. Bills	5/24/00	—	990544	QA SIG	A. Dovin
-	Formal Release	C. Bills	6-26-07	—	970446	ES SIG	K. Massengill

MSDS
HYDRAULIC FLUID OD-15-10
(1-L)

SIZE	NUMBER	PAGE
A	920/16002/00MSDS	X of 3

Micromeritics Material Safety Data Sheet

Title : HYDRAULIC FLUID OD-15-10(1-L)
Date of Preparation : 06/25/04

MSDS No. : 920/16002/00MSDS
Revision : C

Section 1 - Chemical Product and Company Identification

Product/Chemical Name: HYDRAULIC FLUID OD-15-10
Chemical Formula: Blend
CAS Number: n/a
Other Designations:
General Use:

Supplier: Micromeritics Instrument Corp.
1 Micromeritics Dr.
Norcross, GA 30093-1877 USA

Contact: Human Resources
Phone: (770) 662-3620
Fax: (770) 662-3696

Manufacturer: Sun Company, Inc. Ten Penn Center 1801 Market St. Philadelphia, PA 19103-1699
(770) 662-3678

Section 2 - Composition Information on Ingredients

Ingredient Name	CAS Number	% vol
Severely solvent refined heavy paraffinic petroleum oil	64741-88-4	90-100
Zinc dialkyl Dithiophosphats	68649-42-3	0-1
Butylated Phenol	n/a	0-1
Calcium Sulfonate	61789-86-4	0-1
Acrylic Copolymer	68171-46-0	0-1
2-Ethylhexanol	104-76-7	0-1

Trace Impurities:

	OSHA PEL		ACGIH TLV		NIOSH REL		NIOSH
Ingredient	**TWA**	**STEL**	**TWA**	**STEL**	**TWA**	**STEL**	**IDLH**
Severely solvent refined heavy paraffinic petroleum oil	5mg/m^3	-	5mg/m^3	-	n/a	n/a	n/a
Zinc dialkyl Dithiophosphats	n/a	n/a	n/a	n/a	n/a	n/a	n/a
Butylated Phenol	n/a	n/a	n/a	n/a	n/a	n/a	n/a
Calcium Sulfonate	n.a	n/a	n/a	n/a	n/a	n/a	n/a
Acrylic Copolymer	n/a	n/a	n/a	n/a	n/a	n/a	n/a
2-Ethylhexanol	n/a	n/a	n/a	n/a	n/a	n/a	n/a
Additional exposure limits: Oil Mist	5mg/m^3		5mg/m^3				

Section 3 - Hazards Identification

★★★★★ Emergency Overview ★★★★★

HMIS	
H	1
F	1
R	0
PPE†	

†Sec. 8

Potential Health Effects

Primary Entry Routes: Skin
Effects of Overexposure:

Inhalation: No effects expected
Eye: Contact with the eye may cause minimal irritation.
Skin: Practically non-toxic if absorbed (LD50 greater than 2000 mg/kg). May cause mild irritation with prolonged or repeated contact.
Ingestion: Practically non-toxic (LD50 > 15g/Kg).

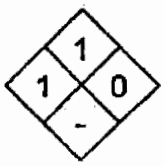
Section 4 First Aid Measures

Inhalation: Move person to fresh air.
Eye: Flush with water.
Skin: Wash with soap and water until no odor remains. Wash clothing before reuse.
Swallowing: Practically non-toxic. Induction of vomiting not required. Obtain emergency medical attention. Small amounts which accidentally enter mouth should be rinsed out until taste of it is gone.

Other Information: Warning!! *High pressure injection of oil through the skin is a medial emergency. There may be no sign of injury and no initial pain. This oil must be removed completely by a physician. Failure to obtain immediate treatment has resulted in loss of a finger, hand or arm.*
WHMIS Classification: Not controlled.

Section 5 Fire-Fighting Measures

NFPA



Flash Point: 380°F (192°C)
Flash Point Method: COC
Extinguishing Media: Water spray, regular foam, dry chemical, carbon dioxide.
Unusual Fire or Explosion Hazards: n/a
Fire-Fighting Procedures: Wear self-contained breathing apparatus. Wear structural firefighters protective clothing.

Section 6 Accidental Release Measures

Spill /Leak Procedures: n/a

Section 7 Handling and Storage

Handling/ Storage Requirements: n/a

Section 8 Exposure Controls/ Personal Protection

N/A

Section 9 Physical and Chemical Properties

Appearance and Odor: clear fluid, little odor
Odor Threshold: n/a
Vapor Pressure: <0.0001 (mm Hg at 20 °C)
Vapor Density (Air=1): 10 +
Formula Weight: n/a
Density: n/a
Specific Gravity (H_2O=1, at 4 °C): 0.87
Water Solubility: nil
Other Solubilities: n/a
Boiling Point: n/a
Melting Point: n/a
Viscosity: 165 sus @ 100°F. 32.0 CST @ 40 °C.
% Volatile: n/a
Evaporation Rate: 1000X slower (ehtyl ether = 1)

Section 10 Stability and Reactivity

Stability: HYDRAULIC FLUID OD-15-10 is stable.
Polymerization: Hazardous polymerization will not occur.
Chemical Incompatibilities: Strong oxidizers.
Conditions to Avoid: n/a
Hazardous Decomposition Products: Combustion will produce carbon monoxide, oxides of sulfur and asphyxiants.

Section 11 Toxicological Information

n/a

Section 12 Ecological Information

Ecotoxicity: n/a

Section 13 Disposal Considerations

Disposal: n/a

Section 14 Transport Information

n/a

Section 15 Regulatory Information

n/a

Section 16 Other Information

Prepared By: C. Bills
Revision Notes:

Disclaimer:

MATERIAL SAFETY DATA SHEET

Diesel Fuel (All Types) **MSDS No. 9909**

EMERGENCY OVERVIEW
CAUTION!
OSHA/NFPA COMBUSTIBLE LIQUID - SLIGHT TO MODERATE IRRITANT
EFFECTS CENTRAL NERVOUS SYSTEM
HARMFUL OR FATAL IF SWALLOWED
Moderate fire hazard. Avoid breathing vapors or mists. May cause dizziness and drowsiness. May cause moderate eye irritation and skin irritation (rash). Long-term, repeated exposure may cause skin cancer.
If ingested, do NOT induce vomiting, as this may cause chemical pneumonia (fluid in the lungs).

NFPA 704 (Section 16)

1. CHEMICAL PRODUCT AND COMPANY INFORMATION

Hess Corporation
1 Hess Plaza
Woodbridge, NJ 07095-0961

EMERGENCY TELEPHONE NUMBER (24 hrs): **CHEMTREC (800) 424-9300**
COMPANY CONTACT (business hours): Corporate Safety (732) 750-6000
MSDS INTERNET WEBSITE: www.hess.com (See Environment, Health, Safety & Social Responsibility)

SYNONYMS: Ultra Low Sulfur Diesel (ULSD); Low Sulfur Diesel; Motor Vehicle Diesel Fuel; Diesel Fuel #2; Dyed Diesel Fuel; Non-Road, Locomotive and Marine Diesel Fuel; Tax-exempt Diesel Fuel

See Section 16 for abbreviations and acronyms.

2. COMPOSITION and CHEMICAL INFORMATION ON INGREDIENTS

INGREDIENT NAME (CAS No.)	CONCENTRATION PERCENT BY WEIGHT
Diesel Fuel (68476-34-6)	100
Naphthalene (91-20-3)	Typically < 0.01

A complex mixture of hydrocarbons with carbon numbers in the range C9 and higher. Diesel fuel may be dyed (red) for tax purposes. May contain a multifunctional additive.

3. HAZARDS IDENTIFICATION

EYES
Contact with liquid or vapor may cause mild irritation.

SKIN
May cause skin irritation with prolonged or repeated contact. Practically non-toxic if absorbed following acute (single) exposure. Liquid may be absorbed through the skin in toxic amounts if large areas of skin are repeatedly exposed.

INGESTION
The major health threat of ingestion occurs from the danger of aspiration (breathing) of liquid drops into the lungs, particularly from vomiting. Aspiration may result in chemical pneumonia (fluid in the lungs), severe lung damage, respiratory failure and even death.

Ingestion may cause gastrointestinal disturbances, including irritation, nausea, vomiting and diarrhea, and central nervous system (brain) effects similar to alcohol intoxication. In severe cases, tremors, convulsions, loss of consciousness, coma, respiratory arrest, and death may occur.

INHALATION
Excessive exposure may cause irritations to the nose, throat, lungs and respiratory tract. Central nervous system (brain) effects may include headache, dizziness, loss of balance and coordination, unconsciousness, coma, respiratory failure, and death.

WARNING: the burning of any hydrocarbon as a fuel in an area without adequate ventilation may result in hazardous levels of combustion products, including carbon monoxide, and inadequate oxygen levels, which may cause unconsciousness, suffocation, and death.

CHRONIC EFFECTS and CARCINOGENICITY
Similar products produced skin cancer and systemic toxicity in laboratory animals following repeated applications. The significance of these results to human exposures has not been determined - see Section 11 Toxicological Information.

IARC classifies whole diesel fuel exhaust particulates as probably carcinogenic to humans (Group 2A). NIOSH regards whole diesel fuel exhaust particulates as a potential cause of occupational lung cancer based on animal studies and limited evidence in humans.

MEDICAL CONDITIONS AGGRAVATED BY EXPOSURE
Irritation from skin exposure may aggravate existing open wounds, skin disorders, and dermatitis (rash).

4. FIRST AID MEASURES

EYES
In case of contact with eyes, immediately flush with clean, low-pressure water for at least 15 min. Hold eyelids open to ensure adequate flushing. Seek medical attention.

SKIN
Remove contaminated clothing. Wash contaminated areas thoroughly with soap and water or waterless hand cleanser. Obtain medical attention if irritation or redness develops.

INGESTION
DO NOT INDUCE VOMITING. Do not give liquids. Obtain immediate medical attention. If spontaneous vomiting occurs, lean victim forward to reduce the risk of aspiration. Monitor for breathing difficulties. Small amounts of material which enter the mouth should be rinsed out until the taste is dissipated.

INHALATION
Remove person to fresh air. If person is not breathing provide artificial respiration. If necessary, provide additional oxygen once breathing is restored if trained to do so. Seek medical attention immediately.

5. FIRE FIGHTING MEASURES

FLAMMABLE PROPERTIES:

FLASH POINT:	> 125 °F (> 52 °C) minimum PMCC
AUTOIGNITION POINT:	494 °F (257 °C)
OSHA/NFPA FLAMMABILITY CLASS:	2 (COMBUSTIBLE)
LOWER EXPLOSIVE LIMIT (%):	0.6
UPPER EXPLOSIVE LIMIT (%):	7.5

FIRE AND EXPLOSION HAZARDS
Vapors may be ignited rapidly when exposed to heat, spark, open flame or other source of ignition. When mixed with air and exposed to an ignition source, flammable vapors can burn in the open or explode in confined spaces. Being heavier than air, vapors may travel long distances to an ignition source and flash back. Runoff to sewer may cause fire or explosion hazard.

EXTINGUISHING MEDIA
SMALL FIRES: Any extinguisher suitable for Class B fires, dry chemical, CO2, water spray, fire fighting foam, or Halon.

LARGE FIRES: Water spray, fog or fire fighting foam. Water may be ineffective for fighting the fire, but may be used to cool fire-exposed containers.

FIRE FIGHTING INSTRUCTIONS

Small fires in the incipient (beginning) stage may typically be extinguished using handheld portable fire extinguishers and other fire fighting equipment.

Firefighting activities that may result in potential exposure to high heat, smoke or toxic by-products of combustion should require NIOSH/MSHA- approved pressure-demand self-contained breathing apparatus with full facepiece and full protective clothing.

Isolate area around container involved in fire. Cool tanks, shells, and containers exposed to fire and excessive heat with water. For massive fires the use of unmanned hose holders or monitor nozzles may be advantageous to further minimize personnel exposure. Major fires may require withdrawal, allowing the tank to burn. Large storage tank fires typically require specially trained personnel and equipment to extinguish the fire, often including the need for properly applied fire fighting foam.

See Section 16 for the NFPA 704 Hazard Rating.

6. ACCIDENTAL RELEASE MEASURES

ACTIVATE FACILITY'S SPILL CONTINGENCY OR EMERGENCY RESPONSE PLAN.

Evacuate nonessential personnel and remove or secure all ignition sources. Consider wind direction; stay upwind and uphill, if possible. Evaluate the direction of product travel, diking, sewers, etc. to confirm spill areas. Spills may infiltrate subsurface soil and groundwater; professional assistance may be necessary to determine the extent of subsurface impact.

Carefully contain and stop the source of the spill, if safe to do so. Protect bodies of water by diking, absorbents, or absorbent boom, if possible. Do not flush down sewer or drainage systems, unless system is designed and permitted to handle such material. The use of fire fighting foam may be useful in certain situations to reduce vapors. The proper use of water spray may effectively disperse product vapors or the liquid itself, preventing contact with ignition sources or areas/equipment that require protection.

Take up with sand or other oil absorbing materials. Carefully shovel, scoop or sweep up into a waste container for reclamation or disposal - caution, flammable vapors may accumulate in closed containers. Response and clean-up crews must be properly trained and must utilize proper protective equipment (see Section 8).

7. HANDLING and STORAGE

HANDLING PRECAUTIONS

Handle as a combustible liquid. Keep away from heat, sparks, and open flame! Electrical equipment should be approved for classified area. Bond and ground containers during product transfer to reduce the possibility of static-initiated fire or explosion.

Diesel fuel, and in particular low and ultra low sulfur diesel fuel, has the capability of accumulating a static electrical charge of sufficient energy to cause a fire/explosion in the presence of lower flashpoint products such as gasoline. The accumulation of such a static charge occurs as the diesel flows through pipelines, filters, nozzles and various work tasks such as tank/container filling, splash loading, tank cleaning; product sampling; tank gauging; cleaning, mixing, vacuum truck operations, switch loading, and product agitation. There is a greater potential for static charge accumulation in cold temperature, low humidity conditions.

Documents such as 29 CFR OSHA 1910.106 "Flammable and Combustible Liquids, NFPA 77 Recommended Practice on Static Electricity, API 2003 "Protection Against Ignitions Arising Out of Static, Lightning, and Stray Currents and ASTM D4865 "Standard Guide for Generation and Dissipation of Static

Electricity in Petroleum Fuel Systems" address special precautions and design requirements involving loading rates, grounding, bonding, filter installation, conductivity additives and especially the hazards associated with "switch loading." ["Switch Loading" is when a higher flash point product (such as diesel) is loaded into tanks previously containing a low flash point product (such as gasoline) and the electrical charge generated during loading of the diesel results in a static ignition of the vapor from the previous cargo (gasoline).]

Note: When conductivity additives are used or are necessary the product should achieve 25 picosiemens/meter or greater at the handling temperature.

STORAGE PRECAUTIONS

Keep away from flame, sparks, excessive temperatures and open flame. Use approved vented containers. Keep containers closed and clearly labeled. Empty product containers or vessels may contain explosive vapors. Do not pressurize, cut, heat, weld or expose such containers to sources of ignition.

Store in a well-ventilated area. This storage area should comply with NFPA 30 "Flammable and Combustible Liquid Code". Avoid storage near incompatible materials. The cleaning of tanks previously containing this product should follow API Recommended Practice (RP) 2013 "Cleaning Mobile Tanks In Flammable and Combustible Liquid Service" and API RP 2015 "Cleaning Petroleum Storage Tanks".

WORK/HYGIENIC PRACTICES

Emergency eye wash capability should be available in the near proximity to operations presenting a potential splash exposure. Use good personal hygiene practices. Avoid repeated and/or prolonged skin exposure. Wash hands before eating, drinking, smoking, or using toilet facilities. Do not use as a cleaning solvent on the skin. Do not use solvents or harsh abrasive skin cleaners for washing this product from exposed skin areas. Waterless hand cleaners are effective. Promptly remove contaminated clothing and launder before reuse. Use care when laundering to prevent the formation of flammable vapors which could ignite via washer or dryer. Consider the need to discard contaminated leather shoes and gloves.

8. EXPOSURE CONTROLS and PERSONAL PROTECTION

EXPOSURE LIMITS

Components (CAS No.)	Source	Exposure Limits TWA/STEL	Note
Diesel Fuel: (68476-34-6)	OSHA	5 mg/m, as mineral oil mist	
	ACGIH	100 mg/m^3 (as totally hydrocarbon vapor) TWA	A3, skin
Naphthalene (91-20-3)	OSHA	10 ppm TWA	
	ACGIH	10 ppm TWA / 15 ppm STEL	A4, Skin

ENGINEERING CONTROLS

Use adequate ventilation to keep vapor concentrations of this product below occupational exposure and flammability limits, particularly in confined spaces.

EYE/FACE PROTECTION

Safety glasses or goggles are recommended where there is a possibility of splashing or spraying.

SKIN PROTECTION

Gloves constructed of nitrile, neoprene, or PVC are recommended. Chemical protective clothing such as of E.I. DuPont TyChem®, Saranex® or equivalent recommended based on degree of exposure. Note: The resistance of specific material may vary from product to product as well as with degree of exposure. Consult manufacturer specifications for further information.

RESPIRATORY PROTECTION
A NIOSH/MSHA-approved air-purifying respirator with organic vapor cartridges or canister may be permissible under certain circumstances where airborne concentrations are or may be expected to exceed exposure limits or for odor or irritation. Protection provided by air-purifying respirators is limited. Refer to OSHA 29 CFR 1910.134, NIOSH Respirator Decision Logic, and the manufacturer for additional guidance on respiratory protection selection.

Use a positive pressure, air-supplied respirator if there is a potential for uncontrolled release, exposure levels are not known, in oxygen-deficient atmospheres, or any other circumstance where an air-purifying respirator may not provide adequate protection.

9. PHYSICAL and CHEMICAL PROPERTIES

APPEARANCE
Clear, straw-yellow liquid. Dyed fuel oil will be red or reddish-colored.

ODOR
Mild, petroleum distillate odor

BASIC PHYSICAL PROPERTIES

BOILING RANGE:	320 to 690 oF (160 to 366 °C)
VAPOR PRESSURE:	0.009 psia @ 70 °F (21 °C)
VAPOR DENSITY (air = 1):	> 1.0
SPECIFIC GRAVITY (H_2O = 1):	0.83 to 0.88 @ 60 °F (16 °C)
PERCENT VOLATILES:	100 %
EVAPORATION RATE:	Slow; varies with conditions
SOLUBILITY (H_2O):	Negligible

10. STABILITY and REACTIVITY

STABILITY: Stable. Hazardous polymerization will not occur.

CONDITIONS TO AVOID and INCOMPATIBLE MATERIALS
Avoid high temperatures, open flames, sparks, welding, smoking and other ignition sources. Keep away from strong oxidizers; Viton ®; Fluorel ®

HAZARDOUS DECOMPOSITION PRODUCTS
Carbon monoxide, carbon dioxide and non-combusted hydrocarbons (smoke).

11. TOXICOLOGICAL PROPERTIES

ACUTE TOXICITY
Acute dermal LD50 (rabbits): > 5 ml/kg
Acute oral LD50 (rats): 9 ml/kg
Primary dermal irritation: extremely irritating (rabbits)
Draize eye irritation: non-irritating (rabbits)
Guinea pig sensitization: negative

CHRONIC EFFECTS AND CARCINOGENICITY
Carcinogenic: OSHA: NO IARC: NO NTP: NO ACGIH: A3

Studies have shown that similar products produce skin tumors in laboratory animals following repeated applications without washing or removal. The significance of this finding to human exposure has not been determined. Other studies with active skin carcinogens have shown that washing the animal's skin with soap and water between applications reduced tumor formation.

MUTAGENICITY (genetic effects)
This material has been positive in a mutagenicity study.

12. ECOLOGICAL INFORMATION

Keep out of sewers, drainage areas, and waterways. Report spills and releases, as applicable, under Federal and State regulations.

13. DISPOSAL CONSIDERATIONS

Consult federal, state and local waste regulations to determine appropriate disposal options.

14. TRANSPORTATION INFORMATION

PROPER SHIPPING NAME:	Diesel Fuel	Placard (International Only):
HAZARD CLASS and PACKING GROUP:	3, PG III	
DOT IDENTIFICATION NUMBER:	NA 1993 (Domestic) UN 1202 (International)	
DOT SHIPPING LABEL:	None	

Use Combustible Placard if shipping in bulk domestically

15. REGULATORY INFORMATION

U.S. FEDERAL, STATE, and LOCAL REGULATORY INFORMATION

This product and its constituents listed herein are on the EPA TSCA Inventory. Any spill or uncontrolled release of this product, including any substantial threat of release, may be subject to federal, state and/or local reporting requirements. This product and/or its constituents may also be subject to other regulations at the state and/or local level. Consult those regulations applicable to your facility/operation.

CLEAN WATER ACT (OIL SPILLS)

Any spill or release of this product to "navigable waters" (essentially any surface water, including certain wetlands) or adjoining shorelines sufficient to cause a visible sheen or deposit of a sludge or emulsion must be reported immediately to the National Response Center (1-800-424-8802) as required by U.S. Federal Law. Also contact appropriate state and local regulatory agencies as required.

CERCLA SECTION 103 and SARA SECTION 304 (RELEASE TO THE ENVIRONMENT)

The CERCLA definition of hazardous substances contains a "petroleum exclusion" clause which exempts crude oil, refined, and unrefined petroleum products and any indigenous components of such. However, other federal reporting requirements (e.g., SARA Section 304 as well as the Clean Water Act if the spill occurs on navigable waters) may still apply.

SARA SECTION 311/312 - HAZARD CLASSES

ACUTE HEALTH	CHRONIC HEALTH	FIRE	SUDDEN RELEASE OF PRESSURE	REACTIVE
X	X	X	–	–

SARA SECTION 313 - SUPPLIER NOTIFICATION

This product may contain listed chemicals below the *de minimis* levels which therefore are not subject to the supplier notification requirements of Section 313 of the Emergency Planning and Community Right-To-Know Act (EPCRA) of 1986 and of 40 CFR 372. If you may be required to report releases of chemicals listed in 40 CFR 372.28, you may contact Hess Corporate Safety if you require additional information regarding this product.

CALIFORNIA PROPOSITON 65 LIST OF CHEMICALS

This product contains the following chemicals that are included on the Proposition 65 "List of Chemicals" required by the California Safe Drinking Water and Toxic Enforcement Act of 1986:

INGREDIENT NAME (CAS NUMBER)	Date Listed
Diesel Engine Exhaust (no CAS Number listed)	10/01/1990

CANADIAN REGULATORY INFORMATION (WHMIS)

Class B, Division 3 (Combustible Liquid) and Class D, Division 2, Subdivision B (Toxic by other means)

16. OTHER INFORMATION

NFPA® HAZARD RATING	HEALTH:	0	
	FIRE:	2	
	REACTIVITY:	0	

Refer to NFPA 704 "Identification of the Fire Hazards of Materials" for further information

HMIS® HAZARD RATING	HEALTH:	1 *	* Chronic
	FIRE:	2	
	PHYSICAL:	0	

SUPERSEDES MSDS DATED: 02/28/2001

ABBREVIATIONS:

AP = Approximately < = Less than > = Greater than
N/A = Not Applicable N/D = Not Determined ppm = parts per million

ACRONYMS:

ACGIH	American Conference of Governmental Industrial Hygienists
AIHA	American Industrial Hygiene Association
ANSI	American National Standards Institute (212) 642-4900
API	American Petroleum Institute (202) 682-8000
CERCLA	Comprehensive Emergency Response, Compensation, and Liability Act
DOT	U.S. Department of Transportation [General info: (800) 467-4922]
EPA	U.S. Environmental Protection Agency
HMIS	Hazardous Materials Information System
IARC	International Agency For Research On Cancer
MSHA	Mine Safety and Health Administration
NFPA	National Fire Protection Association (617)770-3000
NIOSH	National Institute of Occupational Safety and Health
NOIC	Notice of Intended Change (proposed change to ACGIH TLV)
NTP	National Toxicology Program
OPA	Oil Pollution Act of 1990
OSHA	U.S. Occupational Safety & Health Administration
PEL	Permissible Exposure Limit (OSHA)
RCRA	Resource Conservation and Recovery Act
REL	Recommended Exposure Limit (NIOSH)
SARA	Superfund Amendments and Reauthorization Act of 1986 Title III
SCBA	Self-Contained Breathing Apparatus
SPCC	Spill Prevention, Control, and Countermeasures
STEL	Short-Term Exposure Limit (generally 15 minutes)
TLV	Threshold Limit Value (ACGIH)
TSCA	Toxic Substances Control Act
TWA	Time Weighted Average (8 hr.)
WEEL	Workplace Environmental Exposure Level (AIHA)
WHMIS	Canadian Workplace Hazardous Materials Information System

DISCLAIMER OF EXPRESSED AND IMPLIED WARRANTIES

Information presented herein has been compiled from sources considered to be dependable, and is accurate and reliable to the best of our knowledge and belief, but is not guaranteed to be so. Since conditions of use are beyond our control, we make no warranties, expressed or implied, except those that may be contained in our written contract of sale or acknowledgment.

Vendor assumes no responsibility for injury to vendee or third persons proximately caused by the material if reasonable safety procedures are not adhered to as stipulated in the data sheet. Additionally, vendor assumes no responsibility for injury to vendee or third persons proximately caused by abnormal use of the material, even if reasonable safety procedures are followed. Furthermore, vendee assumes the risk in their use of the material.

Prestone

PRESTONE ANTIFREEZE/COOLANT
MSDSP149

SECTION 1: IDENTIFICATION

MSDS ID: MSDSP149

PRODUCT NAME: PRESTONE ANTIFREEZE/COOLANT
Product Number: AF777
Formula Number: YA721, YA718, YA718B

MANUFACTURER: Prestone Products Corporation
39 Old Ridgebury Road
Danbury, CT 06810-5109

INFORMATION PHONE NUMBER: (203) 731-3686

EMERGENCY PHONE NUMBER: CHEMTREC 1-800-424-9300
483-7161 in the District of Columbia

MSDS DATE OF PREPARATION/REVISION: 10/18/99

SECTION 2: PRODUCT COMPONENTS

HAZARDOUS COMPONENTS	CAS#	PERCENT	EXPOSURE LIMITS
Ethylene Glycol (aerosol)	107-21-1	80-96	None Established-OSHA PEL 100 mg/m3 Ceiling ACGIH TLV
Diethylene Glycol	111-46-6	0-8	None Established OSHA PEL, ACGIH TLV

Non-Hazardous Ingredients >1%
Water 7732-18-5

SECTION 3: HAZARDS IDENTIFICATION

EMERGENCY OVERVIEW

Eye and upper respiratory irritant. May cause nausea, vomiting, headache, drowsiness, blurred vision, convulsions, coma or death if ingested or inhaled. Prolonged or repeated skin contact may cause dermatitis or skin sensitization.

POTENTIAL HEALTH EFFECTS:

INHALATION: May cause irritation of the nose and throat with headache, particularly from mists. High vapor concentrations caused, for example, by heating the material in an enclosed and poorly ventilated workplace, may produce nausea, vomiting, headache, dizziness and irregular eye movements.

SKIN CONTACT: No evidence of adverse effects from available information.

EYE CONTACT: Liquid, vapors or mist may cause discomfort in the eye with persistent conjunctivitis, seen as slight excess redness or conjunctiva. Serious corneal injury is not anticipated.

INGESTION: Following ingestion, a bitter taste may be noted. May cause abdominal discomfort or pain, nausea, vomiting, dizziness, drowsiness, malaise, blurring of vision, irritability, back pain, decrease in urine output, kidney failure, and central nervous system effects, including irregular eye movements, convulsions and coma. Cardiac failure and pulmonary edema may develop. Severe kidney damage which may be fatal may follow the swallowing of ethylene glycol. A few reports have been published describing the development of weakness of the facial muscles, diminishing hearing, and difficulty with swallowing, during the late stages of severe poisoning.

CHRONIC EFFECTS: Prolonged or repeated inhalation exposure may produce signs of central nervous system involvement, particularly dizziness and jerking eye movements. Prolonged or repeated skin contact may cause skin sensitization and an associated dermatitis in some individuals. Ethylene glycol has been found to cause birth defects in laboratory animals. The significance of this finding to humans has not been determined. See section 11 for additional information.

MEDICAL CONDITIONS AGGRAVATED BY EXPOSURE: The available toxicological information and a knowledge of the physical and chemical properties of the material suggest that overexposure in unlikely to aggravate existing medical conditions.

CARCINOGEN: None of the components of these products is listed as a carcinogen or suspected carcinogen by IARC, NTP or OSHA.

SECTION 4: FIRST AID MEASURES

INHALATION: Remove the victim to fresh air. If breathing has stopped administer artificial respiration. If breathing is difficult, have medical personnel administer oxygen. Get medical attention.

SKIN CONTACT: Remove contaminated clothing. Immediately wash contacted area thoroughly with soap and water. If irritation persists, get medical attention.

EYE CONTACT: Immediately flush eyes with large amounts of water for 15 minutes. Get medical attention if irritation persists.

INGESTION: Seek immediate medical attention. Immediately call local poison control center or go to an emergency department. Never give anything by mouth to or induce vomiting in an unconscious or drowsy person.

NOTES TO PHYSICIAN: The principal toxic effects of ethylene glycol, when swallowed, are kidney damage and metabolic acidosis. The combination of metabolic acidosis, an osmol gap and oxalate crystals in the urine is evidence of ethylene glycol poisoning.

Pulmonary edema with hypoxemia has been described in a number of patients following poisoning with ethylene glycol. Respiratory support with mechanical ventilation may be required.

There may be cranial nerve involvement in the late stages of toxicity from swallowed ethylene glycol. In particular, effects have been reported involving the seventh, eighth, and ninth cranial nerves, presenting with bilateral facial paralysis, diminished hearing and dysphagia.

Ethanol is antidotal and its early administration may block the formation of nephrotoxic metabolites of ethylene glycol in the liver. The objective is to rapidly achieve and maintain a blood ethanol level of approximately 100 mg/dl by giving a loading dose of ethanol followed by a maintenance dose. Intravenous administration of ethanol is the preferred route. Ethanol blood levels should be checked frequently. Hemodialysis may be required.

4-Methylpyrazole (Antizole(R) or Fomepizole), a potent inhibitor of alcohol dehydrogenase, has been used therapeutically to decrease the metabolic consequences of ethylene glycol poisoning. Additional therapeutic modalities which may decrease the adverse consequences of ethylene glycol metabolism are the administration of both thiamine and pyridoxine. As there are complicated and serious overdoses, we recommend you consult with the toxicologists at your poison control center. This antidote is now approved by the F.D.A. and in many cases has replaced ethanol in the treatment of ethylene glycol poisoning.

SECTION 5: FIRE AND EXPLOSION DATA

FLASH POINT: 242 F (117 C) TOC
220 F (104 C) PMCC

AUTOIGNITION TEMPERATURE: Not determined

FLAMMABILITY LIMITS: LEL: 3.2% UEL: 15.3%

EXTINGUISHING MEDIA: For large fires, use alcohol type or all-purpose foams. For small fires, use water spray, carbon dioxide or dry chemical.

SPECIAL FIRE FIGHTING PROCEDURES: Do not spray pool fires directly. Cool fire exposed containers with water. Firefighters should wear positive pressure self-contained breathing apparatus and full protective clothing for fires in areas where chemicals are used or stored.

UNUSUAL FIRE HAZARDS: A solid stream of water or foam directed into hot, burning liquid can cause frothing.

HAZARDOUS COMBUSTION PRODUCTS: Burning may produce carbon monoxide and carbon dioxide.

SECTION 6: ACCIDENTAL RELEASE MEASURES

Wear appropriate protective clothing and equipment (See Section 8). Collect with absorbent material and place in appropriate, labeled container for disposal or, if permitted flush spill area with water.

SECTION 7: HANDLING AND STORAGE

DANGER: Harmful or Fatal if Swallowed

Do not drink antifreeze or solution.
Avoid eye and prolonged or repeated skin contact.
Avoid breathing vapors or mists.
Wash exposed skin thoroughly with soap and water after use.
Do not store in opened or unlabeled containers.

Keep container away from open flames and excessive heat.
Do not reuse empty containers unless properly cleaned.

Empty containers retain product residue and may be dangerous. Do not cut, weld, drill, etc. containers, even empty.

Sudden release of hot organic chemical vapors or mists from process equipment operating at elevated temperature and pressure, or sudden ingress of air into vacuum equipment, may result in ignitions without any obvious ignition sources. Published "autoignition" or "ignition" temperatures cannot be treated as safe operating temperatures in chemical processes without analysis of the actual process conditions. Use of this product in elevated temperature applications should be thoroughly evaluated to assure safe operating conditions.

SECTION 8: EXPOSURE CONTROLS/PERSONAL PROTECTION

VENTILATION: Use general ventilation or local exhaust as required to maintain exposures below the occupational exposure limits.

RESPIRATORY PROTECTION: For operations where the TLV is exceeded a NIOSH approved respirator with organic vapor cartridges and dust/mist prefilters or supplied air respirator is recommended. Equipment selection depends on contaminant type and concentration. Select and use in accordance with 29 CFR 1910.134 and good industrial hygiene practice. For firefighting, use self-contained breathing apparatus.

GLOVES: Chemical resistant gloves such as neoprene or PVC where contact is possible

EYE PROTECTION: Splash-proof goggles.

OTHER PROTECTIVE EQUIPMENT/CLOTHING: Appropriate protective clothing as needed to minimize skin contact. Suitable washing and eye flushing facilities should be available in the work area. Contaminated clothing should be removed and laundered before re-use.

SECTION 9: PHYSICAL AND CHEMICAL PROPERTIES

APPEARANCE AND ODOR: Yellow liquid with a mild odor.

pH: Not determined	SPECIFIC GRAVITY: 1.12
BOILING POINT (F): 334 F	VAPOR PRESSURE: Less than 0.1
FREEZING POINT (F): -8 F	VAPOR DENSITY: 2.1
SOLUBILITY IN WATER: 100%	EVAPORATION RATE: Less than 1
PERCENT VOLATILE: None	VISCOSITY: Not determine

SECTION 10: STABILITY AND REACTIVITY

STABILITY: Stable
CONDITIONS TO AVOID: None known.
INCOMPATIBILITY: Normally unreactive, however, avoid strong bases at high temperatures, strong acids, strong oxidizing agents, and materials reactive with hydroxyl compounds.
DECOMPOSITION PRODUCTS: Carbon monoxide, carbon dioxide.
HAZARDOUS POLYMERIZATION: Will not occur
CONDITIONS TO AVOID: None known.

SECTION 11: TOXICOLOGICAL INFORMATION

ACUTE TOXICITY VALUES:

Ethylene Glycol: LD50 Oral Rat: 4700 mg/kg
LD50 Skin Rabbit: 9530 mg/kg

Diethylene Glycol: LD50 Oral Rat: 12,565 mg/kg
LD50 Skin Rabbit: 11,890 mg/kg

SIGNIFICANT LABORATORY DATA WITH POSSIBLE RELEVANCE TO HUMAN HEALTH:
Ethylene glycol has been shown to produce dose-related teratogenic effects in rats and mice when given by gavage or in drinking water at high concentrations or doses. Also, in a preliminary study to assess the effects of exposure of pregnant rats and mice to aerosols at concentrations 150, 1,000 and 2,500 mg/m3 for 6 hours a day throughout the period of organogenesis, teratogenic effects were produced at the highest concentrations, but only in mice. The conditions of these latter experiments did not allow a conclusion as to whether the developmental toxicity was mediated by inhalation of aerosol, percutaneous absorption of ethylene glycol from contaminated skin, or swallowing of ethylene glycol as a result of grooming the wetted coat. In a further study, comparing effects from high aerosol concentration by whole-body or nose-only exposure, it was shown that nose-only exposure

resulted in maternal toxicity (1,000 and 2,500 mg/m3) and developmental toxicity in with minimal evidence of teratogenicity (2,500 mg/m3). The no-effects concentration (based on maternal toxicity) was 500 mg/m3. In a further study in mice, no teratogenic effects could be produced when ethylene glycol was applied to the skin of pregnant mice over the period of organogenesis. The above observations suggest that ethylene glycol is to be regarded as an animal teratogen; there is currently no available information to suggest that ethylene glycol caused birth defects in humans. Cutaneous application of ethylene glycol is ineffective in producing developmental toxicity; exposure to high aerosol concentration is only minimally effective in producing developmental toxicity; the major route for producing developmental toxicity is perorally.

Two chronic feeding studies, using rats and mice, have not produced any evidence that ethylene glycol causes dose-related increases in tumor incidence or a different pattern of tumors compared with untreated controls. The absence of carcinogenic potential for ethylene glycol has been supported by numerous invitro genotoxicity studies showing that it does not produce mutagenic or clastogenic effects.

This products contains less than 0.5% tolytriazole which has demonstrates mutagenic activity in a bacterial test system. A correlation has been established between mutagenic activity and carcinogenic activity for many chemicals. Tolytriazole has not been identified as a carcinogen or probable carcinogen by NTP, IARC or OSHA.

SECTION 12: ECOLOGICAL INFORMATION

Ethylene Glycol: LC50 Goldfish: 5,000 mg/L/24 hr. at 20 C static conditions.

Toxicity threshold (cell multiplication inhibition test):
Bacterial (Pseudomonas putida): 10,000 mg/l
Protozoa (Entosiphon sulcatum and Uronema parduczi Chatton-Lwoff): >10,000 mg/l
Algae (Microcystis aeruginosa): 2,000 mg/l
Green algae (Scenedesmus quandricauda): >10,000 mg/l

SECTION 13: DISPOSAL INFORMATION

Dispose of product in accordance with all local, state/provincial and federal regulations.

SECTION 14: TRANSPORT INFORMATION

U.S. DOT HAZARD CLASSIFICATION

PROPER SHIPPING NAME: None
UN NUMBER: None
LABELS REQUIRED: None

DOT MARINE POLLUTANTS: This product does not contains Marine Pollutants as defined in 49 CFR 171.8.

IMDG CODE SHIPPING CLASSIFICATION

DESCRIPTION: Not Regulated

Note: IF A BULK SHIPMENT IS INVOLVED, THE FOLLOWING INFORMATION APPLIES:

U.S. DOT HAZARD CLASSIFICATION

PROPER SHIPPING NAME: Environmentally hazardous substance, liquid, N.O.S. (Ethylene glycol)
UN NUMBER: UN3082
LABELS REQUIRED: Class 9, UN3082

SECTION 15: REGULATORY INFORMATION

EPA SARA 311/312 HAZARD CLASSIFICATION: Acute health, chronic health

EPA SARA 313: This Product Contains the Following Chemicals Subject to Annual Release Reporting Requirements Under SARA Title III, Section 313 (40 CFR 372):

Ethylene Glycol	107-21-1	80-96%

PROTECTION OF STRATOSPHERIC OZONE: This product is not known to contain or to have been manufactured with ozone depleting substances as defined in 40 CFR Part 82, Appendix A to Subpart A.

CERCLA SECTION 103: Spills of this product over the RQ (reportable quantity) must be reported to the National Response Center. The RQ for this product, based on the RQ for Ethylene Glycol (96% maximum) of 5,000 lbs, is 5,208 lbs. Many states have more stringent release reporting requirements. Report spills required under federal, state and local regulations.

CALIFORNIA PROPOSITION 65 - This product may contain the following substances known to the State of California to cause Cancer and/or Reproductive Harm: 1,4-Dioxane (trace amount).

EPA TSCA INVENTORY: All of the components of this material are listed on the Toxic Substances Control Act (TSCA) Chemical Substances Inventory.

CANADIAN ENVIRONMENTAL PROTECTION ACT: All of the ingredients are listed on the Canadian Domestic Substances List.

CANADIAN WHMIS CLASSIFICATION: Class D - Division 2 - Subdivision B - (A toxic material causing other chronic effects)

EUROPEAN INVENTORY OF EXISTING COMMERCIAL CHEMICAL SUBSTANCES (EINECS): All of the ingredients are listed on the EINECS inventory.

AUSTRALIA: All of the ingredients of this product are listed on the Australian Inventory of Chemical Substances.

SECTION 16: OTHER INFORMATION

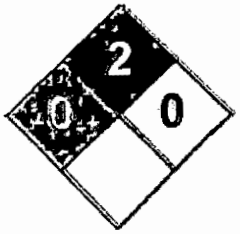
NFPA RATING (NFPA 704) - FIRE: 1
HEALTH: 2
REACTIVITY: 0

REVISION SUMMARY: Section 4: Notes to Physican
Section 9: Specific Gravity
Section 16: Contact Name and Address

This MSDS is directed to professional users and bulk handlers of the product. Consumer products are labeled in accordance with Federal Hazardous Substances Act regulations.

While Prestone Products Corporation believes that the data contained herein are factual and the opinions expressed are those of qualified experts regarding the results of tests conducted, the data are not to be taken as a warranty or representation for which Prestone Products Corporation assumes legal responsibility. They are offered for your consideration, investigation and verification. Any use of these data and information must be determined by the user to be in accordance with applicable federal, state and local laws and regulations.

If more information is needed, please contact: Stan Prusakowski
Prestone Products Corporation
55 Federal Road
Danbury, CT 06810
(203)830-7865



Health	0
Fire	2
Reactivity	0
Personal Protection	H

Material Safety Data Sheet
Mineral spirits MSDS

Section 1: Chemical Product and Company Identification

Product Name: Mineral spirits

Catalog Codes: SLM3616

CAS#: 64475-85-0

RTECS: WJ8925000

TSCA: TSCA 8(b) inventory: Mineral spirits

CI#: Not applicable.

Synonym:

Chemical Name: Not available.

Chemical Formula: Not available.

Contact Information:

Sciencelab.com, Inc.
14025 Smith Rd.
Houston, Texas 77396

US Sales: **1-800-901-7247**
International Sales: **1-281-441-4400**

Order Online: ScienceLab.com

CHEMTREC (24HR Emergency Telephone), call: 1-800-424-9300

International CHEMTREC, call: 1-703-527-3887

For non-emergency assistance, call: 1-281-441-4400

Section 2: Composition and Information on Ingredients

Composition:

Name	CAS #	% by Weight
Mineral spirits	64475-85-0	100

Toxicological Data on Ingredients: Mineral spirits LD50: Not available. LC50: Not available.

Section 3: Hazards Identification

Potential Acute Health Effects:
Hazardous in case of skin contact (irritant), of eye contact (irritant), of ingestion, of inhalation. Slightly hazardous in case of skin contact (permeator).

Potential Chronic Health Effects:
CARCINOGENIC EFFECTS: Not available. MUTAGENIC EFFECTS: Not available. TERATOGENIC EFFECTS: Not available. DEVELOPMENTAL TOXICITY: Not available. The substance is toxic to lungs, the nervous system. Repeated or prolonged exposure to the substance can produce target organs damage.

Section 4: First Aid Measures

Eye Contact: Check for and remove any contact lenses. Do not use an eye ointment. Seek medical attention.

Skin Contact:

After contact with skin, wash immediately with plenty of water. Gently and thoroughly wash the contaminated skin with running water and non-abrasive soap. Be particularly careful to clean folds, crevices, creases and groin. Cover the irritated skin with an emollient. If irritation persists, seek medical attention. Wash contaminated clothing before reusing.

Serious Skin Contact:
Wash with a disinfectant soap and cover the contaminated skin with an anti-bacterial cream. Seek medical attention.

Inhalation: Allow the victim to rest in a well ventilated area. Seek immediate medical attention.

Serious Inhalation:
Evacuate the victim to a safe area as soon as possible. Loosen tight clothing such as a collar, tie, belt or waistband. If breathing is difficult, administer oxygen. If the victim is not breathing, perform mouth-to-mouth resuscitation. Seek medical attention.

Ingestion:
Do not induce vomiting. Loosen tight clothing such as a collar, tie, belt or waistband. If the victim is not breathing, perform mouth-to-mouth resuscitation. Seek immediate medical attention.

Serious Ingestion: Not available.

Section 5: Fire and Explosion Data

Flammability of the Product: Flammable.

Auto-Ignition Temperature: 245°C (473°F)

Flash Points: CLOSED CUP: 38°C (100.4°F).

Flammable Limits: LOWER: 1%

Products of Combustion: Not available.

Fire Hazards in Presence of Various Substances: Not available.

Explosion Hazards in Presence of Various Substances:
Risks of explosion of the product in presence of mechanical impact: Not available. Risks of explosion of the product in presence of static discharge: Not available.

Fire Fighting Media and Instructions:
Flammable liquid, insoluble in water. SMALL FIRE: Use DRY chemical powder. LARGE FIRE: Use water spray or fog. Cool containing vessels with water jet in order to prevent pressure build-up, autoignition or explosion.

Special Remarks on Fire Hazards: Not available.

Special Remarks on Explosion Hazards: Not available.

Section 6: Accidental Release Measures

Small Spill: Absorb with an inert material and put the spilled material in an appropriate waste disposal.

Large Spill:
Flammable liquid, insoluble in water. Keep away from heat. Keep away from sources of ignition. Stop leak if without risk. Absorb with DRY earth, sand or other non-combustible material. Do not get water inside container. Do not touch spilled material. Prevent entry into sewers, basements or confined areas; dike if needed. Eliminate all ignition sources. Call for assistance on disposal.

Section 7: Handling and Storage

Precautions:
eep away from heat. Keep away from sources of ignition. Ground all equipment containing material. Do not breathe gas/ mes/ vapour/spray. Wear suitable protective clothing In case of insufficient ventilation, wear suitable respiratory equipment If you feel unwell, seek medical attention and show the label when possible. Avoid contact with skin and eyes

Storage:
Flammable materials should be stored in a separate safety storage cabinet or room. Keep away from heat. Keep away from sources of ignition. Keep container tightly closed. Keep in a cool, well-ventilated place. Ground all equipment containing material. Keep container dry. Keep in a cool place.

Section 8: Exposure Controls/Personal Protection

Engineering Controls:
Provide exhaust ventilation or other engineering controls to keep the airborne concentrations of vapors below their respective threshold limit value. Ensure that eyewash stations and safety showers are proximal to the work-station location.

Personal Protection:
Splash goggles. Lab coat. Vapor respirator. Be sure to use an approved/certified respirator or equivalent. Gloves.

Personal Protection in Case of a Large Spill:
Splash goggles. Full suit. Vapor respirator. Boots. Gloves. A self contained breathing apparatus should be used to avoid inhalation of the product. Suggested protective clothing might not be sufficient; consult a specialist BEFORE handling this product.

Exposure Limits: Not available.

Section 9: Physical and Chemical Properties

Physical state and appearance: Liquid.

Odor: Not available.

Taste: Not available.

Molecular Weight: Not available.

Color: Clear Colorless.

pH (1% soln/water): Not applicable.

Boiling Point: 148°C (298.4°F)

Melting Point: Not available.

Critical Temperature: Not available.

Specific Gravity: 0.74 (Water = 1)

Vapor Pressure: 2 mm of Hg (@ 20°C)

Vapor Density: 4.9 (Air = 1)

Volatility: Not available.

Odor Threshold: Not available.

Water/Oil Dist. Coeff.: Not available.

Ionicity (in Water): Not available.

Dispersion Properties: Not available.

Solubility: Insoluble in cold water.

Section 10: Stability and Reactivity Data

Stability: The product is stable.

Instability Temperature: Not available.

Conditions of Instability: Not available.

Incompatibility with various substances: Not available.

Corrosivity: Not considered to be corrosive for metals and glass.

Special Remarks on Reactivity: Not available.

Special Remarks on Corrosivity: Not available.

Polymerization: No.

Section 11: Toxicological Information

Routes of Entry: Eye contact. Inhalation. Ingestion.

Toxicity to Animals:
LD50: Not available. LC50: Not available.

Chronic Effects on Humans: The substance is toxic to lungs, the nervous system.

Other Toxic Effects on Humans:
Hazardous in case of skin contact (irritant), of ingestion, of inhalation. Slightly hazardous in case of skin contact (permeator).

Special Remarks on Toxicity to Animals: Not available.

Special Remarks on Chronic Effects on Humans: Not available.

Special Remarks on other Toxic Effects on Humans: Not available.

Section 12: Ecological Information

Ecotoxicity: Not available.

BOD5 and COD: Not available.

Products of Biodegradation:
Possibly hazardous short term degradation products are not likely. However, long term degradation products may arise.

Toxicity of the Products of Biodegradation: The products of degradation are more toxic.

Special Remarks on the Products of Biodegradation: Not available.

Section 13: Disposal Considerations

Waste Disposal:

Section 14: Transport Information

DOT Classification: CLASS 3: Combustible liquid with a flash point greater than 37.8C (100F).

Identification: : Flammable liquids n.o.s. : UN1993 PG: Not available.

Special Provisions for Transport: No DOT, ref 49CFR, 173.150

Section 15: Other Regulatory Information

Federal and State Regulations: TSCA 8(b) inventory: Mineral spirits

Other Regulations: OSHA: Hazardous by definition of Hazard Communication Standard (29 CFR 1910.1200).

Other Classifications:

WHMIS (Canada):
CLASS B-3: Combustible liquid with a flash point between 37.8°C (100°F) and 93.3°C (200°F). CLASS D-2A: Material causing other toxic effects (VERY TOXIC).

DSCL (EEC):
R10- Flammable. R36/38- Irritating to eyes and skin.

HMIS (U.S.A.):

Health Hazard: 0

Fire Hazard: 2

Reactivity: 0

Personal Protection: h

National Fire Protection Association (U.S.A.):

Health: 0

Flammability: 2

Reactivity: 0

Specific hazard:

Protective Equipment:
Gloves. Lab coat. Vapor respirator. Be sure to use an approved/certified respirator or equivalent. Wear appropriate respirator when ventilation is inadequate. Splash goggles.

Section 16: Other Information

References: Not available.

Other Special Considerations: Not available.

Created: 10/10/2005 10:50 AM

Last Updated: 06/09/2012 12:00 PM

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NALCO Water
An Ecolab Company

PRODUCT DESCRIPTION AND APPLICATION

NALCLEAR 7744 is a solution, medium charge, high molecular weight anionic flocculant. This product is intended for use in applications in which a polymer makeup unit is not available. **NALCLEAR 7744** can be used for clarification, sludge thickening, sludge dewatering, and as a filter aid.

This product functions well with all types of equipment including twin-belt presses, screw presses, dissolved air flotation/induced air flotation, plate and frame presses, vacuum filter presses, as well as high shear applications.

PHYSICAL & CHEMICAL PROPERTIES

Physical State	Liquid
Appearance	Off- White
Odor	Slight
Specific Gravity @ 77°F (25°C)	1.04
Density	8.4 - 8.7 Lb/Gal
Solubility In Water	Complete
pH(100%)	3.6 - 5.0
Freeze Point	30°F (-1°C)
Freeze/Thaw Recovery	Incomplete
VOC	0.6% (Calculated)
Shelf Life	1 year in an unopened container

Refer to the Safety Data Sheet (SDS) for the most current data.

ACTIVE CONSTITUENTS

Anionic polyacrylamide

REGULATORY APPROVALS

Refer to the Regulatory Certifications & Registrations (RCR) document for the most recent information on approvals.

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MATERIALS OF COMPATIBILITY

Material compatibility data are only valid for product storage and feed systems.

Compatible	Not Compatible
304 and 316 Stainless Steel	Mild Steel
Plasite 7122	Aluminum
Plasite 6000	Brass
Plasite 4005	Nickel
Polypropylene (rigid)	Vinyl
Polyethylene (rigid)	Polyurethane
PVC, CPVC	
Viton® synthetic rubber	
Fluoropolymer, Teflon®	
Buna-N	
Neoprene	
Hypalon® elastomer	

DOSAGE AND FEEDING

Each application is unique. Testing varying products of different charge and molecular weight is highly recommended for proper program selection. **NALCLEAR 7744** should be fed via a closed feed system. A closed feed system is defined as a system in which fluid is moved from a closed storage vessel into a treated media without exposure to the atmosphere except through normal venting or pressure relief devices.

NALCLEAR 7744 can be fed directly to the application. To gain better dispersion of product, this product should be delivered with an appropriate amount of in-line dilution water utilizing a mixing tee. Avoid using plant recycle water or other water sources high in suspended solids, mineral salts and iron and with a pH below 6.5 or above 7.8. A positive displacement pump is recommended for feeding **NALCLEAR 7744** to the treatment system. In most cases, the flocculant should be fed on the discharge side of any feed pump. There may be some isolated cases where the additional mixing rendered by distributing the polymer on the suction side of the pump will yield better program results.

Temperature vs. Viscosity

75°F	2170 cP
32°F	3370 cP

ENVIRONMENTAL AND TOXICITY DATA

Nalco Water, an Ecolab Company
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Refer to the Safety Data Sheet (SDS) for the most current data.

SAFETY AND HANDLING

As with any chemical, **NALCLEAR 7744** should be handled with responsible care. When considering the use of **NALCLEAR 7744** in a particular application, the Safety Data Sheet must be reviewed to assure that the intended use can be accomplished safely. Refer to the Safety Data Sheet (SDS) for the most current data.

In case of small liquid spills: Contain with absorbent material, such as clay, soil or any commercially available absorbent. Small spills can be effectively cleaned up with **NALCO POLYCLEAN 7.**

STORAGE

Keep containers closed. Low temperatures should be avoided since viscosity increases and pumping problems can occur. When frozen, warm the product slowly to ambient temperature and agitate with a low (<200) RPM mixer. After warming up to 46 - 50°F (8 -10°C) and re-homogenization by gentle agitation for about 2 hrs, the product can be re-used without loss in efficiency. Nevertheless, freezing should be avoided.

Refer to the Safety Data Sheet (SDS) for the most current data.

REMARKS

If you need assistance or more information on this product, please call your nearest Nalco Water representative.

For **Medical and Transportation Emergencies** involving Nalco Water products, please see the Safety Data Sheet for the phone number.

ADDITIONAL INFORMATION

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NALCO Water
An Ecolab Company

SAFETY DATA SHEET

NALCLEAR™ 7744

Section: 1. PRODUCT AND COMPANY IDENTIFICATION

Product name	:	NALCLEAR™ 7744
Other means of identification	:	Not applicable.
Recommended use	:	FLOCCULANT
Restrictions on use	:	Refer to available product literature or ask your local Sales Representative for restrictions on use and dose limits.
Company	:	Nalco Company 1601 W. Diehl Road Naperville, Illinois 60563-1198 USA TEL: (630) 305-1000
Emergency telephone number	:	(800) 424-9300 (24 Hours) CHEMTREC
Issuing date	:	10/23/2019

Section: 2. HAZARDS IDENTIFICATION

GHS Classification

Not a hazardous substance or mixture.

GHS Label element

Precautionary Statements : **Prevention:**
Wash hands thoroughly after handling.
Response:
Get medical advice/ attention if you feel unwell.
Storage:
Store in accordance with local regulations.

Other hazards : None known.

Section: 3. COMPOSITION/INFORMATION ON INGREDIENTS

Chemical Name	CAS-No.	Concentration: (%)
Hydrotreated Light Distillate (petroleum)	64742-47-8	1 - 5

Section: 4. FIRST AID MEASURES

In case of eye contact	:	Rinse with plenty of water. Get medical attention if symptoms occur.
In case of skin contact	:	Wash off with soap and plenty of water. Get medical attention if symptoms occur.
If swallowed	:	Rinse mouth. Get medical attention if symptoms occur.
If inhaled	:	Get medical attention if symptoms occur.

Protection of first-aiders	:	In event of emergency assess the danger before taking action. Do not put yourself at risk of injury. If in doubt, contact emergency responders. Use personal protective equipment as required.
Notes to physician	:	Treat symptomatically.
Most important symptoms and effects, both acute and delayed	:	See Section 11 for more detailed information on health effects and symptoms.

Section: 5. FIREFIGHTING MEASURES

Suitable extinguishing media	:	Use extinguishing measures that are appropriate to local circumstances and the surrounding environment.
Unsuitable extinguishing media	:	None known.
Specific hazards during firefighting	:	Not flammable or combustible.
Hazardous combustion products	:	Decomposition products may include the following materials: Carbon oxides nitrogen oxides (NOx)
Special protective equipment for firefighters	:	Use personal protective equipment.
Specific extinguishing methods	:	Collect contaminated fire extinguishing water separately. This must not be discharged into drains. Fire residues and contaminated fire extinguishing water must be disposed of in accordance with local regulations. In the event of fire and/or explosion do not breathe fumes.

Section: 6. ACCIDENTAL RELEASE MEASURES

Personal precautions, protective equipment and emergency procedures	:	Ensure clean-up is conducted by trained personnel only. Refer to protective measures listed in sections 7 and 8.
Environmental precautions	:	Do not allow contact with soil, surface or ground water.
Methods and materials for containment and cleaning up	:	Stop leak if safe to do so. Contain spillage, and then collect with non-combustible absorbent material, (e.g. sand, earth, diatomaceous earth, vermiculite) and place in container for disposal according to local / national regulations (see section 13). For large spills, dike spilled material or otherwise contain material to ensure runoff does not reach a waterway. Flush away traces with water.

Section: 7. HANDLING AND STORAGE

Advice on safe handling	:	Wash hands thoroughly after handling.
Conditions for safe storage	:	Keep out of reach of children. Keep container tightly closed. Store in suitable labelled containers. Protect product from freezing.

Suitable material : Keep in properly labelled containers.

Unsuitable material : not determined

Section: 8. EXPOSURE CONTROLS/PERSONAL PROTECTION

Components with workplace control parameters

Components	CAS-No.	Form of exposure	Permissible concentration	Basis
Hydrotreated Light Distillate (petroleum)	64742-47-8	TWA	500 ppm 2,000 mg/m3	OSHA Z1
		TWA	200 mg/m3 (as total hydrocarbon vapor)	ACGIH
		TWA (Mist)	5 mg/m3	OSHA Z1
		TWA (Mist)	5 mg/m3	NIOSH REL
		STEL (Mist)	10 mg/m3	NIOSH REL
Sulfuric Acid	7664-93-9	TWA (Thoracic fraction)	0.2 mg/m3	ACGIH
		TWA	1 mg/m3	NIOSH REL
		TWA	1 mg/m3	OSHA Z1

Engineering measures : Good general ventilation should be sufficient to control worker exposure to airborne contaminants.

Personal protective equipment

Eye protection : Safety glasses

Hand protection : Wear protective gloves.
Gloves should be discarded and replaced if there is any indication of degradation or chemical breakthrough.

Skin protection : Wear suitable protective clothing.

Respiratory protection : No personal respiratory protective equipment normally required.

Hygiene measures : Handle in accordance with good industrial hygiene and safety practice. Remove and wash contaminated clothing before re-use. Wash face, hands and any exposed skin thoroughly after handling.

Section: 9. PHYSICAL AND CHEMICAL PROPERTIES

Appearance : Liquid

Colour : off-white

Odour : hydrocarbon-like

Flash point : 93.3 °C, Method: ASTM D 93, Pensky-Martens closed cup, minimum

pH : 3.6 - 5.0,(100 %), Method: ASTM E 70

Odour Threshold : no data available

Melting point/freezing point	:	no data available
Initial boiling point and boiling range	:	no data available
Evaporation rate	:	no data available
Flammability (solid, gas)	:	Not applicable.
Upper explosion limit	:	no data available
Lower explosion limit	:	no data available
Vapour pressure	:	no data available
Relative vapour density	:	no data available
Relative density	:	1.04, (25 °C),
Density	:	1.04 g/cm3 , 8.4 - 8.7 lb/gal
Water solubility	:	completely soluble
Solubility in other solvents	:	no data available
Partition coefficient: n-octanol/water	:	no data available
Auto-ignition temperature	:	no data available
Thermal decomposition	:	no data available
Viscosity, dynamic	:	no data available
Viscosity, kinematic	:	no data available
Molecular weight	:	no data available
VOC	:	0 %, 0 g/l, EPA Method 24

Section: 10. STABILITY AND REACTIVITY

Reactivity	:	No dangerous reaction known under conditions of normal use.
Chemical stability	:	Stable under normal conditions.
Possibility of hazardous reactions	:	No dangerous reaction known under conditions of normal use.
Conditions to avoid	:	Freezing temperatures.
Incompatible materials	:	None known.
Hazardous decomposition products	:	In case of fire, hazardous decomposition products may be produced such as: Carbon oxides nitrogen oxides (NOx)

Section: 11. TOXICOLOGICAL INFORMATION

Information on likely routes of exposure	:	Inhalation, Eye contact, Skin contact

Potential Health Effects

Eyes	:	Health injuries are not known or expected under normal use.
Skin	:	Health injuries are not known or expected under normal use.
Ingestion	:	Health injuries are not known or expected under normal use.
Inhalation	:	Health injuries are not known or expected under normal use.
Chronic Exposure	:	Health injuries are not known or expected under normal use.

Experience with human exposure

Eye contact	:	No symptoms known or expected.
Skin contact	:	No symptoms known or expected.
Ingestion	:	No symptoms known or expected.
Inhalation	:	No symptoms known or expected.

Toxicity

Product

Acute oral toxicity	:	Acute toxicity estimate: > 5,000 mg/kg
Acute inhalation toxicity	:	no data available
Acute dermal toxicity	:	no data available
Skin corrosion/irritation	:	no data available
Serious eye damage/eye irritation	:	no data available
Respiratory or skin sensitization	:	no data available
Carcinogenicity	:	no data available
Reproductive effects	:	no data available
Germ cell mutagenicity	:	no data available
Teratogenicity	:	no data available
STOT - single exposure	:	no data available
STOT - repeated exposure	:	no data available
Aspiration toxicity	:	no data available

Section: 12. ECOLOGICAL INFORMATION

Ecotoxicity

Environmental Effects	:	Harmful to aquatic life.

Product

Toxicity to fish	:	LC50 Pimephales promelas (fathead minnow): 1,768 mg/l Exposure time: 96 hrs Test substance: Product NOEC Pimephales promelas (fathead minnow): 1,250 mg/l Exposure time: 96 hrs Test substance: Product LC50 Inland Silverside: 52.5 mg/l Exposure time: 96 hrs Test substance: Similar (more concentrated) Product NOEC Inland Silverside: 6.25 mg/l Exposure time: 96 hrs Test substance: Similar (more concentrated) Product LC50 Rainbow Trout: 8,800 mg/l Exposure time: 96 hrs Test substance: Similar Product NOEC Rainbow Trout: 3,600 mg/l Exposure time: 96 hrs Test substance: Similar Product
Toxicity to daphnia and other aquatic invertebrates	:	EC50 Ceriodaphnia dubia: 16.3 mg/l Exposure time: 48 hrs Test substance: Product LC50 Ceriodaphnia dubia: 28.2 mg/l Exposure time: 48 hrs Test substance: Product NOEC Ceriodaphnia dubia: 9.4 mg/l Exposure time: 48 hrs Test substance: Product LC50 Daphnia magna: 410 mg/l Exposure time: 48 hrs Test substance: Similar Product EC50 Daphnia magna: 190 mg/l Exposure time: 48 hrs Test substance: Similar Product NOEC Daphnia magna: 80 mg/l Exposure time: 48 hrs Test substance: Similar Product

Components

Toxicity to algae	:	Hydrotreated Light Distillate (petroleum) EC50 : > 1,000 mg/l Exposure time: 72 h

Components

Toxicity to bacteria : Hydrotreated Light Distillate (petroleum)
> 1,000 mg/l
Exposure time: 48 h

Persistence and degradability

Total Organic Carbon (TOC) : 57,660 mg/l

Chemical Oxygen Demand (COD): 76,980 mg/l

Biochemical Oxygen Demand (BOD):

Incubation Period	Value	Test Descriptor
	6,100 mg/l	Product

Mobility

The environmental fate was estimated using a level III fugacity model embedded in the EPI (estimation program interface) Suite TM, provided by the US EPA. The model assumes a steady state condition between the total input and output. The level III model does not require equilibrium between the defined media. The information provided is intended to give the user a general estimate of the environmental fate of this product under the defined conditions of the models.
If released into the environment this material is expected to distribute to the air, water and soil/sediment in the approximate respective percentages;

Air : <5%
Water : 30 - 50%
Soil : 50 - 70%

Bioaccumulative potential

no data available

Other information

no data available

Section: 13. DISPOSAL CONSIDERATIONS

If this product becomes a waste, it is not a hazardous waste as defined by the Resource Conservation and Recovery Act (RCRA) 40 CFR 261, since it does not have the characteristics of Subpart C, nor is it listed under Subpart D.

Disposal methods : The product should not be allowed to enter drains, water courses or the soil. Where possible recycling is preferred to disposal or incineration. If recycling is not practicable, dispose of in compliance with local regulations. Dispose of wastes in an approved waste disposal facility.

Disposal considerations : Dispose of as unused product. Empty containers should be taken to an approved waste handling site for recycling or disposal. Do not re-use empty containers.

Section: 14. TRANSPORT INFORMATION

The shipper/consignor/sender is responsible to ensure that the packaging, labeling, and markings are in compliance with the selected mode of transport.

Land transport (DOT)

Proper shipping name : PRODUCT IS NOT REGULATED DURING TRANSPORTATION

Air transport (IATA)

Proper shipping name : PRODUCT IS NOT REGULATED DURING TRANSPORTATION

Sea transport (IMDG/IMO)

Proper shipping name : PRODUCT IS NOT REGULATED DURING TRANSPORTATION

Section: 15. REGULATORY INFORMATION

TSCA list : No substances are subject to a Significant New Use Rule.

No substances are subject to TSCA 12(b) export notification requirements.

EPCRA - Emergency Planning and Community Right-to-Know Act

CERCLA Reportable Quantity

This product does not contain a RQ substance, or this product contains a substance with a RQ, however the calculated RQ exceeds the reasonably attainable upper limit.

SARA 304 Extremely Hazardous Substances Reportable Quantity

This material does not contain any components with a section 304 EHS RQ.

SARA 311/312 Hazards : No SARA Hazards

SARA 302 : This material does not contain any components with a section 302 EHS TPQ.

SARA 313 : This material does not contain any chemical components with known CAS numbers that exceed the threshold (De Minimis) reporting levels established by SARA Title III, Section 313.

California Prop. 65

⚠ **WARNING:** Cancer - www.P65Warnings.ca.gov

Sulfuric Acid	7664-93-9

INTERNATIONAL CHEMICAL CONTROL LAWS :

United States TSCA Inventory

On or in compliance with the active portion of the TSCA inventory

Australia. Industrial Chemical (Notification and Assessment) Act

All substances in this product comply with the National Industrial Chemicals Notification & Assessment Scheme (NICNAS).

Canadian Domestic Substances List (DSL)

The substance(s) in this preparation are included in or exempted from the Domestic Substance List (DSL).

Japan. ENCS - Existing and New Chemical Substances Inventory
All substances in this product comply with the Law Regulating the Manufacture and Importation Of Chemical Substances and are listed on the Existing and New Chemical Substances list (ENCS).

Korea. Korean Existing Chemicals Inventory (KECI)
All substances in this product comply with the Chemical Control Act (CCA) and are listed on the Existing Chemicals List (ECL)

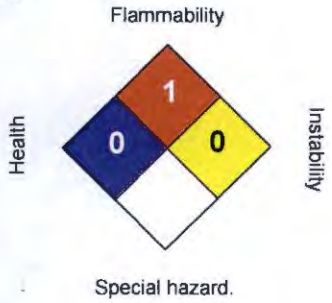
Philippines Inventory of Chemicals and Chemical Substances (PICCS)
All substances in this product comply with the Republic Act 6969 (RA 6969) and are listed on the Philippines Inventory of Chemicals & Chemical Substances (PICCS).

China Inventory of Existing Chemical Substances
All substances in this product comply with the Provisions on the Environmental Administration of New Chemical Substances and are listed on or exempt from the Inventory of Existing Chemical Substances China (IECSC).

Taiwan Chemical Substance Inventory
not determined

Section: 16. OTHER INFORMATION

NFPA:



HMIS III:

HEALTH	0
FLAMMABILITY	1
PHYSICAL HAZARD	0

0 = not significant, 1 = Slight,
2 = Moderate, 3 = High
4 = Extreme, * = Chronic

Revision Date	:	10/23/2019
Version Number	:	1.5
Prepared By	:	Regulatory Affairs

REVISED INFORMATION: Significant changes to regulatory or health information for this revision is indicated by a bar in the left-hand margin of the SDS.

The information provided in this Safety Data Sheet is correct to the best of our knowledge, information and belief at the date of its publication. The information given is designed only as a guidance for safe handling, use, processing, storage, transportation, disposal and release and is not to be considered a warranty or quality specification. The information relates only to the specific material designated and may not be valid for such material used in combination with any other materials or in any process, unless specified in the text.
For additional copies of an SDS visit www.nalco.com and request access.

CAT-FLOC™ 9851 PLUS

Closed Circuit Cationic Liquid Polymer

NALCO
An Ecolab Company

Product Bulletin

PRODUCT DESCRIPTION AND APPLICATION

CAT-FLOC 9851 PLUS is a medium molecular weight, liquid cationic polymer. It is used as a primary coagulant or coagulant aid in clarification and filtration applications. It is highly effective as a replacement for, or can be used in conjunction with, inorganic coagulants such as ferric salts or alum. **CAT-FLOC 9851 PLUS** is chlorine resistant and effective over a broad pH range.

Features	Benefits
Liquid form helps eliminate waste and housekeeping problems	Easy to feed; requires no makeup equipment; does not require respiratory protection
Unique high charge, moderate molecular weight cationic polymer	Effective in a wide range of clarification and filtration applications across a wide pH range
May reduce or replace inorganic coagulants	Improves recycle water quality, increases sludge density and improves sludge dewatering capability
	Reduces solids carryover

PHYSICAL & CHEMICAL PROPERTIES

These properties are typical. Refer to the Safety Data Sheet (SDS) for the most current data.

Physical State:	Viscous liquid
Appearance:	Clear yellow
Odor:	None
Specific Gravity @ 77°F (25°C):	1.018 - 1.058
Density:	8.5 - 8.0 lb/gal
Solubility in Water:	Complete
pH (Neat) @ 77°F (25°C):	5.0 - 8.0
Freeze Point:	32°F (0°C)
Freeze-Thaw Recovery:	May stratify upon freezing. Agitate to make uniform.
Viscosity @ 77°F (25°C):	< 1,050 cps
Flash Point (PMCC):	>200°F [>93°C]
Vapor Density:	Same as water
VOC Content:	0.00 % EPA Method 24

ACTIVE CONSTITUENTS

REGULATORY APPROVALS

Refer to the product Regulatory Certifications (RCR) document

MATERIALS OF COMPATIBILITY

CAT-FLOC 9851 PLUS polymer is moderately corrosive to iron and copper, including their alloys. Storage tanks, chemical feed systems, and piping should be constructed of high density (HDPE) or crosslinked (XLPE) polyethylene, fiberglass (FRP) with polyester or vinylester resins, epoxy- or vinylester-lined steel.

Material	Compatible	Not Compatible
Carbon Steel		x
304 Stainless Steel		x
316 Stainless steel		x
Polyethylene - crosslinked		x
Polyethylene - low density		x
Polyethylene - high density	x	
Polypropylene	x	
PVC	x	
CPVC	x	
Kynar	x	
Neoprene		x
Buna-N Rubber		x
Silicone 65		x
FRP (bisphenol)	x	
FRP (isophthalic)	x	
Plasite 7122 (epoxy)	x	
Plasite 4100 (vinyl ester)		x

DOSAGE AND FEEDING

Product feed rate will be site and application specific, and may vary as conditions change. Product demand may be determined by a laboratory cylinder testing, filtration testing, or free drainage testing.

ENVIRONMENTAL AND TOXICITY DATA

Refer to the SDS for all mammalian and aquatic toxicological information. LC50 determinations without added suspended solids overestimate the true toxicity of cationic polymers. Suspended solids and other dissolved organic materials like humic acid are present in natural waters and reduce the effective concentration of the polymer and thereby its toxicity.

SAFETY AND HANDLING

As part of good industrial and personal hygiene and safety procedure, avoid all unnecessary exposure to the product and ensure prompt removal from eyes, skin and clothing. Wash thoroughly after handling. Keep container closed when not in use. Read the SDS for specific personal protective equipment (PPE) recommendations and for health effects information.

STORAGE

Product must be maintained at 38°F (3°C) or higher. Protect from low temperatures. **Do not store in stainless steel bulk tanks.**

REMARKS

If you need assistance or more information on this product, please call your nearest Nalco representative.

For more news about Nalco, an Ecolab company, visit our website www.nalco.ecolab.com

For **Medical and Transportation Emergencies** involving Nalco products, please see the Safety Data Sheet for the phone number.

ADDITIONAL INFORMATION

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SAFETY DATA SHEET

CAT-FLOC® 9851 PLUS

Section: 1. PRODUCT AND COMPANY IDENTIFICATION

Product name	:	CAT-FLOC® 9851 PLUS
Other means of identification	:	Not applicable.
Recommended use	:	COAGULANT
Restrictions on use	:	Refer to available product literature or ask your local Sales Representative for restrictions on use and dose limits.
Company	:	Nalco Company 1601 W. Diehl Road Naperville, Illinois 60563-1198 USA TEL: (630)305-1000
Emergency telephone number	:	(800) 424-9300 (24 Hours) CHEMTREC
Issuing date	:	05/14/2014

Section: 2. HAZARDS IDENTIFICATION

GHS Classification

Not a hazardous substance or mixture.

GHS Label element

Precautionary Statements : **Prevention:**
Wash hands thoroughly after handling.
Response:
Specific measures: consult MSDS Section 4.
Storage:
Store in accordance with local regulations.

Other hazards : None known.

Section: 3. COMPOSITION/INFORMATION ON INGREDIENTS

No hazardous ingredients

Section: 4. FIRST AID MEASURES

In case of eye contact	:	Rinse with plenty of water. Get medical attention if symptoms occur.
In case of skin contact	:	Wash off with soap and plenty of water. Get medical attention if symptoms occur.
If swallowed	:	Rinse mouth. Get medical attention if symptoms occur.
If inhaled	:	Get medical attention if symptoms occur.
Protection of first-aiders	:	In event of emergency assess the danger before taking action. Do not put yourself at risk of injury. If in doubt, contact emergency responders.Use personal protective equipment as required.

Notes to physician	:	No specific measures identified.

See toxicological information (Section 11)

Section: 5. FIREFIGHTING MEASURES

Suitable extinguishing media	:	Use extinguishing measures that are appropriate to local circumstances and the surrounding environment.
Unsuitable extinguishing media	:	None known.
Specific hazards during firefighting	:	Not flammable or combustible.
Hazardous combustion products	:	Carbon oxides
Special protective equipment for firefighters	:	Use personal protective equipment.
Specific extinguishing methods	:	Fire residues and contaminated fire extinguishing water must be disposed of in accordance with local regulations.

Section: 6. ACCIDENTAL RELEASE MEASURES

Personal precautions, protective equipment and emergency procedures	:	Refer to protective measures listed in sections 7 and 8.
Environmental precautions	:	No special environmental precautions required.
Methods and materials for containment and cleaning up	:	Stop leak if safe to do so. Contain spillage, and then collect with non-combustible absorbent material, (e.g. sand, earth, diatomaceous earth, vermiculite) and place in container for disposal according to local / national regulations (see section 13). Flush away traces with water. For large spills, dike spilled material or otherwise contain material to ensure runoff does not reach a waterway.

Section: 7. HANDLING AND STORAGE

Advice on safe handling	:	For personal protection see section 8. Wash hands after handling.
Conditions for safe storage	:	Keep out of reach of children. Keep container tightly closed. Store in suitable labeled containers.
Packaging material	:	Suitable material: Keep in properly labelled containers. Unsuitable material: not determined

Section: 8. EXPOSURE CONTROLS/PERSONAL PROTECTION

Components with workplace control parameters

Contains no substances with occupational exposure limit values.

Engineering measures	:	Good general ventilation should be sufficient to control worker exposure to airborne contaminants.

Personal protective equipment

Eye protection	:	Safety glasses
Hand protection	:	Wear protective gloves. Gloves should be discarded and replaced if there is any indication of degradation or chemical breakthrough.
Skin protection	:	Wear suitable protective clothing.
Respiratory protection	:	No personal respiratory protective equipment normally required.
Hygiene measures	:	Wash hands before breaks and immediately after handling the product.

Section: 9. PHYSICAL AND CHEMICAL PROPERTIES

Appearance	:	Viscous liquid
Colour	:	Clear Yellow
Odour	:	None
Flash point	:	> 93.3 °C
pH	:	5.0 - 8.0, 100 % (25 °C)
Odour Threshold	:	no data available
Melting point/freezing point	:	no data available
Initial boiling point and boiling range	:	> 100 °C
Evaporation rate	:	no data available
Flammability (solid, gas)	:	no data available
Upper explosion limit	:	no data available
Lower explosion limit	:	no data available
Vapour pressure	:	similar to water
Relative vapour density	:	Same as water
Relative density	:	1.018 - 1.058 (25 °C)
Density	:	no data available
Water solubility	:	completely soluble
Solubility in other solvents	:	no data available
Partition coefficient: n-octanol/water	:	no data available
Auto-ignition temperature	:	no data available
Thermal decomposition	:	Carbon oxides
Viscosity, dynamic	:	< 1,050 mPa.s (25 °C)

Viscosity, kinematic	:	no data available
VOC	:	0 %

Section: 10. STABILITY AND REACTIVITY

Chemical stability	:	Stable under normal conditions.
Possibility of hazardous reactions	:	No dangerous reaction known under conditions of normal use.
Conditions to avoid	:	Freezing temperatures.
Incompatible materials	:	Contact with strong oxidizers (e.g. chlorine, peroxides, chromates, nitric acid, perchlorate, concentrated oxygen, permanganate) may generate heat, fires, explosions and/or toxic vapors.
Hazardous decomposition products	:	Oxides of carbon Oxides of nitrogen May evolve ammonia under fire conditions. HCl

Section: 11. TOXICOLOGICAL INFORMATION

Information on likely routes of exposure	:	Inhalation, Eye contact, Skin contact

Potential Health Effects

Eyes	:	Health injuries are not known or expected under normal use.
Skin	:	Health injuries are not known or expected under normal use.
Ingestion	:	Health injuries are not known or expected under normal use.
Inhalation	:	Health injuries are not known or expected under normal use.
Chronic Exposure	:	Health injuries are not known or expected under normal use.

Experience with human exposure

Eye contact	:	No symptoms known or expected.
Skin contact	:	No symptoms known or expected.
Ingestion	:	No symptoms known or expected.
Inhalation	:	No symptoms known or expected.

Toxicity

Product

Acute oral toxicity	:	LD50 rat: 8,710 mg/kg Test substance 40% Active Ingredient
Acute inhalation toxicity	:	no data available
Acute dermal toxicity	:	LD50 rabbit: > 20,000 mg/kg

Test substance: 40% Active Ingredient

Skin corrosion/irritation : Species: Rabbit
Result: 0.8
Method: Draize Test
Test substance:40% Active Ingredient

Serious eye damage/eye irritation : Species: rabbit
Result: 8.0
Method: Draize Test
Test substance: Similar Product

Species: rabbit
Result: 4.0
Method: Draize Test
Test substance: 40% Active Ingredient

Respiratory or skin sensitization : no data available

Carcinogenicity : no data available

Reproductive effects : no data available

Germ cell mutagenicity : no data available

Teratogenicity : no data available

STOT - single exposure : no data available

STOT - repeated exposure : no data available

Aspiration toxicity : no data available

Section: 12. ECOLOGICAL INFORMATION

Ecotoxicity

Environmental Effects : Toxic to aquatic life.

Product

Toxicity to fish : LC50 Rainbow Trout: 0.85 mg/l
Exposure time: 96 hrs
Test substance: Product tested in clean water

LC50 Zebra Danio: 10 - 100 mg/l
Exposure time: 96 hrs
Test substance: Representative polymer tested in water with DOC

Toxicity to daphnia and other aquatic invertebrates : LC50 Daphnia magna: 2.06 mg/l
Exposure time: 48 hrs
Test substance: Product tested in clean water

LC50 Daphnia magna: 10 - 100 mg/l

Exposure time: 48 hrs
Test substance: Representative polymer tested in water with DOC

Toxicity to algae : no data available

Persistence and degradability

no data available

Mobility

The product is eliminated from aqueous phase via abiotic process (adsorption on suspended material) to a large extent (>95 %).

Air :
Water :
Soil :

Bioaccumulative potential

No bioaccumulation will occur. The large size of the polymer is incompatible with transport across the cellular membranes.

Other information

The hazard characterization is based on the tests or potential hazard in the clean water.

Section: 13. DISPOSAL CONSIDERATIONS

If this product becomes a waste, it is not a hazardous waste as defined by the Resource Conservation and Recovery Act (RCRA) 40 CFR 261, since it does not have the characteristics of Subpart C, nor is it listed under Subpart D.

Disposal methods : The product should not be allowed to enter drains, water courses or the soil. Where possible recycling is preferred to disposal or incineration. If recycling is not practicable, dispose of in compliance with local regulations. Dispose of wastes in an approved waste disposal facility.

Disposal considerations : Dispose of as unused product. Empty containers should be taken to an approved waste handling site for recycling or disposal. Do not re-use empty containers.

Section: 14. TRANSPORT INFORMATION

The shipper/consignor/sender is responsible to ensure that the packaging, labeling, and markings are in compliance with the selected mode of transport.

Land transport (DOT)

Proper shipping name : PRODUCT IS NOT REGULATED DURING TRANSPORTATION

Air transport (IATA)

Proper shipping name : PRODUCT IS NOT REGULATED DURING

TRANSPORTATION

Sea Transport (IMDG/IMO)

Proper shipping name : PRODUCT IS NOT REGULATED DURING TRANSPORTATION

Section: 15. REGULATORY INFORMATION

EPCRA - Emergency Planning and Community Right-to-Know Act

CERCLA Reportable Quantity

This material does not contain any components with a CERCLA RQ.

SARA 304 Extremely Hazardous Substances Reportable Quantity

This material does not contain any components with a section 304 EHS RQ.

SARA 311/312 Hazards : No SARA Hazards

SARA 302 : SARA 302: No chemicals in this material are subject to the reporting requirements of SARA Title III, Section 302.

SARA 313 : SARA 313: This material does not contain any chemical components with known CAS numbers that exceed the threshold (De Minimis) reporting levels established by SARA Title III, Section 313.

California Prop 65

This product does not contain any chemicals known to State of California to cause cancer, birth defects, or any other reproductive harm.

INTERNATIONAL CHEMICAL CONTROL LAWS :

TOXIC SUBSTANCES CONTROL ACT (TSCA)

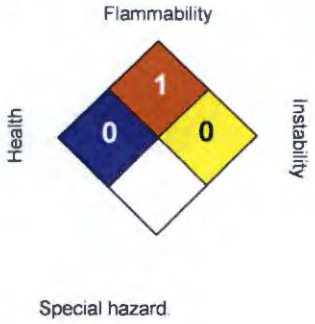
The substances in this preparation are included on or exempted from the TSCA 8(b) Inventory (40 CFR 710)

CANADIAN ENVIRONMENTAL PROTECTION ACT (CEPA)

The substance(s) in this preparation are included in or exempted from the Domestic Substance List (DSL).

Section: 16. OTHER INFORMATION

NFPA:



HMIS III:

HEALTH	0
FLAMMABILITY	1
PHYSICAL HAZARD	0

0 = not significant, 1 =Slight,
2 = Moderate, 3 = High
4 = Extreme, * = Chronic

CAT-FLOC® 9851 PLUS

Revision Date	: 05/14/2014
Version Number	: 1.0
Prepared By	: Regulatory Affairs

REVISED INFORMATION: Significant changes to regulatory or health information for this revision is indicated by a bar in the left-hand margin of the SDS.

The information provided in this Safety Data Sheet is correct to the best of our knowledge, information and belief at the date of its publication. The information given is designed only as a guidance for safe handling, use, processing, storage, transportation, disposal and release and is not to be considered a warranty or quality specification. The information relates only to the specific material designated and may not be valid for such material used in combination with any other materials or in any process, unless specified in the text.

For additional copies of an MSDS visit www.nalco.com and request access.

CAT-FLOC™ 9853 PLUS

Closed Circuit Cationic Liquid Polymer

NALCO
An Ecolab Company

Product Bulletin

PRODUCT DESCRIPTION AND APPLICATION

CAT-FLOC 9853 PLUS is a medium molecular weight, liquid cationic polymer. It is used as a primary coagulant or coagulant aid in clarification and filtration applications. It is highly effective as a replacement for, or can be used in conjunction with, inorganic coagulants such as ferric salts or alum. **CAT-FLOC 9853 PLUS** is chlorine resistant and effective over a broad pH range.

Features:	**Benefits:**
-Liquid form helps eliminate waste and housekeeping problems	-Easy to feed; requires no makeup equipment; does not require respiratory protection
-Unique high charge, moderate molecular weight cationic polymer	-Effective in a wide range of clarification and filtration applications across a wide pH range
-May reduce or replace inorganic coagulants	-Improves recycle water quality, increases sludge density and improves sludge dewatering capability
	-Reduces solids carryover

PHYSICAL & CHEMICAL PROPERTIES

These properties are typical. Refer to the Safety Data Sheet (SDS) for the most current data.

Physical State:	Viscous liquid
Appearance:	Clear yellow
Odor:	None
Specific Gravity @ 77°F (25°C):	1.01 - 1.05
Density:	8.4 - 8.74 lb/gal
Solubility in Water:	Complete
pH (Neat) @ 77°F (25°C):	5.0 - 8.0
Freeze Point:	32°F (0°C)
Freeze-Thaw Recovery:	May stratify upon freezing. Agitate to make uniform.
Viscosity @ 77°F (25°C):	< 1,050 cps
Flash Point (PMCC):	>200°F [>93°C]
Vapor Density:	Same as water
VOC Content:	0.00 % EPA Method 24

ACTIVE CONSTITUENTS

REGULATORY APPROVALS

Refer to Regulatory Certifications (RCR) document for current regulatory approvals.

MATERIALS OF COMPATIBILITY

CAT-FLOC 9853 PLUS polymer is moderately corrosive to iron and copper, including their alloys. Storage tanks, chemical feed systems, and piping should be constructed of high density (HDPE) or crosslinked (XLPE) polyethylene, fiberglass (FRP) with polyester or vinylester resins, epoxy- or vinylester-lined steel.

Material	Compatible	Not Compatible
Carbon Steel		x
304 Stainless Steel		x
316 Stainless steel		x
Polyethylene - crosslinked		x
Polyethylene - low density		x
Polyethylene - high density	x	
Polypropylene	x	
PVC	x	
CPVC	x	
Kynar	x	
Neoprene		x
Buna-N Rubber		x
Silicone 65		x
FRP (bisphenol)	x	
FRP (isophthalic)	x	
Plasite 7122 (epoxy)	x	
Plasite 4100 (vinyl ester)		x

DOSAGE AND FEEDING

Product feed rate will be site and application specific, and may vary as conditions change. Product demand may be determined by a laboratory cylinder testing, filtration testing, or free drainage testing.

ENVIRONMENTAL AND TOXICITY DATA

Refer to the SDS for all mammalian and aquatic toxicological information. LC50 determinations without added suspended solids overestimate the true toxicity of cationic polymers. Suspended solids and other dissolved organic materials like humic acid are present in natural waters and reduce the effective concentration of the polymer and thereby its toxicity.

SAFETY AND HANDLING

As part of good industrial and personal hygiene and safety procedure, avoid all unnecessary exposure to the product and ensure prompt removal from eyes, skin and clothing. Wash thoroughly after handling. Keep container closed when not in use. Read the SDS for specific personal protective equipment (PPE) recommendations and for health effects information.

STORAGE

Product must be maintained at 38°F (3°C) or higher. Protect from low temperatures.
Do not store in stainless steel bulk tanks.

REMARKS

If you need assistance or more information on this product, please call your nearest Nalco representative.

For more news about Nalco, an Ecolab company, visit our website www.nalco.ecolab.com

For **Medical and Transportation Emergencies** involving Nalco products, please see the Safety Data Sheet for the phone number.

ADDITIONAL INFORMATION

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SAFETY DATA SHEET

CAT-FLOC® 9853 PLUS

SECTION 1. PRODUCT AND COMPANY IDENTIFICATION

Product name	:	CAT-FLOC® 9853 PLUS
Other means of identification	:	Not applicable.
Recommended use	:	COAGULANT
Restrictions on use	:	Refer to available product literature or ask your local Sales Representative for restrictions on use and dose limits.
Company	:	Nalco Company 1601 W. Diehl Road Naperville, Illinois 60563-1198 USA TEL: (630)305-1000
Emergency telephone number	:	(800) 424-9300 (24 Hours) CHEMTREC
Issuing date	:	07/18/2014

SECTION 2. HAZARDS IDENTIFICATION

GHS Classification

Not a hazardous substance or mixture.

GHS Label element

Precautionary Statements : **Prevention:**
Wash hands thoroughly after handling.
Response:
Specific measures: consult MSDS Section 4.
Storage:
Store in accordance with local regulations. Protect product from freezing.

Other hazards : None known.

SECTION 3. COMPOSITION/INFORMATION ON INGREDIENTS

No hazardous ingredients

SECTION 4. FIRST AID MEASURES

In case of eye contact	:	Rinse with plenty of water. Get medical attention if symptoms occur.
In case of skin contact	:	Wash off with soap and plenty of water. Get medical attention if symptoms occur.
If swallowed	:	Rinse mouth. Get medical attention if symptoms occur.
If inhaled	:	Get medical attention if symptoms occur.
Protection of first-aiders	:	In event of emergency assess the danger before taking action. Do not put yourself at risk of injury. If in doubt, contact emergency

responders.Use personal protective equipment as required.

Notes to physician : Treat symptomatically.

See toxicological information (Section 11)

SECTION 5. FIREFIGHTING MEASURES

Suitable extinguishing media	: Use extinguishing measures that are appropriate to local circumstances and the surrounding environment.
Unsuitable extinguishing media	: None known.
Specific hazards during firefighting	: Not flammable or combustible.
Hazardous combustion products	: Carbon oxides
Special protective equipment for firefighters	: Use personal protective equipment.
Specific extinguishing methods	: Fire residues and contaminated fire extinguishing water must be disposed of in accordance with local regulations.

SECTION 6. ACCIDENTAL RELEASE MEASURES

Personal precautions, protective equipment and emergency procedures	: Refer to protective measures listed in sections 7 and 8.
Environmental precautions	: No special environmental precautions required.
Methods and materials for containment and cleaning up	: Stop leak if safe to do so. Contain spillage, and then collect with non-combustible absorbent material, (e.g. sand, earth, diatomaceous earth, vermiculite) and place in container for disposal according to local / national regulations (see section 13). Flush away traces with water. For large spills, dike spilled material or otherwise contain material to ensure runoff does not reach a waterway.

SECTION 7. HANDLING AND STORAGE

Advice on safe handling	: For personal protection see section 8. Wash hands after handling.
Conditions for safe storage	: Keep out of reach of children. Keep container tightly closed. Store in suitable labeled containers.
Suitable material	: Keep in properly labelled containers.
Unsuitable material	: not determined

SECTION 8. EXPOSURE CONTROLS/PERSONAL PROTECTION

Components with workplace control parameters

Contains no substances with occupational exposure limit values.

Engineering measures	:	Good general ventilation should be sufficient to control worker exposure to airborne contaminants.

Personal protective equipment

Eye protection	:	Safety glasses
Hand protection	:	Wear protective gloves. Gloves should be discarded and replaced if there is any indication of degradation or chemical breakthrough.
Skin protection	:	Wear suitable protective clothing.
Respiratory protection	:	No personal respiratory protective equipment normally required.
Hygiene measures	:	Wash hands before breaks and immediately after handling the product.

SECTION 9. PHYSICAL AND CHEMICAL PROPERTIES

Appearance	:	Viscous liquid
Colour	:	Clear Yellow
Odour	:	None
Flash point	:	> 93.3 °C
pH	:	7.0 - 8.0, 100 % (25 °C)
Odour Threshold	:	no data available
Melting point/freezing point	:	no data available
Initial boiling point and boiling range	:	no data available
Evaporation rate	:	no data available
Flammability (solid, gas)	:	no data available
Upper explosion limit	:	no data available
Lower explosion limit	:	no data available
Vapour pressure	:	no data available
Relative vapour density	:	Same as water
Relative density	:	1.01 - 1.05 (25 °C)
Density	:	8.41 - 8.75 lb/gal
Water solubility	:	completely soluble
Solubility in other solvents	:	no data available
Partition coefficient: n-octanol/water	:	no data available
Auto-ignition temperature	:	no data available
Thermal decomposition	:	Carbon oxides

Viscosity, dynamic	:	no data available
Viscosity, kinematic	:	no data available
VOC	:	no data available

SECTION 10. STABILITY AND REACTIVITY

Chemical stability	:	Stable under normal conditions.
Possibility of hazardous reactions	:	No dangerous reaction known under conditions of normal use.
Conditions to avoid	:	Freezing temperatures.
Incompatible materials	:	Contact with strong oxidizers (e.g. chlorine, peroxides, chromates, nitric acid, perchlorate, concentrated oxygen, permanganate) may generate heat, fires, explosions and/or toxic vapors.
Hazardous decomposition products	:	Oxides of carbon Oxides of nitrogen May evolve ammonia under fire conditions. HCl

SECTION 11. TOXICOLOGICAL INFORMATION

Information on likely routes of exposure	:	Inhalation, Eye contact, Skin contact

Potential Health Effects

Eyes	:	Health injuries are not known or expected under normal use.
Skin	:	Health injuries are not known or expected under normal use.
Ingestion	:	Health injuries are not known or expected under normal use.
Inhalation	:	Health injuries are not known or expected under normal use.
Chronic Exposure	:	Health injuries are not known or expected under normal use.

Experience with human exposure

Eye contact	:	No symptoms known or expected.
Skin contact	:	No symptoms known or expected.
Ingestion	:	No symptoms known or expected.
Inhalation	:	No symptoms known or expected.

Toxicity

Product

Acute oral toxicity	:	LD50 rat: 14,600 mg/kg Test substance: 20% Active Ingredient
Acute inhalation toxicity	:	no data available

Acute dermal toxicity	:	LD50 rabbit: > 20,000 mg/kg Test substance: 20% Active Ingredient
Skin corrosion/irritation	:	Species: Rabbit Result: 1.0 Method: Draize Test Test substance:Similar Product
Serious eye damage/eye irritation	:	Species: rabbit Result: 8.0 Method: Draize Test Test substance: Similar Product
Respiratory or skin sensitization	:	no data available
Carcinogenicity	:	no data available
Reproductive effects	:	no data available
Germ cell mutagenicity	:	no data available
Teratogenicity	:	no data available
STOT - single exposure	:	no data available
STOT - repeated exposure	:	no data available
Aspiration toxicity	:	no data available

SECTION 12. ECOLOGICAL INFORMATION

Ecotoxicity

Environmental Effects	:	This product has no known ecotoxicological effects.

Product

Toxicity to fish	:	LC50 Rainbow Trout: 1.05 mg/l Exposure time: 96 hrs Test substance: Product
Toxicity to daphnia and other aquatic invertebrates	:	LC50 Daphnia magna: 2.6 mg/l Exposure time: 48 hrs Test substance: Product
Toxicity to algae	:	no data available

Persistence and degradability

no data available

Mobility

no data available

Bioaccumulative potential

no data available

Other information

no data available

SECTION 13. DISPOSAL CONSIDERATIONS

If this product becomes a waste, it is not a hazardous waste as defined by the Resource Conservation and Recovery Act (RCRA) 40 CFR 261, since it does not have the characteristics of Subpart C, nor is it listed under Subpart D.

Disposal methods : Where possible recycling is preferred to disposal or incineration. If recycling is not practicable, dispose of in compliance with local regulations. Dispose of wastes in an approved waste disposal facility.

Disposal considerations : Dispose of as unused product. Empty containers should be taken to an approved waste handling site for recycling or disposal. Do not re-use empty containers.

SECTION 14. TRANSPORT INFORMATION

The shipper/consignor/sender is responsible to ensure that the packaging, labeling, and markings are in compliance with the selected mode of transport.

Land transport (DOT)

Proper shipping name : PRODUCT IS NOT REGULATED DURING TRANSPORTATION

Air transport (IATA)

Proper shipping name : PRODUCT IS NOT REGULATED DURING TRANSPORTATION

Sea Transport (IMDG/IMO)

Proper shipping name : PRODUCT IS NOT REGULATED DURING TRANSPORTATION

SECTION 15. REGULATORY INFORMATION

EPCRA - Emergency Planning and Community Right-to-Know Act

CERCLA Reportable Quantity

This material does not contain any components with a CERCLA RQ.

SARA 304 Extremely Hazardous Substances Reportable Quantity

This material does not contain any components with a section 304 EHS RQ.

SARA 311/312 Hazards : No SARA Hazards

SARA 302 : SARA 302: No chemicals in this material are subject to the reporting requirements of SARA Title III, Section 302.

SARA 313 : SARA 313: This material does not contain any chemical components with known CAS numbers that exceed the threshold (De Minimis) reporting levels established by SARA Title III, Section 313.

California Prop 65
This product does not contain any chemicals known to State of California to cause cancer, birth defects, or any other reproductive harm.

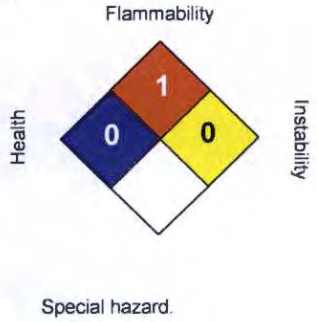
INTERNATIONAL CHEMICAL CONTROL LAWS :

TOXIC SUBSTANCES CONTROL ACT (TSCA)
The substances in this preparation are included on or exempted from the TSCA 8(b) Inventory (40 CFR 710)

CANADIAN ENVIRONMENTAL PROTECTION ACT (CEPA)
The substance(s) in this preparation are included in or exempted from the Domestic Substance List (DSL).

SECTION 16. OTHER INFORMATION

NFPA:



HMIS III:

HEALTH	0
FLAMMABILITY	1
PHYSICAL HAZARD	0

0 = not significant, 1 =Slight,
2 = Moderate, 3 = High
4 = Extreme, * = Chronic

Revision Date	:	07/18/2014
Version Number	:	1.0
Prepared By	:	Regulatory Affairs

REVISED INFORMATION: Significant changes to regulatory or health information for this revision is indicated by a bar in the left-hand margin of the SDS.

The information provided in this Safety Data Sheet is correct to the best of our knowledge, information and belief at the date of its publication. The information given is designed only as a guidance for safe handling, use, processing, storage, transportation, disposal and release and is not to be considered a warranty or quality specification. The information relates only to the specific material designated and may not be valid for such material used in combination with any other materials or in any process, unless specified in the text.

For additional copies of an MSDS visit www.nalco.com and request access.

Updated November 4, 2015

Applied Polymer Systems, Inc.

Safety Data Sheet

1. IDENTIFICATION OF THE PRODUCT AND THE COMPANY

Product Name: APS 708x Floc Log ®

Supplied:

519 Industrial Drive
Woodstock, GA 30189
Tel. 678-494-5998
Fax. 678-494-5298
www.siltstop.com

2. HAZARD IDENTIFICAITON

Placement of these materials on wet walking surface will create extreme slipping hazard.

3. COMPOSITION/INFORMATION ON INGREDIENTS

Identification of the preparation: Anionic water-soluble Co-polymer gel mix

4. FIRST AID MEASURES

Inhalation: None

Skin contact: Contact with wet skin can cause dryness and chapping. Wash with water and soap.

Eye contact: Rinse thoroughly with plenty of water, also under the eyelids, seek medical attention in case of persistent irritation.

Ingestion: Consult a physician

5. FIRE-FIGHTING MEASURES

Suitable extinguishing media: Water, water spray, foam, carbon dioxide, dry powder.

Special fire-fighting precautions: Floc Logs that become wet render surfaces extremely slippery.

Protective equipment for firefighters: No special equipment required.

6. ACCIDENTAL RELEASE MEASURES

Personal precautions: No special precautions required.

Methods for cleaning up: Dry wipe as well as possible, Keep in suitable and closed containers for disposal. After cleaning, flush away traces with water.

7. HANDLING AND STORAGE

Handling: Avoid contact with skin and eyes. Wash hands after handling.

Storage: Keep in a cool, dry place.

8. EXPOSURE CONTROLS / PERSONAL PROTECTION

Engineering controls: Use dry handling areas only.

Personal protection equipment

Respiratory Protection:	None
Hand protection:	Dry cloth, leather or rubber gloves.
Eye Protection:	Safety glasses with side shields. Do not wear contact lenses.
Skin protection:	No special protective clothing required.
Hygiene measures:	Wash hands before breaks and at end of work day.

9. PHYSICAL AND CHEMICAL PROPERTIES

Form:	Granular semi-solid gel
Color:	Blue
Odor:	None
pH:	7.5-8.2
Melting point:	N/A
Flash point:	N/A
Vapor density:	N/A

10. STABILITY AND REACTIVITY

Stability: Product is stable, no hazardous polymerization will occur.

Materials to avoid: Oxidizing agents may cause exothermic reactions.

Hazardous decomposition products: Thermal decomposition may produce nitrogen oxides (NOx), carbon oxides.

11. TOXICOLOGICAL INFORMATION

Acute toxicity

LC 50 / *Daphnia magna* / 48 hr / >840mg/L
LC 50 / *Oncorhynchus mykiss* / 96 hr / 840 ppm

NOEC/ *Daphnia magna* / 48 hr / 840 ppm
NOEC/ *Oncorhynchus mykiss* / 96 hr / 840 ppm

12. ECOLOGICAL INFORMATION

Chronic toxicity

LC 25 (Survival) / *P. promelas* / 7 day / 97 ppm
NOEC (Survival) / *P. promelas* / 7 day / 210 ppm

IC 25 (Reproduction) / *C. dubia* / 7 day / 6.2 ppm
NOEC (Reproduction) / *C. dubia* / 7 day / 105 ppm

LC 25 (Survival) / *P. promelas* / 7 day / 1710 ppm
NOEC (Survival) / *P. promelas* / 7 day / 1680 ppm

IC 25 (Reproduction) / *C. dubia* / 7 day / 2366 ppm
NOEC (Reproduction) / *C. dubia* / 7 day / 3360 ppm

Bioaccumulation: The product is not expected to bioaccumulate.

Persistence / degradability: Not readily biodegradable: (85% after 180 days).

13. DISPOSAL CONSIDERATIONS

Waste from residues/unused products.
Any disposal practice must be in compliance with local, state and federal laws and regulations (contact local or state environmental agency for specific rules).

14. TRANSPORT INFORMATION

Not regulated by DOT, RCRA status-Not a hazardous waste

15. REGULATORY INFORMATION

TSCA Chemical Substances Inventory: **All components of this product are either listed on the Inventory or are exempt from listing.**

SARA Section 311 / 312 Hazard Class: **Not concerned**
RCRA Status: **Not RCRA hazardous**

16. OTHER INFORMATION

NFPA and HMIS ratings:

NFPA	**Health:**	1	**Flammability:**	0	**Reactivity:**	0
HMIS	**Health**	1	**Flammability**	0	**Reactivity**	0

DATE EDITED: Nov 4th 2015

Applied Polymer Systems, Inc.

Safety Data Sheet

1. IDENTIFICATION OF THE PRODUCT AND THE COMPANY

Product Name: APS 710 Silt Stop

Supplied:
Applied Polymer Systems Inc.
Woodstock, GA 30189
Tel. 678-494-5998
Fax. 678-494-5298
www.siltstop.com

2. HAZARD IDENTIFICATION

Aqueous solutions and powders that become wet render surfaces extremely slippery.

3. COMPOSITION/INFORMATION ON INGREDIENTS

Identification of the preparation: Anionic water-soluble co-polymer blend

4. FIRST AID MEASURES

Inhalation: Move to fresh air. Wear dust mask while handling.

Skin contact: Contact with wet skin could cause chapping and dryness. Wash with water and soap. In case of persistent skin irritation, consult a physician.

Eye contact: Rinse thoroughly with plenty of water, also under the eyelids, seek medical attention in case of persistent irritation.

Ingestion: Consult a physician

5. FIRE-FIGHTING MEASURES

Suitable extinguishing media: Water, water spray, foam, carbon dioxide, dry powder.
Special fire-fighting precautions: Aqueous solutions or powders that become wet render surfaces extremely slippery.
Protective equipment for firefighters: No special equipment required.

6. ACCIDENTAL RELEASE MEASURES

Personal precautions: No special precautions required.

Methods for cleaning up: Do Not flush with water. Clean up promptly by sweeping or vacuum. Keep in suitable and closed containers for disposal. After cleaning, flush away traces with water.

7. HANDLING AND STORAGE

Handling: Avoid contact with skin and eyes. Avoid dust formation. Do not breath dust. Use dust mask during handling. Wash hands after handling.

Storage: Keep in a cool, dry place.

8. EXPOSURE CONTROLS / PERSONAL PROTECTION

Engineering controls: Use local exhaust if dusting occurs. Natural ventilation is adequate in absence of dust.

Personal protection equipment

Respiratory Protection:	Dust safety masks are recommended where dusting may occur.
Hand protection:	Dry cloth, leather or rubber gloves.
Eye Protection:	Safety glasses with side shields or face masks. Do not wear contact lenses.
Skin protection:	No special protective clothing required.
Hygiene measures:	Wash hands before breaks and at end of work day.

9. PHYSICAL AND CHEMICAL PROPERTIES

Form:	Granular solid
Color:	White / Brown
Odor:	None
pH:	7.6
Melting point:	N/A
Flash point:	N/A
Vapor density:	N/A

10. STABILITY AND REACTIVITY

Stability:	Product is stable, no hazardous polymerization will occur.
Materials to avoid:	Oxidizing agents may cause exothermic reactions.
Hazardous decomposition products:	Thermal decomposition may produce nitrogen oxides (NOx), carbon oxides.

11. TOXICOLOGICAL INFORMATION

Oral:	LD 50 / *Rattus norvegicus* / oral / > 5000 mg / kg
Inhalation:	The product is not expected to be toxic by inhalation. Use dust mask while handling.
Bioaccumulation:	The product is not expected to bioaccumulate.
Persistence / degradability:	Not readily biodegradable: (–40% after 28 days)

Acute toxicity

LC 50 / *Ceriodaphnia dubia* / 48h / 1,617 ppm
LC 50 / *Pimephales promelas* / 48 h / >6,720 ppm
LC 50 / *Pimephales promelas* / 96 h / >6,720 ppm

12. ECOLOGICAL INFORMATION

Chronic toxicity

IC 25 (Survival) / *Ceriodaphnia dubia* / 7day / 122.5 ppm
NOEC (Survival) / *Ceriodaphnia dubia* / 7day / 52.5 ppm

IC 25 (Reproduction) / *Ceriodaphnia dubia* / 7day / 59.3 ppm
NOEC (Reproduction) / *Ceriodaphnia dubia* / 7day / 52.5 ppm

13. DISPOSAL CONSIDERATIONS

Waste from residues/unused products.
Any disposal practice must be in compliance with local, state and federal laws and regulations (contact local or state environmental agency for specific rules).

14. TRANSPORT AND REGULATORY INFORMATION

Not regulated by DOT, RCRA status-Not a hazardous waste

15. TRANSPORT AND REGULATORY INFORMATION

TSCA Chemical Substances Inventory:	**All components of this product are either listed on the inventory or are exempt from listing.**
SARA Section 311 / 312 Hazard Class:	**Not concerned**
RCRA Status:	**Not RCRA hazardous**

16. OTHER INFORMATION

NFPA and HMIS ratings:

NFPA	**Health:**	**1**	**Flammability:**	**1**	**Reactivity:**	**0**
HMIS	**Health**	**1**	**Flammability**	**1**	**Reactivity**	**0**

DATE EDITED: Jan 11th 2016

ChemTreat, Inc.

MATERIAL SAFETY DATA SHEET

Section 1. Chemical Product and Company Identification

Product Name:	ChemTreat P890L
Product Use:	Water Clarification Agent
Manufacturer's Name:	ChemTreat, Inc.
Emergency Telephone Number:	(800) 424–9300
Address (Corporate Headquarters):	4461 Cox Road Glen Allen, VA 23060
Telephone Number for Information:	(800) 648–4579
Date of MSDS:	February 11, 2009

Section 2. Hazard(s) Identification

Signal Word: WARNING!

Hazard Statement(s): May be harmful in contact with skin.
May be harmful if inhaled.
May be harmful if swallowed.

Precautionary Statement(s): Wear protective gloves/clothing and eye/face protection. Do not breathe dust/fume/gas/mist/vapors/spray. Do not eat, drink or smoke when using this product. Wash hands thoroughly after handling. Use only outdoors or in a well–ventilated area.

Section 3. Composition/Hazardous Ingredients

Component	CAS Registry #	Wt.%
Polyaluminum chloride	1327–41–9	15 – 40

Section 4. First Aid Measures

Inhalation: Remove to fresh air and keep at rest in a position comfortable for breathing. Call a poison center or doctor/physician if you feel unwell.

Eyes: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing. If eye irritation persists, get medical advice/attention.

Skin: Wash with plenty of soap and water. Call a poison center or doctor/physician if you feel unwell.

Ingestion: DO NOT INDUCE VOMITING. Rinse mouth. Call a POISON CENTER or doctor/physician if you feel unwell.

Notes to Physician:	N/A
Additional First Aid Remarks:	N/A

Section 5. Fire Fighting Measures

Flammability of the Product:	Not flammable.
Suitable Extinguishing Media:	Use extinguishing media suitable to surrounding fire.
Specific Hazards Arising from the Chemical:	None known.
Protective Equipment:	If product is involved in a fire, wear full protective clothing including a positive–pressure, NIOSH approved, self–contained breathing apparatus.

Section 6. Accidental Release Measures

Personal Precautions:	Use appropriate Personal Protective Equipment (PPE).
Environmental Precautions:	Avoid dispersal of spilled material and runoff and contact with soil, waterways, drains, and sewers.
Methods for Cleaning up:	Contain and recover liquid when possible. Flush spill area with water spray.
Other Statements:	None.

Section 7. Handling and Storage

Handling:	Wear appropriate Personal Protection Equipment (PPE) when handling this product. Do not get in eyes, or on skin and clothing. Wash thoroughly after handling. Do not ingest. Avoid breathing vapors, mist or dust.
Storage:	Store away from incompatible materials (see Section 10). Store at ambient temperatures. Keep container securely closed when not in use. Label precautions also apply to empty container. Recondition or dispose of empty containers in accordance with government regulations. For Industrial use only. Protect from heat and sources of ignition.

Section 8. Exposure Controls/Personal Protection

Exposure Limits

Component	Source	Exposure Limits
Polyaluminum chloride		N/E

Carcinogenicity Category

Component	Source	Code	Brief Description
Polyaluminum chloride			N/E

Engineering Controls: Use only with adequate ventilation. The use of local ventilation is recommended to control emission near the source.

Personal Protection

Eyes: Wear chemical splash goggles or safety glasses with full–face shield. Maintain eyewash fountain in work area.

Skin: Maintain quick–drench facilities in work area.
Wear butyl rubber or neoprene gloves. Wash them after each use and replace as necessary. If conditions warrant, wear protective clothing such as boots, aprons, and coveralls to prevent skin contact.

Respiratory: If misting occurs, use NIOSH approved organic vapor/acid gas dual cartridge respirator with a dust/mist prefilter in accordance with 29 CFR 1910.134.

Section 9. Physical and Chemical Properties

Physical State and Appearance:	Liquid, Colorless, Clear
Specific Gravity:	1.2010
pH:	2.7
Freezing Point:	32°F
Flash Point:	N/D
Odor:	Mild
Melting Point:	N/D
Boiling Point:	220°F
Solubility in Water:	Miscible
Evaporation Rate:	N/D
Vapor Density:	N/D
Molecular Weight:	N/D
Viscosity:	N/A
Flammable Limits:	N/A
Autoignition Temperature:	N/A
Density:	10.02 lb/ga
Vapor Pressure:	N/D
% VOC	0

Section 10. Stability and Reactivity

Chemical Stability: Stable at normal temperatures and pressures.

Incompatibility with Various Substances: Strong oxidizers, Strong bases

Hazardous Decomposition Products: None known.

Possibility of Hazardous Reactions: None known.

Section 11. Toxicological Information

Chemical Name	Exposure	Type of Effect	Concentration	Species
N/D				

Comments: None.

Section 12. Ecological Information

Species	Duration	Type of Effect	Test Results
Fathead Minnow	96h	LC50	230.4 mg/l
Sheepshead Minnow	96h	LC50	>1000 mg/l
Mysid Shrimp	48h	LC50	>1000 mg/l

Comments: None.

Section 13. Disposal Considerations

Dispose of in accordance with local, state and federal regulations.
Not a RCRA–regulated hazardous waste when disposed in the original product form.

ChemTreat, Inc.

MSDS

Section 14. Transport Information

DOT Classification

DOT Name:	CORROSIVE LIQUID, ACIDIC, INORGANIC, N.O.S
Technical Name:	(POLYALUMINUM CHLORIDE)
Hazard Class:	Corrosive
UN/NA#:	UN3264
Packing Group:	PGIII

Section 15. Regulatory Information

Inventory Status

United States (TSCA):	All ingredients listed.
Canada (DSL/NDSL):	All ingredients listed.

Federal Regulations

SARA Title III Rules

Sections 311/312 Hazard Classes

Fire Hazard:	No
Reactive Hazard:	No
Release of Pressure:	No
Acute Health Hazard:	Yes
Chronic Health Hazard:	No

Other Sections

Component	Section 313 Toxic Chemical	Section 302 EHS TPQ	Section 302 CERCLA RQ
Polyaluminum chloride	N/A	N/A	N/A

State Regulations

California Proposition 65: None known.

Special Regulations

Component	States
Polyaluminum chloride	None

International Regulations

Canada

WHMIS Classification:	E (Corrosive Material)
Controlled Product Regulations (CPR):	This product has been classified in accordance with the hazard criteria of the Controlled Products Regulations (CPR) and the MSDS contains all the information required by the CPR.

Section 16. Other Information

HMIS Hazard Rating

Health:	1
Flammability:	0
Physical Hazard:	0
PPE:	X

Notes: The PPE rating depends on circumstances of use. See Section 8 for recommended PPE.
The Hazardous Material Information System (HMIS) is a voluntary, subjective alpha–numeric symbolic system for recommending hazard risk and personal protection equipment information. It is a subjective rating system based on the evaluator's understanding of the chemical associated risks. The end–user must determine if the code is appropriate for their use.

NSF: Certified to NSF/ANSI Standard 60
Maximum use rate for potable water – 250 mg/L
This product ships as NSF from:
Eldridge, IA
Nederland, TX
Ashland, VA
Orangeburg, SC
Baltimore, MD
Bastrop, LA

FDA: N/A

KOSHER: This product has not been evaluated for Kosher approval.

FIFRA: N/A

Other: None

Abbreviations

Abbreviation	Definition
<	Less Than
>	Greater Than
ACGIH	American Conference of Governmental Industrial Hygienists
EHS	Environmental Health and Safety Dept
N/A	Not Applicable
N/D	Not Determined
N/E	Not Established
OSHA	Occupational Health and Safety Dept
PEL	Personal Exposure Limit
STEL	Short Term Exposure Limit
TLV	Threshold Limit Value
TWA	Time Weight Average
UNK	Unknown

Prepared by: Regulatory Affairs Department

Disclaimer

Although the information and recommendations set forth herein (hereinafter "information") are presented in good faith and believed to be correct as of the date hereof, ChemTreat, Inc. makes no representations as to the completeness or accuracy thereof. Information is supplied upon the condition that the persons receiving same will make their own determination as to its suitability for their purposes prior to use. In no event will ChemTreat, Inc. be responsible for damages of any nature whatsoever resulting from the use or reliance upon information. No representation or warranties, either expressed or implied, of merchantability, fitness for a particular purpose, or of any other nature are made hereunder with respect to information or the product to which information refers.

MATERIAL SAFETY DATA SHEET

Section 1. Chemical Product and Company Identification

Product Name:	ChemTreat P812GL
Product Use:	Water Clarification/Solids Conditioning Agent
Supplier's Name:	ChemTreat, Inc.
Emergency Telephone Number:	(800) 424–9300 (Toll Free) (703) 527–3887
Address (Corporate Headquarters):	4461 Cox Road Glen Allen, VA 23060
Telephone Number for Information:	(800) 648–4579
Date of MSDS:	October 8, 2010

Section 2. Hazard(s) Identification

Signal Word: **WARNING!**

Hazard Statement(s): May be harmful in contact with skin.
May be harmful if inhaled.
May be harmful if swallowed.

Precautionary Statement(s): No significant health risks are expected from exposures under normal conditions of use.

Section 3. Composition/Hazardous Ingredients

Component	CAS Registry #	Wt.%
Acrylamide/sodium acrylate copolymer	25085–02–3	15 – 40

Section 4. First Aid Measures

Inhalation: Remove to fresh air and keep at rest in a position comfortable for breathing. Call a poison center or doctor/physician if you feel unwell.

Eyes: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing. If eye irritation persists, get medical advice/attention.

Skin: Wash with plenty of soap and water. Call a poison center or doctor/physician if you feel unwell.

Ingestion: DO NOT INDUCE VOMITING. Rinse mouth. Call a POISON CENTER or doctor/physician if you feel unwell.

Notes to Physician:	N/A
Additional First Aid Remarks:	N/A

Section 5. Fire Fighting Measures

Flammability of the Product:	Not flammable.
Suitable Extinguishing Media:	Use extinguishing media suitable to surrounding fire.
Specific Hazards Arising from the Chemical:	None known.
Protective Equipment:	If product is involved in a fire, wear full protective clothing including a positive–pressure, NIOSH approved, self–contained breathing apparatus.

Section 6. Accidental Release Measures

Personal Precautions:	Use appropriate Personal Protective Equipment (PPE). Material is very slippery if spilled.
Environmental Precautions:	Avoid dispersal of spilled material and runoff and contact with soil, waterways, drains, and sewers.
Methods for Cleaning up:	Collect any paste and place in a container for proper disposal. Flush cleaned area with water.
Other Statements:	None.

Section 7. Handling and Storage

Handling:	Wear appropriate Personal Protective Equipment (PPE) when handling this product. Do not get in eyes, or on skin and clothing. Wash thoroughly after handling. Do not ingest. Avoid breathing vapors, mist or dust.
Storage:	Store away from incompatible materials (see Section 10). Store at ambient temperatures. Keep container securely closed when not in use. Label precautions also apply to empty container. Recondition or dispose of empty containers in accordance with government regulations. For Industrial use only.

Section 8. Exposure Controls/Personal Protection

Exposure Limits

Component	Source	Exposure Limits
Acrylamide/sodium acrylate copolymer		N/E

Carcinogenicity Category

Component	Source	Code	Brief Description
Acrylamide/sodium acrylate copolymer			N/E

Engineering Controls: Use only with adequate ventilation. The use of local ventilation is recommended to control emission near the source.

Personal Protection

Eyes: Wear chemical splash goggles or safety glasses with full–face shield. Maintain eyewash fountain in work area.

Skin: Maintain quick–drench facilities in work area.
Wear butyl rubber or neoprene gloves. Wash them after each use and replace as necessary. If conditions warrant, wear protective clothing such as boots, aprons, and coveralls to prevent skin contact.

Respiratory: None needed under normal conditions of use.

Section 9. Physical and Chemical Properties

Physical State and Appearance:	Paste, Colorless, N/D
Specific Gravity:	1.1300
pH:	9.0 @ 1.0%
Freezing Point:	N/A
Flash Point:	N/D
Odor:	Mild
Melting Point:	N/A
Boiling Point:	N/D
Solubility in Water:	Complete
Evaporation Rate:	N/D
Vapor Density:	N/D
Molecular Weight:	N/D
Viscosity:	N/A
Flammable Limits:	N/A
Autoignition Temperature:	N/A
Density:	N/A
Vapor Pressure:	N/D
% VOC	N/D

Section 10. Stability and Reactivity

Chemical Stability: Stable at normal temperatures and pressures.

Incompatibility with Various Substances: Strong oxidizers, Strong acids

Hazardous Decomposition Products: Oxides of carbon, Oxides of nitrogen

Possibility of Hazardous Reactions: None known.

Section 11. Toxicological Information

Chemical Name	Exposure	Type of Effect	Concentration	Species
N/D				

Comments: None.

Section 12. Ecological Information

Species	Duration	Type of Effect	Test Results
N/D			

Comments: Not tested.

Section 13. Disposal Considerations

Dispose of in accordance with local, state and federal regulations.
Not a RCRA–regulated hazardous waste when disposed in the original product form.

Section 14. Transport Information

DOT Classification

DOT Name: COMPOUND, INDUSTRIAL WATER TREATMENT, DRY
Technical Name: N/A
Hazard Class: Not D.O.T. Regulated.
UN/NA#: N/A
Packing Group: N/A

Section 15. Regulatory Information

Inventory Status

United States (TSCA): All ingredients listed.
Canada (DSL/NDSL): All ingredients listed.

Federal Regulations

SARA Title III Rules

Sections 311/312 Hazard Classes

Fire Hazard: No
Reactive Hazard: No
Release of Pressure: No
Acute Health Hazard: Yes
Chronic Health Hazard: No

Other Sections

Component	Section 313 Toxic Chemical	Section 302 EHS TPQ	CERCLA RQ
Acrylamide/sodium acrylate copolymer	N/A	N/A	N/A

State Regulations

California Proposition 65: This product contains chemical(s) known to the State of California to cause cancer and/or to cause birth defects or other reproductive harm: residual acrylamide.

Special Regulations

Component	States
Acrylamide/sodium acrylate copolymer	None

International Regulations

Canada

WHMIS Classification: N/A

Controlled Product Regulations (CPR): N/A

Section 16. Other Information

HMIS Hazard Rating

Health:	1
Flammability:	0
Physical Hazard:	0
PPE:	X

Notes: The PPE rating depends on circumstances of use. See Section 8 for recommended PPE.
The Hazardous Material Information System (HMIS) is a voluntary, subjective alpha–numeric symbolic system for recommending hazard risk and personal protection equipment information. It is a subjective rating system based on the evaluator's understanding of the chemical associated risks. The end–user must determine if the code is appropriate for their use.

NSF: N/A

FDA: N/A

KOSHER: This product has not been evaluated for Kosher approval.

FIFRA: N/A

Other: None

Abbreviations

Abbreviation	Definition
<	Less Than
>	Greater Than
ACGIH	American Conference of Governmental Industrial Hygienists
EHS	Environmental Health and Safety Dept
N/A	Not Applicable
N/D	Not Determined
N/E	Not Established
OSHA	Occupational Health and Safety Dept
PEL	Personal Exposure Limit
STEL	Short Term Exposure Limit
TLV	Threshold Limit Value
TWA	Time Weight Average
UNK	Unknown

Prepared by: Regulatory Affairs Department

Disclaimer

Although the information and recommendations set forth herein (hereinafter "information") are presented in good faith and believed to be correct as of the date hereof, ChemTreat, Inc. makes no representations as to the completeness or accuracy thereof. Information is supplied upon the condition that the persons receiving same will make their own determination as to its suitability for their purposes prior to use. In no event will ChemTreat, Inc. be responsible for damages of any nature whatsoever resulting from the use or reliance upon information. No representation or warranties, either expressed or implied, of merchantability, fitness for a particular purpose, or of any other nature are made hereunder with respect to information or the product to which information refers.

SAFETY DATA SHEET

Section 1. Chemical Product and Company Identification

Product Name:	ChemTreat P900GL
Product Use:	Water Clarification/Solids Conditioning Agent
Supplier's Name:	ChemTreat, Inc.
Emergency Telephone Number:	(800)424-9300 (Toll Free)
Address (Corporate Headquarters):	5640 Cox Road Glen Allen, VA 23060
Telephone Number for Information:	(800)648-4579
Date of SDS:	March 7, 2017
Revision Date:	March 7, 2017
Revision Number:	17030701AN

Section 2. Hazard(s) Identification

Signal Word: **WARNING**

GHS Classification(s): Carcinogenicity – Category 2

Hazard Statement(s): H351 Suspected of causing cancer.

Precautionary Statement(s):

Prevention:
P201 Obtain special instructions before use.
P202 Do not handle until all safety precautions have been read and understood.
P280 Wear protective gloves/protective clothing/eye protection/face protection.

Response: None.

Storage: None.

Disposal: None.

System of Classification Used: Classification under 2012 OSHA Hazard Communication Standard (29 CFR 1910.1200).

Hazards Not Otherwise Classified: None.

Section 3. Composition/Hazardous Ingredients

Component	CAS Registry #	WL%
2-Propenaide, polymer with N,N,N-trimethyl-2-[(1-oxo-2-propenyl)oxy]ethanaminium chloride	69418-26-4	10 - 30

Comments If chemical identity and/or exact percentage of composition has been withheld, this information is considered to be a trade secret.

Section 4. First Aid Measures

Inhalation: Call a POISON CENTER or doctor/physician if you feel unwell.

Eyes: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing. If eye irritation persists, get medical advice/attention.

Skin: Call a poison center or doctor/physician if you feel unwell.

Ingestion: Rinse mouth. Call a poison center or doctor/physician if you feel unwell.

Most Important Symptoms: N/D

Indication of Immediate Medical Attention and Special Treatment Needed, If Necessary: N/A

Section 5. Fire Fighting Measures

Flammability of the Product: Not flammable.

Suitable Extinguishing Media: Use extinguishing media suitable to surrounding fire.

Specific Hazards Arising from the Chemical: None known.

Protective Equipment: If product is involved in a fire, wear full protective clothing including a positive-pressure, NIOSH approved, self-contained breathing apparatus.

Section 6. Accidental Release Measures

Personal Precautions: Use appropriate Personal Protective Equipment (PPE).

Environmental Precautions: Avoid dispersal of spilled material and runoff and contact with soil, waterways, drains, and sewers.

Methods for Cleaning up: Contain and recover liquid when possible. Flush spill area with water spray.
Material is very slippery if spilled.

Other Statements: None.

Section 7. Handling and Storage

Handling: Wear appropriate Personal Protective Equipment (PPE) when handling this product. Do not get in eyes, or on skin and clothing. Wash thoroughly after handling. Do not ingest. Avoid breathing vapors, mist or dust.

Storage: Store away from incompatible materials (see Section 10). Store at ambient temperatures. Keep container securely closed when not in use. Label precautions also apply to empty container. Recondition or dispose of empty containers in accordance with government regulations. For Industrial use only.

Section 8. Exposure Controls/Personal Protection

Exposure Limits

Component	Source	Exposure Limits
2-Propenaide, polymer with N,N,N-trimethyl-2-[(1-oxo-2-propenyl)oxy]ethanaminium chloride	N/E	N/E

Engineering Controls: Use only with adequate ventilation. The use of local ventilation is recommended to control emission near the source.

Personal Protection

Eyes:	Wear chemical splash goggles or safety glasses with full-face shield. Maintain eyewash fountain in work area.
Skin:	Maintain quick-drench facilities in work area. Wear butyl rubber or neoprene gloves. Wash them after each use and replace as necessary. If conditions warrant, wear protective clothing such as boots, aprons, and coveralls to prevent skin contact.
Respiratory:	If misting occurs, use NIOSH approved organic vapor/acid gas dual cartridge respirator with a dust/mist prefilter in accordance with 29 CFR 1910.134.

Section 9. Physical and Chemical Properties

Physical State and Appearance:	Gelatinous Solid, Light Amber, N/D
Specific Gravity:	1.030 @ 20°C
pH:	5.0 @ 20°C, 1.0%
Freezing Point:	N/D
Flash Point:	N/A
Odor:	Mild
Melting Point:	N/A
Initial Boiling Point and Boiling Range:	214°F
Solubility in Water:	Complete
Evaporation Rate:	<1
Vapor Density:	N/D
Molecular Weight:	N/D
Viscosity:	N/D
Flammability (solid, gas):	N/D
Flammable Limits:	N/A
Autoignition Temperature:	N/A
Density:	0.00 LB/GA
Vapor Pressure:	N/A
% VOC:	N/D
Odor Threshold	N/D
n-octanol Partition Coefficient	N/D
Decomposition Temperature	N/D

Section 10. Stability and Reactivity

Chemical Stability: Stable at normal temperatures and pressures.

Incompatibility with Various Substances: Strong oxidizers, Strong bases.

Hazardous Decomposition Products: Oxides of carbon, Oxides of nitrogen.

Possibility of Hazardous Reactions: None known.

Reactivity: N/D

Conditions To Avoid: N/D

Section 11. Toxicological Information

Acute Toxicity

Chemical Name	Exposure	Type of Effect	Concentration	Species
N/D	N/D	N/D	N/D	N/D

Carcinogenicity Category

Component	Source	Code	Brief Description
2-Propenaide, polymer with N,N,N-trimethyl-2-[(1-oxo-2-propenyl)oxy]ethanaminium chloride	N/E	N/E	N/E

Likely Routes of Exposure: N/D

Symptoms

Inhalation: N/D

Eye Contact: N/D

Skin Contact: N/D

Ingestion: N/D

Skin Corrosion/Irritation: N/D

Serious Eye Damage/Eye Irritation: N/D

Sensitization: N/D

Germ Cell Mutagenicity: N/D

Reproductive/Developmental Toxicity: N/D

Specific Target Organ Toxicity

Single Exposure: N/D

Repeated Exposure: N/D

Aspiration Hazard: N/D

Comments: None.

Section 12. Ecological Information

Ecotoxicity

Species	Duration	Type of Effect	Test Results
Rainbow Trout	96h	LC50	4.5 mg/l
Ceriodaphnia dubia	48h	LC50	<5 mg/l

Persistence and Biodegradability: N/D

Bioaccumulative Potential: N/D

Mobility In Soil: N/D

Other Adverse Effects: N/D

Comments: Water clarification polymers function by multipoint adsorption and charge neutralization with suspended solids. Polymers inherently migrate with solids in the separation process and with the exception of uneconomic overdose do not remain in the clarified waters. Aquatic toxicity determinations in test method protocol waters without suspended solids overestimate the toxicity compared to natural receiving waters.

Section 13. Disposal Considerations

Dispose of in accordance with local, state and federal regulations.
Not a RCRA-regulated hazardous waste when disposed in the original product form.

Section 14. Transport Information

Controlling Regulation	UN/NA#:	Proper Shipping Name:	Technical Name:	Hazard Class:	Packing Group:
DOT	N/A	COMPOUND, INDUSTRIAL WATER TREATMENT, LIQUID	N/A	N/A	N/A

Note: N/A

Section 15. Regulatory Information

Inventory Status

United States (TSCA): All ingredients listed.
Canada (DSL/NDSL): All ingredients listed.

Federal Regulations

SARA Title III Rules

Sections 311/312 Hazard Classes

Fire Hazard: No
Reactive Hazard: No
Release of Pressure: No
Acute Health Hazard: No
Chronic Health Hazard: Yes

Other Sections

Component	Section 313 Toxic Chemical	Section 302 EHS TPQ	CERCLA RQ
2-Propenaide, polymer with N,N,N-trimethyl-2-[(1-oxo-2-propenyl)oxy]ethanaminium chloride	N/A	N/A	N/A

Comments: None.

State Regulations

California Proposition 65: This product contains chemical(s) known to the State of California to cause cancer and/or to cause birth defects or other reproductive harm: residual acrylamide.

Special Regulations

Component	States
2-Propenaide, polymer with N,N,N-trimethyl-2-[(1-oxo-2-propenyl)oxy]ethanaminium, chloride	None.

International Regulations

Canada

WHMIS Classification: N/A

Controlled Product Regulations (CPR): N/A

Compliance Information

NSF: N/A

Food Regulations: N/A

KOSHER: This product has not been evaluated for Kosher approval.

FIFRA: N/A

Other: None

Comments: None.

Section 16. Other Information

HMIS Hazard Rating

Health:	1
Flammability:	0
Physical Hazard:	0
PPE:	X

Notes:

The PPE rating depends on circumstances of use. See Section 8 for recommended PPE.
The Hazardous Material Information System (HMIS) is a voluntary, subjective alpha-numeric symbolic system for recommending hazard risk and personal protection equipment information. It is a subjective rating system based on the evaluator's understanding of the chemical associated risks. The end-user must determine if the code is appropriate for their use.

Abbreviations

Abbreviation	Definition
<	Less Than
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ACGIH	American Conference of Governmental Industrial Hygienists
EHS	Environmental Health and Safety Dept
N/A	Not Applicable
N/D	Not Determined
N/E	Not Established
OSHA	Occupational Health and Safety Dept
PEL	Personal Exposure Limit
STEL	Short Term Exposure Limit
TLV	Threshold Limit Value
TWA	Time Weight Average
UNK	Unknown

Prepared by: Product Compliance Department; ProductCompliance@chemtreat.com

Revision Date: March 7, 2017

Disclaimer

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Appendix C

Spill Prevention, Control and Countermeasures (SPCC) Plan

Spill Prevention, Control and Countermeasures (SPCC) Plan

For

Vincent Hills Quarry

A Subsidiary of White Rock Quarries, LLC

Vincent, Alabama

NPDES Permit No.: AL0082066

March 2019

Updated: July 2019

Prepared by:
Tom Joiner & Associates, Inc.
P.O. Box 1490
Tuscaloosa, AL 35403
(205) 345-2311

Spill Prevention, Control and Countermeasures (SPCC) Plan

For

Vincent Hills Quarry
Vincent, Alabama

ENGINEER CERTIFICATION

I hereby certify that I have visited and examined the facility, and being familiar with the provisions of Environmental Protection Agency (EPA) Code of Federal Regulations, 40 CFR Part 112 and attest that this SPCC Plan has been prepared in accordance with good engineering practices and the regulations, and it is adequate for the facility. Furthermore, this plan also establishes procedures for inspections, maintenance and testing.

Certifying Engineer: Joseph E. Patrick, P.E.
Alabama Registration No. 22251

Signature: Joseph E Patrick

Certification Date: 6-21-2019

MANAGEMENT CERTIFICATION

I hereby certify that management of this facility extends its full approval of this SPCC Plan and will commit the necessary resources for implementation.

Name: Nicholas Rudanovich, Operations Manager

Signature: Nicholas R. Rudanovich

Date: 6-12-2019

Table of Contents

I. INTRODUCTION

II. LOCATION OF SPCC PLAN

III. SPCC PLAN REVIEW
- Action Items

IV. FACILITY INFORMATION
- Site Location
- Fuel and Chemical Storage
- Underground Storage Tanks
- Facility Transfer Operations

V. DISCHARGE PREVENTION
- Drainage
- Secondary Containment
- Personnel Training and Briefing Guide
- Security
- Inspections
- Annual Aboveground Storage Tank Integrity Inspection

VI. DISCHARGE RESPONSE
- Discharge Response Procedure
- Emergency Response Telephone Numbers
- Potential Discharge Flow and Direction
- Visible Discharges
- Recovered Material Disposal

VII. SPILL RECORD

TABLE
1. Description of Bulk Containments for Chemicals

FIGURES
1. Facility Diagram
2. Site Map
3. Proposed Fuel Farm Detail

APPENDICES
A. SPCC Plan Cross Reference
B. Employee Training Record
C. Monthly SPCC Plan Inspection Form
D. Annual Aboveground Storage Tank Integrity Inspection Form
E. Containment Drainage Form
F. Discharge Information Form
G. Reserved to Incorporate Contractor SPCC Plan as Approved by WRQ

Spill Prevention, Control and Countermeasures (SPCC) Plan

I. INTRODUCTION

This plan has been developed in accordance with Title 40 CFR 112.7 (Guidelines for the preparation and implementation of a Spill Prevention, Control and Countermeasures (SPCC) Plan) in addition to State and Local regulations and the pending the Alabama Department of Environmental Management (ADEM) Individual National Pollutant Discharge Elimination System (NPDES) Permit application for this facility. This SPCC Plan is a facility-wide plan for the handling and storage of all fuels and chemicals to be stored on site.

This SPCC Plan provides information on how this facility manages the aboveground oil, petroleum-based or chemical-product storage tanks with a storage capacity of 55 gallons and larger. It also includes basic information pertaining to personnel training and steps to be taken in the event of a spill.

As this plan does not follow the sequence of 40 CFR 112.7, a cross reference is included as Appendix A.

The Vincent Hills Quarry is a subsidiary of White Rock Quarries, LLC. This quarry will produce crushed limestone aggregate. The limestone will be mined and then processed through a rock crusher and conveyor where it will be stockpiled until loaded onto transport vehicles for off-site shipment. The primary transportation will be by rail with minor truck transport.

The facility is located in Sections 13, 14, 23, 24 and 25 of Township 19 South, Range 2 East and Sections 18 and 19, Township 19 South, Range 3 East in Shelby County near Vincent, Alabama. The property boundary site plan for the proposed facility is shown on Figures 1 and 2.

II. LOCATION OF SPCC PLAN

In accordance with 40 CFR 112.3(e) and the Facility's NPDES Permit, a complete copy of this SPCC Plan is maintained at the facility office in Vincent, Alabama prior to the use and/or storage of fuels or chemical at this facility.

III. SPCC PLAN REVIEW

The Plan is required to be reviewed and updated at least once every five years or whenever there is a change in facility design, construction, operation or maintenance that materially affects the facilities potential for discharge as described in 40 CFR 112.1(b). If there are changes that trigger an update of the plan, the update must be completed within 6 months. Examples of changes that trigger a plan update include:

- The commissioning or decommissioning of containers,
- the replacement, reconstruction or movement of permanent containers,
- the reconstruction, replacement or installation of piping systems,
- construction or demolition that might alter secondary containment structures,
- changes in products or services,
- a revision in the standard operating or maintenance procedures at the facility.

Technical amendments to the plan must be certified by a Professional Engineer. Examples of technical amendments include:

- Initial certification of constructed storage facilities/containers,
- Increases in the oil or chemical storage capacity,
- The addition of oils or pollutants,
- Changes in the handling or storage areas or equipment,
- Modification in the handling or storage procedures, and
- Changes in the inspection, security and training program.

Changes such as updating personnel and telephone numbers do not require a Professional Engineer's certification. Evidence of these reviews will be recorded below:

Reviewed/Evaluated By:	**Date**	**Details**
Joseph E. Patrick, P.E.	March 2019	Reviewed/5-year update
Joseph E. Patrick, P.E.	June 2019	Amend to include commissioned AST (2,000 gal double-walled, off-road diesel)

Action Items

In accordance with 40 CFR 112.7, if the SPCC Plan calls for additional facilities or procedures, methods, or equipment not yet fully operational, these items must be addressed in separate paragraphs that explain the details of installation and operational startup. Action items are listed in the implementation schedule below. The Mine Manager, or his/her designee, will enter the actual date of completion of each item. Completed action items will be removed from the list at the next Plan revision.

ACTION ITEM IMPLEMENTATION SCHEDULE			
Action Item	**Responsible Person**	**Completion Deadline**	**Actual Date Completed**

IV. FACILITY INFORMATION

The Vincent Hills Quarry in Vincent, Alabama is a subsidiary of White Rock Quarries, LLC (White Rock). This proposed facility will include a limestone quarry, rock crushing and sorting plant, facility load-out structures, and office facilities. The load-out facilities will include rail and truck loading facilities. The product to be shipped offsite will be crushed-limestone gravel.

Site Location

The proposed facility is located in Sections 13, 14, 23, 24 and 25 of Township 19 South, Range 2 East and Sections 18 and 19, Township 19 South, Range 3 East near Vincent, Alabama. The facility location and layout are shown on Figures 1 and 2, respectively.

The owner of the facility is White Rock Quarries, LLC located at Post Office Box 15065, West Palm Beach, Florida 33416 (Telephone, 561-793-2102).

Fuel and Chemical Storage

Current bulk fuels and chemicals handled and stored at the Vincent Hills Quarry are listed in Table 1 and their locations are shown on Figure 2. All bulk fuels and chemicals stored at the facility are within double-walled aboveground storage tanks (ASTs) or in single-walled containers with secondary containment.

Additionally, a proposed fuel farm for the quarry is identified on Figure 2 and a detailed plan is included as Figure 3. This plan will be updated as tanks are installed at the facility. The typical design diagrams for individual tanks and their containment structures are shown on Figure 3. For the single-wall tank installations, the secondary containment structure for tanks within a common dike wall will be sized to contain 110% of the volume of the largest tank within a tank battery. The floor and walls of the secondary containment will be constructed so that any discharge from the primary tanks will be contained until cleanup occurs. The secondary containments shall be constructed in accordance with 40 CFR 112.7(c).

Each tank and containment structure is (or will be) located at least 50 feet away from streams and are constructed of material that is compatible with stored fluid. For current ASTs, (not equipped with alarms), manual gauging is conducted prior to fuel-chemical transfer operations.

Underground Storage Tanks

There are no underground or partially buried tanks at this site and none are proposed.

Facility Transfer Operations

The following procedures will be used for truck loading and unloading areas.

Facility personnel will ensure that all loading and unloading procedures shall meet the following:

- The vehicle engine will be stopped.
- The hand or emergency brake of the vehicle(s) will be engaged and the wheels will be chocked.
- A measure of the available tank volume should be made to determine the empty volume in the AST (or equipment fuel tank).
- No open flame will be allowed in area.

Buckets, catchments or portable drip pans will be placed under the hose connection at the truck and at the unloading pipe, as necessary, to catch any fluids that might drip or be spilled during the loading or unloading operation. Truck drivers shall remain with their vehicle during loading or unloading to provide continuous visual inspection to prevent any overfilling or accidental release.

Prior to filling and departure the driver will be required to examine the lowermost drain and all outlets of the truck for leakage, and make any necessary adjustments or repairs, prior to departure. Truck drivers will be instructed not to depart before disconnecting transfer lines/hoses.

V. DISCHARGE PREVENTION

Drainage

Containment drainage will be accomplished in accordance with the procedures outlined below.

Drainage of rainwater from tank secondary containments with valved-drain points will be conducted according to the procedures outlined below. All containment drainage will be documented on the Containment Drainage Form (Appendix E).

1. The drain valve will be closed and locked under normal operating conditions.

2. The rainwater accumulation within the containment will be inspected prior to unlocking and opening the valve; In the event that a sheen or free oil (or pollutant) is present on the water surface, the containment will be drained in accordance with steps 5 and 6.

3. If no oil (or pollutant) or sheen is detected on accumulated waters, the drain valve may be opened and reseated/locked following drainage. The volume drained will be documented on the Containment Drainage Form (Appendix E).

4. If oil (or pollutant) spills are discovered within containment structures complete either steps 5 or 6.

5. If the oil (or pollutant) quantity is small then absorbent material may be used to remove the oil prior to discharge provided there is no oil in the discharge.

6. If the oil (or pollutant) quantity is too large to be handled using absorbent materials, the rainwater will be removed by draining the clear water beneath the oil layer until the oil layer is within two inches above the intake of the containment drain line. The oil (or pollutant) and associated water can then be pumped out to a transport truck for disposal off-site in accordance with local, state and federal regulations.

Secondary Containment

All bulk containers that are 55 gallons or larger are (or will be) provided with secondary containment for the entire capacity of the largest single container and sufficient freeboard to contain precipitation (110% of the volume of the largest single container). For tanks, these criteria might be met using double-walled ASTs (See Figure 3). Secondary containment structures and ASTs will be installed as discussed in Section IV-Fuel and Chemical Storage. Permanent tanks (maintained by WRQ) are (and will be) double-walled; ASTs maintained by contractors will be either double-walled or single-walled ASTs with appropriate secondary containment structures.

Personnel Training and Briefing Guide

The Mine Manager, or his/her designee, will hold a formal briefing session at least once a year to discuss the SPCC Plan and familiarize plant supervisors and designated employees (oil-handling personnel) with the location and operation of the following items:

1. The location and contents of all storage tanks and containers greater than 55 gallons.

2. The correct loading and unloading procedures for all fuels and chemicals stored at the site.

3. Operation and maintenance of equipment to prevent discharges.

4. Discharge/spill procedure protocol.

5. Applicable laws, rules and regulations.

6. The containment drainage procedures.

7. Inspection requirements.

8. The location and use of spill cleanup materials.

9. Designation of personnel responsible for spill prevention and reporting.

10. Known discharges or failures, malfunctions and recently developed precautionary measures.

An Employee Training Record is included as Appendix B.

During the construction phase of the quarry and rock-crushing plant, contract companies will be working at the facility. If these contractors will be using temporary ASTs for storing petroleum liquids (or other chemicals), they will be required to submit their SPCC Plan to Vincent Hills Quarry prior to bringing any tanks on the property. Vincent Hills Quarry will review the plans and once accepted, these plans will be adapted to this plan in Appendix G. These plans will be considered Technical Amendments and they will be reviewed by an Alabama Licensed Professional Engineer prior to these contractors bringing their tanks and equipment on site.

Security

All tanks/storage containers are (and will be) located inside the boundaries of the facility as shown on Figure 2. Access to the facility will be restricted to plant employees and approved contractors/vendors. The entrance roads, maintenance shop and plant site will be well lit during evening hours to assist in the prevention and detection of spills.

Each secondary containment drain valve will be maintained in the closed and locked position. The Mine Manager, or his/her designee, will have a key to open the lock in the event that the drain valve needs to be opened. Loading and unloading connections to facility piping, not in service or in standby service, will be capped or blank flanged.

In addition, when the facility is not manned, the valves and controls for all dispensers and piping on the tanks will be locked-out so that unauthorized use is prohibited.

Inspections

Monthly inspections will be conducted and will include the following:

1. Inspection of all drums, tanks, tank supports, containment walls, dikes and all piping, pipe supports, hoses, nozzles, valves, and accessories (See Appendix C). In addition, plant personnel will inspect oil-filled electrical, operating or manufacturing equipment for signs of leakage or spillage of oil. If any defects or leaks are noticed, they will be reported to the Mine Manager and repaired immediately.

2. Inspection of areas around the tanks for accumulation of water, spills and contamination. Any spilled fluids will be recovered and disposed of in accordance with local, state and federal regulations.

3. Inspection of field drainage systems (such as drainage ditches or road ditches), for an accumulation of oil that may have resulted from any small discharge.

4. Inventory of absorbent and other spill response materials.

5. Inventory of fire extinguishers and other safety equipment.

Annual inspections of all ASTs will be conducted in accordance with the procedures in Appendix D. All inspection records will be signed by the inspector and will be maintained on file with the SPCC Plan for a minimum of three years.

Annual Aboveground Storage Tank Integrity Inspection

All ASTs will be inspected on an annual basis. Additionally, ASTs will be inspected if the AST undergoes repair, alteration, reconstruction or change in service. Testing will consist of a visual inspection of all components of the tank, including the walls, seams, fittings, gaskets, valves, rivets, supports, foundations and piping. The form for documentation of this inspection can be found in Appendix D.

VI. DISCHARGE RESPONSE

Discharge Response Procedure
(to be followed using the "Discharge Information Form" in Appendix F).

1. Identify the source of the leak.

2. Take measures to secure the site and then take measures to prevent the leak or spill from posing an immediate hazard to human health or safety. For explosive/flammable petroleum products, this would involve the removal of obvious fire hazards such as electrical equipment and ignition sources.

3. Report all spills to Mine Manager.

4. Limit access to the spill area.

5. At the direction of the Mine Manager, start clean-up:

   a. Contact Emergency Response Contractor

   b. Use appropriate materials, equipment and containers (using sand, absorbent material, absorbent pads and/or absorbent booms). Spills and clean-up materials should be containerized and labeled (with contents and date). All spill and clean-up materials will be properly handled and recycled or disposed of.

6. Document the release using the Discharge Information Form (Appendix F).

Mine Manager:

   a. If the spill is less than 25 gallons, and falls on land and is immediately contained and cleaned up, the spill does not need to be reported.

   b. If a spill is 25 gallons, or larger, contact the National Response Center, ADEM, and the Alabama E.M.A. immediately by phone if the spill falls on land or could otherwise reach navigable water and cause a sheen or discoloration.

The National Response Center will contact EPA. The Mine Manager will submit a written report to ADEM within 10 days.

In the event of an emergency release, the release and the following information must be reported immediately to the National Response Center (NRC). A Discharge Information Form to assist with answering this information is included as Appendix F.

In accordance with 40 CFR 112.4(a), a discharge of more than 1,000 gallons of oil in a single discharge or two discharges of more than 42 gallons each in a 12-month period will be reported to the EPA Regional Administrator within 60 days. The following information must be submitted:

- Facility name
- Name of operator/owner
- Facility address and description including maps as necessary
- Maximum storage
- Corrective action taken
- Cause of discharge
- Additional preventative measures taken to prevent reoccurrences

Emergency Response Telephone Numbers

Operations Manager: Nicholas Rudanovich
White Rock Quarries: 561-793-2102
Mobile: 305-215-1483

Mine Manager: Steve Harbin
Mobile: 305-505-9868

Emergency	**911**
Vincent Fire Dept.	205-672-8070
Vincent Police Dept.	205-672-2261
Shelby County EMA (After Hours)	(205) 669-3999 911
Spill Response Contractor: Tom Joiner & Associates, Inc.	205-345-2311
ADEM Ombudsman Field Operations (After Hours)	800-533-2336 205-942-6168 800-843-0699
National Response Center	800-424-8802
US EPA, Atlanta	404-562-8700

Potential Discharge Flow and Direction

In the event of a spill, based on the containment size, location and typical use, potential spill flow and reaction are summarized below:

Containment Description	Potential Failure Mode	Direction of Flow	Predicted Flow Rate	Most Likely Quantity Discharged
Chemtreat 890L (located at 029 Pond)	Rupture/Leak	North (toward and into Pond 029)	Gradual to instantaneous	0 (contained within Pond 029)
Chemtreat 890L (located inside temporary office)	Rupture/Leak	Onto concrete floor, inside building, possibly out of building, flowing onto concrete driveway	Gradual to instantaneous	Maximum volume: 55 gallons
Off Road Diesel AST *double-walled* (located outside/near temporary office)	Overfill/Overflow during tank loading	Onto adjacent asphalt surface, flowing along topography – to south	60 gpm	30 gallons*
	Leak		<1 gpm	Maximum volume: 2,000 gallons

*Assuming fuel delivery pump rate is approximately 50-80 gpm; if overflow is allowed for 30 seconds = 60 gpm * 0.5min = 30 gallons

Visible Discharges

Visible discharges that may result in a loss of oil or chemical from a container will be promptly corrected (including seams, gaskets, piping, pumps, valves, rivets and bolts). Additionally, accumulations of spilled fluids will be removed from diked areas as discussed in Section V of this SPCC Plan.

Recovered Material Disposal

Materials recovered will be disposed of in accordance with federal, state and local regulations.

VII. SPILL RECORD

This facility is a Greenfield site and there have been no reportable spill events.

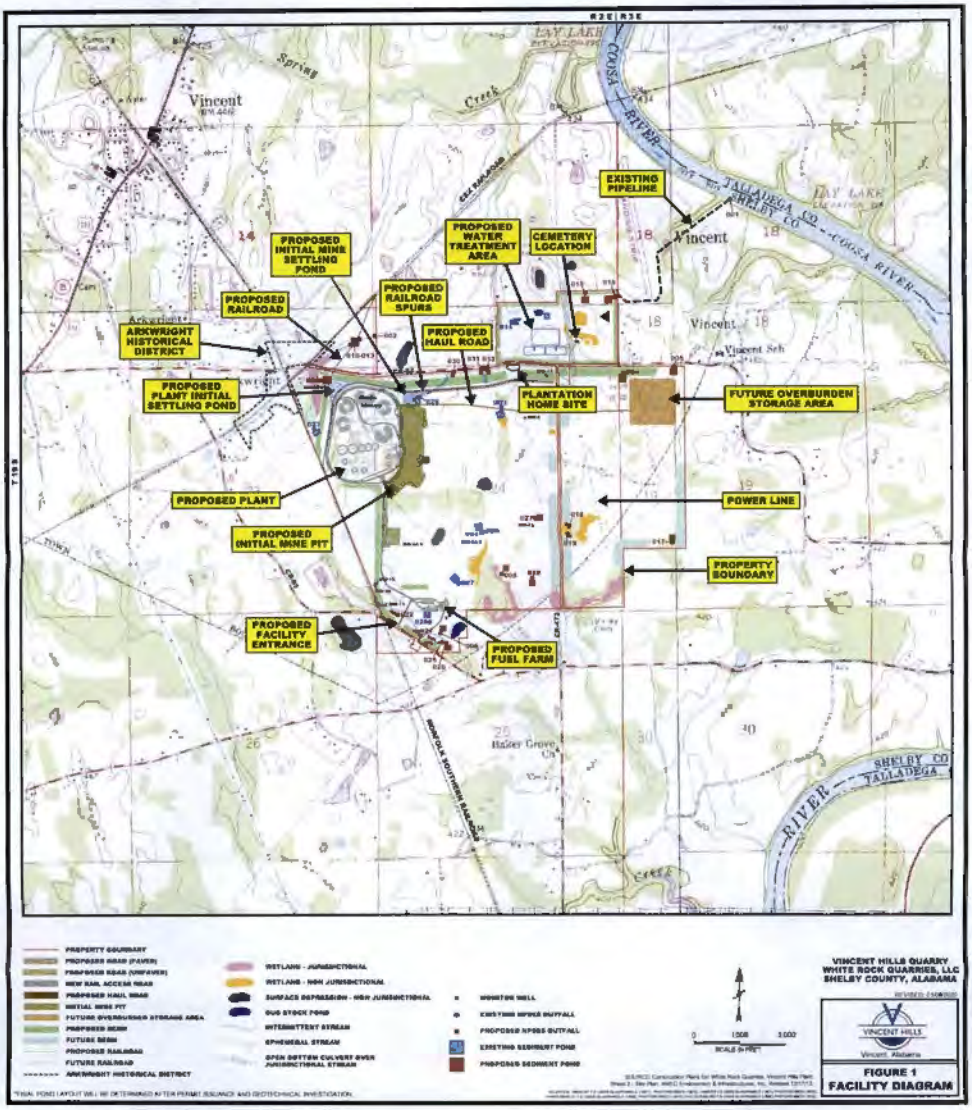
Table

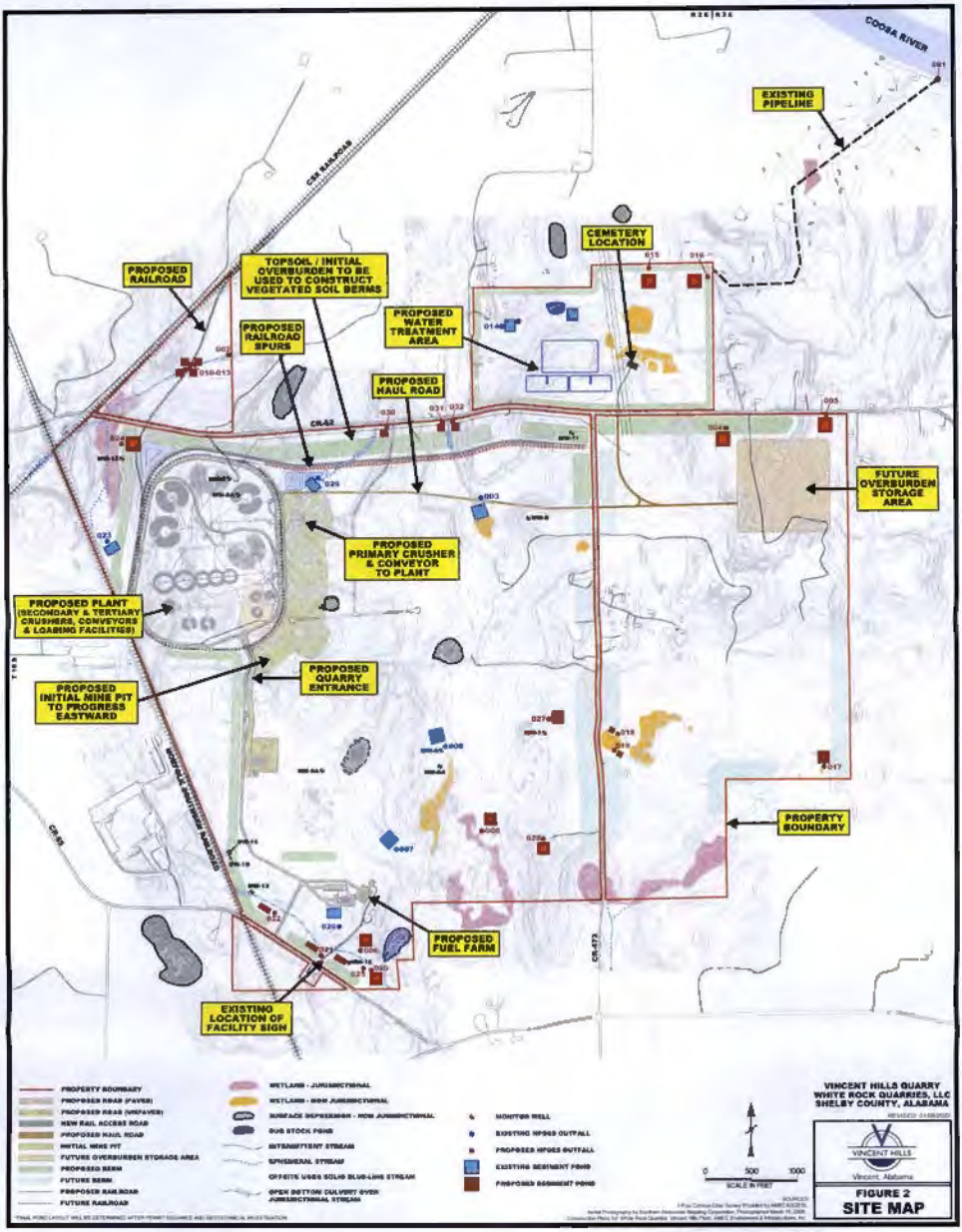
Table 1

Description of Bulk Containments for Chemicals

ID No. on Map	Location of Tanks	Number of Tanks	Storage Capacity (Gallons)	Material Stored	Secondary Containment Description – Equal or Exceeding 110% of Largest Tank
1	Pond 029	2	55	Chemtreat P 890L PolyAluminum Chloride	Inside 275 gal poly containment
2	Storage/ Temp Office	1	2,000	Diesel Fuel	Double-Walled Tank
3		varies	55	Chemtreat P 890L PolyAluminum Chloride	Spill Pallet

Figures


EXISTING PIPELINE
CEMETERY LOCATION
PROPOSED WATER TREATMENT AREA
PROPOSED INITIAL MINE SETTLING POND
PROPOSED RAILROAD SPURS
PROPOSED RAILROAD
ARKWRIGHT HISTORICAL DISTRICT
PROPOSED HAUL ROAD
PROPOSED PLANT INITIAL SETTLING POND
PLANTATION HOME SITE
FUTURE OVERBURDEN STORAGE AREA
PROPOSED PLANT
POWER LINE
PROPOSED INITIAL MINE PIT
PROPERTY BOUNDARY
PROPOSED FACILITY ENTRANCE
PROPOSED FUEL FARM
Vincent
Baker Grove
COOSA RIVER
SHELBY CO
TALLADEGA
PROPERTY BOUNDARY
PROPOSED ROAD (PAVED)
PROPOSED ROAD (UNPAVED)
NEW RAIL ACCESS ROAD
PROPOSED HAUL ROAD
INITIAL MINE PIT
FUTURE OVERBURDEN STORAGE AREA
PROPOSED BERM
FUTURE BERM
PROPOSED RAILROAD
FUTURE RAILROAD
ARKWRIGHT HISTORICAL DISTRICT
WETLAND - JURISDICTIONAL
WETLAND - NON JURISDICTIONAL
SURFACE DEPRESSION - NON JURISDICTIONAL
DUG STOCK POND
INTERMITTENT STREAM
EPHEMERAL STREAM
OPEN BOTTOM CULVERT OVER JURISDICTIONAL STREAM
MONITOR WELL
EXISTING NPDES OUTFALL
PROPOSED NPDES OUTFALL
EXISTING SEDIMENT POND
PROPOSED SEDIMENT POND
0
1,500
3,000
SCALE IN FEET
VINCENT HILLS QUARRY
WHITE ROCK QUARRIES, LLC
SHELBY COUNTY, ALABAMA
VINCENT HILLS
Vincent, Alabama
FIGURE 1
FACILITY DIAGRAM

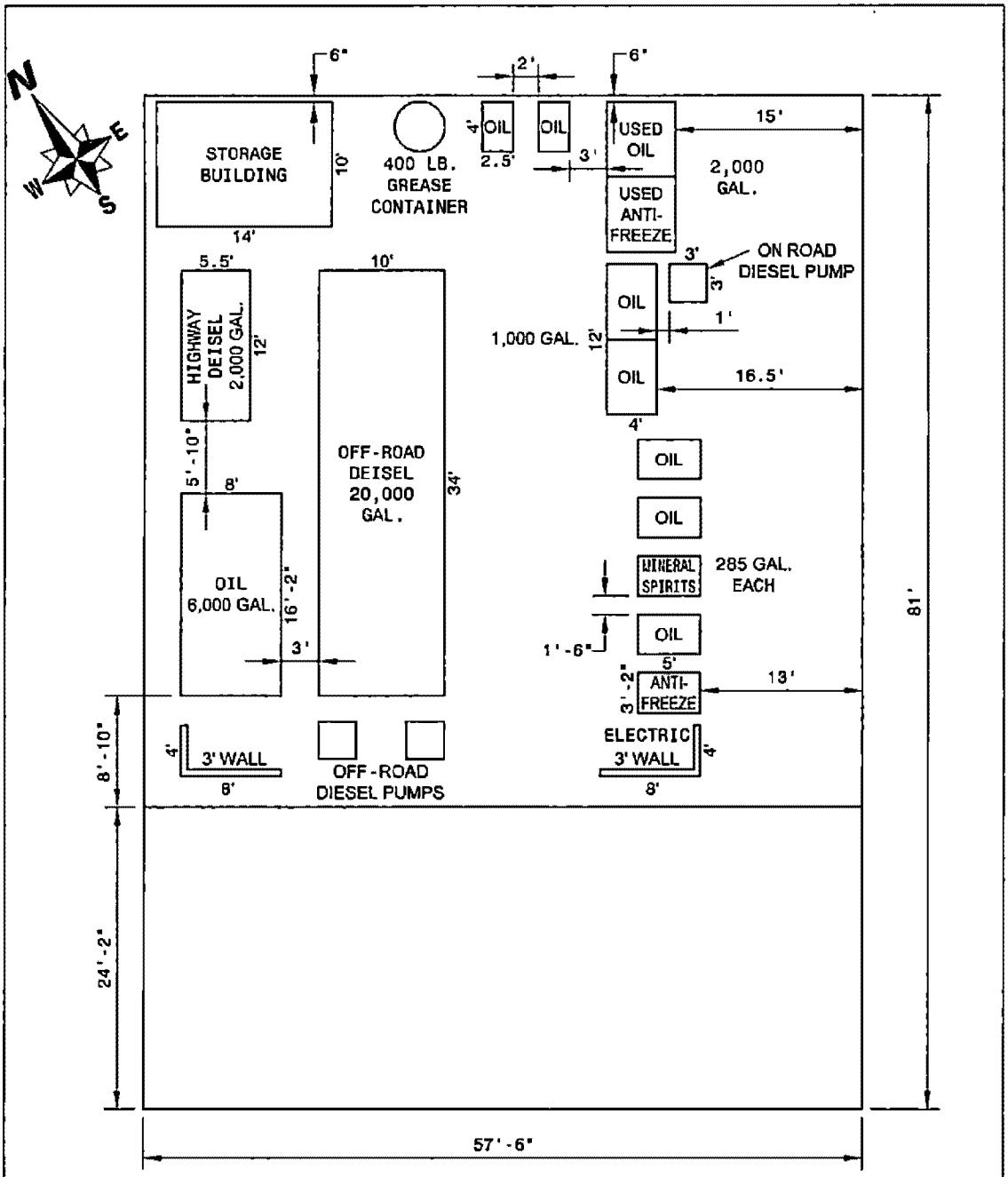


VINCENT HILLS QUARRY
WHITE ROCK QUARRIES, LLC
SHELBY COUNTY, ALABAMA

REVISED 04/08/2021

VINCENT HILLS
Vincent, Alabama

FIGURE 2
SITE MAP



CONCRETE PAD: 81' x 57'-6"
ALL TANKS DOUBLE WALLED

PROPOSED FUEL FARM DETAIL

N.T.S.

FIGURE 3

PROPOSED FUEL FARM DETAIL

VINCENT HILLS QUARRY - WHITE ROCK QUARRIES, LLC

SOURCE: Modified From: Construction Plans for: White Rock Quarries, Vincent Hills Plant.
Sheet 23 - Miscellaneous Details. AMEC Environmental & Infrastructures, Inc. August 31, 2012.

Appendices

Appendix A

SPCC Plan Cross Reference

SPCC Plan Cross Reference

Regulation		Location in SPCC Plan	Page
40 CFR 112.3 (d)		Engineer Certification	2
40 CFR 112.3 (e)		Location of SPCC Plan	4
40 CFR 112.4 (a)		Discharge Response Procedure	12
40 CFR 112.5 (b)		SPCC Plan Review	5
40 CFR 112.7		SPCC Plan Cross Reference Introduction	Appendix A 4
40 CFR 112.7 (a)(3)		Facility Information	7
(a)(3)(i)		Table 1	Table
(a)(3)(ii)		Discharge Prevention	9
(a)(3)(iii)		Drainage & Secondary Containment	9
(a)(3)(iv)		Discharge Discovery and Response	12, Appendix F
(a)(3)(v)		Disposal of Recovered Material	15
(a)(3)(vi)		Emergency Response Telephone Numbers	14
40 CFR 112.7 (a)(4)		Discharge Response Information & Form	12, Appendix F
40 CFR 112.7 (a)(5)		Discharge Response Procedure	12, Appendix F
40 CFR 112.7 (b)		Potential Discharge Flow & Direction	15
40 CFR 112.7 (c)		Secondary Containment	9
40 CFR 112.7 (d)&(e)		Inspections	11, Appendices C & D
40 CFR 112.7 (f)		Employee Training Record	10, Appendix B
40 CFR 112.7 (g)		Security	11
40 CFR 112.7 (h)		Facility Transfer Operations	8
40 CFR 112.7 (i)		AST Inspections	12, Appendix D
40 CFR 112.7 (j)		Introduction	4
40 CFR 112.8 (b)		Discharge Prevention	9
40 CFR 112.8 (c)	(1)	Compatible Material	7
	(2)	Secondary Containment	9
	(3)	Discharge Prevention	9
	(6)	AST Inspections	12
	(8)	Container Installation	9
	(10)	Correct/Response to Discharges	12, Appendix F
	(11)	Container Position	9
40 CFR 112.8 (d) (4)		Inspections	11

This table cross-references select SPCC Plan regulations of the Federal Register 12 CFR 40.
For a listing of SPCC regulations, see a complete set of 40 CFR 112.

Appendix B

Employee Training Record

Vincent Hills Quarry

Employee Training Record

- ☐ **1.** Location and contents of storage tanks
- ☐ **2.** Correct fuel-unloading procedure
- ☐ **3.** Correct fuel-transfer operations
- ☐ **4.** Secondary Containment Requirements
- ☐ **5.** Containment drainage procedure
- ☐ **6.** Inspection program requirements
- ☐ **7.** Immediate spill response procedure
- ☐ **8.** Location and correct use of cleanup materials

_____ _____

Employee Signature **Date**

_____ _____

Trainer Signature **Date**

Vincent Hills Quarry

Employee Training Record

- ☐ **1.** Location and contents of storage tanks
- ☐ **2.** Correct fuel-unloading procedure
- ☐ **3.** Correct fuel-transfer operations
- ☐ **4.** Secondary Containment Requirements
- ☐ **5.** Containment drainage procedure
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- ☐ **8.** Location and correct use of cleanup materials

_____ _____

Employee Signature **Date**

_____ _____

Trainer Signature **Date**

Vincent Hills Quarry

Employee Training Record

- ☐ **1.** Location and contents of storage tanks
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_____ _____

Employee Signature **Date**

_____ _____

Trainer Signature **Date**

Vincent Hills Quarry

Employee Training Record

- ☐ 1. Location and contents of storage tanks
- ☐ 2. Correct fuel-unloading procedure
- ☐ 3. Correct fuel-transfer operations
- ☐ 4. Secondary Containment Requirements
- ☐ 5. Containment drainage procedure
- ☐ 6. Inspection program requirements
- ☐ 7. Immediate spill response procedure
- ☐ 8. Location and correct use of cleanup materials

Employee Signature **Date**

Trainer Signature **Date**

Vincent Hills Quarry

Employee Training Record

- ☐ **1.** Location and contents of storage tanks
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Employee Signature **Date**

Trainer Signature **Date**

Vincent Hills Quarry

Employee Training Record

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- ☐ **6.** Inspection program requirements
- ☐ **7.** Immediate spill response procedure
- ☐ **8.** Location and correct use of cleanup materials

Employee Signature **Date**

Trainer Signature **Date**

Appendix C

Monthly SPCC Plan Inspection Form

Vincent Hills Quarry

MONTHLY INSPECTION

Date: _____/_____/_____	Pond 029		Storage/Temp Office				Comments
	Polyaluminum Chloride ChemTreat 890L		Polyaluminum Chloride ChemTreat 890L		Off-Road Diesel AST		
	55-gallons		55-gallons		2,000 gallons		
	Yes	No	Yes	No	Yes	No	
Is tank labeled to identify its contents?							
Bolts, rivets or seams are damaged?							
Tank is damaged, rusted or deteriorated?							
Tank supports are deteriorated or buckled?							
Level gauges or alarms are inoperative?							
Secondary containment is damaged?							
Water/product in interstitial space of double-walled tank?							
Secondary containment drain valve closed & locked?							
Fencing, gates or lighting is non-functional?							
Response equipment inventory complete?							
Take Digital Photographs							

Inspector Signature **Date Inspection Completed**

Inspector Name

Vincent Hills Quarry

MONTHLY INSPECTION

Date: _____/_____/_____	Pond 029		Storage/Temp Office				Comments
	Polyaluminum Chloride ChemTreat 890L		Polyaluminum Chloride ChemTreat 890L		Off-Road Diesel AST		
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Water/product in interstitial space of double-walled tank?							
Secondary containment drain valve closed & locked?							
Fencing, gates or lighting is non-functional?							
Response equipment inventory complete?							
Take Digital Photographs							

Inspector Signature **Date Inspection Completed**

Inspector Name

Vincent Hills Quarry

MONTHLY INSPECTION

Date: _____/_____/_____	Pond 029		Storage/Temp Office				Comments
	Polyaluminum Chloride ChemTreat 890L		Polyaluminum Chloride ChemTreat 890L		Off-Road Diesel AST		
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Take Digital Photographs							

Inspector Signature **Date Inspection Completed**

Inspector Name

Vincent Hills Quarry

MONTHLY INSPECTION

Date: _____/_____/_____	Pond 029		Storage/Temp Office				Comments
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Inspector Name

Vincent Hills Quarry

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Vincent Hills Quarry

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Vincent Hills Quarry

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Water/product in interstitial space of double-walled tank?							
Secondary containment drain valve closed & locked?							
Fencing, gates or lighting is non-functional?							
Response equipment inventory complete?							
Take Digital Photographs							

Inspector Signature **Date Inspection Completed**

Inspector Name

Vincent Hills Quarry

MONTHLY INSPECTION

Date: _____/_____/_____	Pond 029		Storage/Temp Office				Comments
	Polyaluminum Chloride ChemTreat 890L		Polyaluminum Chloride ChemTreat 890L		Off-Road Diesel AST		
	55-gallons		55-gallons		2,000 gallons		
	Yes	No	Yes	No	Yes	No	
Is tank labeled to identify its contents?							
Bolts, rivets or seams are damaged?							
Tank is damaged, rusted or deteriorated?							
Tank supports are deteriorated or buckled?							
Level gauges or alarms are inoperative?							
Secondary containment is damaged?							
Water/product in interstitial space of double-walled tank?							
Secondary containment drain valve closed & locked?							
Fencing, gates or lighting is non-functional?							
Response equipment inventory complete?							
Take Digital Photographs							

Inspector Signature **Date Inspection Completed**

Inspector Name

Vincent Hills Quarry

MONTHLY INSPECTION

Date: _____/_____/_____	Pond 029		Storage/Temp Office				Comments
	Polyaluminum Chloride ChemTreat 890L		Polyaluminum Chloride ChemTreat 890L		Off-Road Diesel AST		
	55-gallons		55-gallons		2,000 gallons		
	Yes	No	Yes	No	Yes	No	
Is tank labeled to identify its contents?							
Bolts, rivets or seams are damaged?							
Tank is damaged, rusted or deteriorated?							
Tank supports are deteriorated or buckled?							
Level gauges or alarms are inoperative?							
Secondary containment is damaged?							
Water/product in interstitial space of double-walled tank?							
Secondary containment drain valve closed & locked?							
Fencing, gates or lighting is non-functional?							
Response equipment inventory complete?							
Take Digital Photographs							

Inspector Signature **Date Inspection Completed**

Inspector Name

Vincent Hills Quarry

MONTHLY INSPECTION

Date: _____/_____/_____	Pond 029		Storage/Temp Office				Comments
	Polyaluminum Chloride ChemTreat 890L		Polyaluminum Chloride ChemTreat 890L		Off-Road Diesel AST		
	55-gallons		55-gallons		2,000 gallons		
	Yes	No	Yes	No	Yes	No	
Is tank labeled to identify its contents?							
Bolts, rivets or seams are damaged?							
Tank is damaged, rusted or deteriorated?							
Tank supports are deteriorated or buckled?							
Level gauges or alarms are inoperative?							
Secondary containment is damaged?							
Water/product in interstitial space of double-walled tank?							
Secondary containment drain valve closed & locked?							
Fencing, gates or lighting is non-functional?							
Response equipment inventory complete?							
Take Digital Photographs							

Inspector Signature **Date Inspection Completed**

Inspector Name

Vincent Hills Quarry

MONTHLY INSPECTION

Date: _____ / _____ / _____	Pond 029		Storage/Temp Office				Comments
	Polyaluminum Chloride ChemTreat 890L		Polyaluminum Chloride ChemTreat 890L		Off-Road Diesel AST		
	55-gallons		55-gallons		2,000 gallons		
	Yes	No	Yes	No	Yes	No	
Is tank labeled to identify its contents?							
Bolts, rivets or seams are damaged?							
Tank is damaged, rusted or deteriorated?							
Tank supports are deteriorated or buckled?							
Level gauges or alarms are inoperative?							
Secondary containment is damaged?							
Water/product in interstitial space of double-walled tank?							
Secondary containment drain valve closed & locked?							
Fencing, gates or lighting is non-functional?							
Response equipment inventory complete?							
Take Digital Photographs							

Inspector Signature **Date Inspection Completed**

Inspector Name

Vincent Hills Quarry

MONTHLY INSPECTION

Date: _____/_____/_____	Pond 029		Storage/Temp Office				Comments
	Polyaluminum Chloride ChemTreat 890L		Polyaluminum Chloride ChemTreat 890L		Off-Road Diesel AST		
	55-gallons		55-gallons		2,000 gallons		
	Yes	No	Yes	No	Yes	No	
Is tank labeled to identify its contents?							
Bolts, rivets or seams are damaged?							
Tank is damaged, rusted or deteriorated?							
Tank supports are deteriorated or buckled?							
Level gauges or alarms are inoperative?							
Secondary containment is damaged?							
Water/product in interstitial space of double-walled tank?							
Secondary containment drain valve closed & locked?							
Fencing, gates or lighting is non-functional?							
Response equipment inventory complete?							
Take Digital Photographs							

Inspector Signature **Date Inspection Completed**

Inspector Name

Appendix D

Annual Aboveground Storage Tank Integrity Inspection Form

Vincent Hills Quarry

ABOVEGROUND STORAGE TANK INTEGRITY ANNUAL SPCC PLAN INSPECTION*

Year: _____

Inspection will be conducted by designated personnel technically qualified to evaluate the structural integrity of tank walls, seams, gaskets, rivets, fittings, supports, and foundations and to identify if tanks are free of leaks and without any signs of corrosion, rust, pitting, etc.

Structural Condition

I. Polyaluminum Chloride at Sediment Pond _____

II. Polyaluminum Chloride in Storage _____

II. Off-Road Diesel AST _____

_____ _____

Date Inspection Initiated **Date Inspection Completed**

_____ _____

Name **Title or Designation**

Vincent Hills Quarry

ABOVEGROUND STORAGE TANK INTEGRITY ANNUAL SPCC PLAN INSPECTION*

Year: _____

Inspection will be conducted by designated personnel technically qualified to evaluate the structural integrity of tank walls, seams, gaskets, rivets, fittings, supports, and foundations and to identify if tanks are free of leaks and without any signs of corrosion, rust, pitting, etc.

Structural Condition

I. Polyaluminum Chloride at Sediment Pond _____

II. Polyaluminum Chloride in Storage _____

II. Off-Road Diesel AST _____

_____ _____

Date Inspection Initiated **Date Inspection Completed**

_____ _____

Name **Title or Designation**

Vincent Hills Quarry

ABOVEGROUND STORAGE TANK INTEGRITY ANNUAL SPCC PLAN INSPECTION*

Year: _____

Inspection will be conducted by designated personnel technically qualified to evaluate the structural integrity of tank walls, seams, gaskets, rivets, fittings, supports, and foundations and to identify if tanks are free of leaks and without any signs of corrosion, rust, pitting, etc.

Structural Condition

I. Polyaluminum Chloride at Sediment Pond _____

II. Polyaluminum Chloride in Storage _____

II. Off-Road Diesel AST _____

_____ _____

Date Inspection Initiated **Date Inspection Completed**

_____ _____

Name **Title or Designation**

Vincent Hills Quarry

ABOVEGROUND STORAGE TANK INTEGRITY ANNUAL SPCC PLAN INSPECTION*

Year: _____

Inspection will be conducted by designated personnel technically qualified to evaluate the structural integrity of tank walls, seams, gaskets, rivets, fittings, supports, and foundations and to identify if tanks are free of leaks and without any signs of corrosion, rust, pitting, etc.

Structural Condition

I. Polyaluminum Chloride at Sediment Pond _____

II. Polyaluminum Chloride in Storage _____

II. Off-Road Diesel AST _____

_____ _____

Date Inspection Initiated **Date Inspection Completed**

_____ _____

Name **Title or Designation**

Vincent Hills Quarry

ABOVEGROUND STORAGE TANK INTEGRITY ANNUAL SPCC PLAN INSPECTION*

Year: _____

Inspection will be conducted by designated personnel technically qualified to evaluate the structural integrity of tank walls, seams, gaskets, rivets, fittings, supports, and foundations and to identify if tanks are free of leaks and without any signs of corrosion, rust, pitting, etc.

Structural Condition

I. Polyaluminum Chloride at Sediment Pond _____

II. Polyaluminum Chloride in Storage _____

II. Off-Road Diesel AST _____

_____ _____

Date Inspection Initiated **Date Inspection Completed**

_____ _____

Name **Title or Designation**

Appendix E

Containment Drainage Form

Vincent Hills Quarry

Intercompany Correspondence
CONTAINMENT DRAINAGE

Today's Date: _____

Personnel filling out this form (name): _____

Personnel who performed drainage (name): _____

The Secondary containment of which **Tank** was drained: _____

Date & Time Drained: _____

Estimated **volume** discharged (gallons): _____

Personnel who closed and locked Drain Valve (name): _____

Date & Time Drain Valve was closed and locked: _____

Mark the appropriate Procedure used:

☐ ***Procedure A.*** There was no oil film on top of the rainwater. Therefore, all the rainwater was discharged.

☐ ***Procedure B.*** There was a small film on the rainwater. The oil was absorbed using oil absorbent pillows and blankets prior to rainwater being discharged.

☐ ***Procedure C.*** There was a substantial amount of oil mixed with the rainwater. The mixture was pumped out and disposed of in an appropriate manner.

☐ ***Procedure D.*** There was a substantial amount of oil floating on the rainwater. The rainwater was slowly discharged until the oil approached the drain line. The oil was pumped out and disposed of in an appropriate manner.

Vincent Hills Quarry

Intercompany Correspondence
CONTAINMENT DRAINAGE

Today's Date: _____

Personnel filling out this form (name): _____

Personnel who performed drainage (name): _____

The Secondary containment of which **Tank** was drained: _____

Date & Time Drained: _____

Estimated **volume** discharged (gallons): _____

Personnel who closed and locked Drain Valve (name): _____

Date & Time Drain Valve was closed and locked: _____

Mark the appropriate Procedure used:

☐ ***Procedure A.*** There was no oil film on top of the rainwater. Therefore, all the rainwater was discharged.

☐ ***Procedure B.*** There was a small film on the rainwater. The oil was absorbed using oil absorbent pillows and blankets prior to rainwater being discharged.

☐ ***Procedure C.*** There was a substantial amount of oil mixed with the rainwater. The mixture was pumped out and disposed of in an appropriate manner.

☐ ***Procedure D.*** There was a substantial amount of oil floating on the rainwater. The rainwater was slowly discharged until the oil approached the drain line. The oil was pumped out and disposed of in an appropriate manner.

Vincent Hills Quarry

Intercompany Correspondence
CONTAINMENT DRAINAGE

Today's Date: _____

Personnel filling out this form (name): _____

Personnel who performed drainage (name): _____

The Secondary containment of which **Tank** was drained: _____

Date & Time Drained: _____

Estimated **volume** discharged (gallons): _____

Personnel who closed and locked Drain Valve (name): _____

Date & Time Drain Valve was closed and locked: _____

Mark the appropriate Procedure used:

☐ ***Procedure A.*** There was no oil film on top of the rainwater. Therefore, all the rainwater was discharged.

☐ ***Procedure B.*** There was a small film on the rainwater. The oil was absorbed using oil absorbent pillows and blankets prior to rainwater being discharged.

☐ ***Procedure C.*** There was a substantial amount of oil mixed with the rainwater. The mixture was pumped out and disposed of in an appropriate manner.

☐ ***Procedure D.*** There was a substantial amount of oil floating on the rainwater. The rainwater was slowly discharged until the oil approached the drain line. The oil was pumped out and disposed of in an appropriate manner.

Vincent Hills Quarry

Intercompany Correspondence
CONTAINMENT DRAINAGE

Today's Date: _____

Personnel filling out this form (name): _____

Personnel who performed drainage (name): _____

The Secondary containment of which **Tank** was drained: _____

Date & Time Drained: _____

Estimated **volume** discharged (gallons): _____

Personnel who closed and locked Drain Valve (name): _____

Date & Time Drain Valve was closed and locked: _____

Mark the appropriate Procedure used:

☐ ***Procedure A.*** There was no oil film on top of the rainwater. Therefore, all the rainwater was discharged.

☐ ***Procedure B.*** There was a small film on the rainwater. The oil was absorbed using oil absorbent pillows and blankets prior to rainwater being discharged.

☐ ***Procedure C.*** There was a substantial amount of oil mixed with the rainwater. The mixture was pumped out and disposed of in an appropriate manner.

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Vincent Hills Quarry

Intercompany Correspondence
CONTAINMENT DRAINAGE

Today's Date: _____

Personnel filling out this form (name): _____

Personnel who performed drainage (name): _____

The Secondary containment of which **Tank** was drained: _____

Date & Time Drained: _____

Estimated **volume** discharged (gallons): _____

Personnel who closed and locked Drain Valve (name): _____

Date & Time Drain Valve was closed and locked: _____

Mark the appropriate Procedure used:

☐ ***Procedure A***. There was no oil film on top of the rainwater. Therefore, all the rainwater was discharged.

☐ ***Procedure B***. There was a small film on the rainwater. The oil was absorbed using oil absorbent pillows and blankets prior to rainwater being discharged.

☐ ***Procedure C***. There was a substantial amount of oil mixed with the rainwater. The mixture was pumped out and disposed of in an appropriate manner.

☐ ***Procedure D***. There was a substantial amount of oil floating on the rainwater. The rainwater was slowly discharged until the oil approached the drain line. The oil was pumped out and disposed of in an appropriate manner.

Appendix F

Discharge Information Form

DISCHARGE INFORMATION

Discharge Information			
1. Facility: Vincent Hills Quarry Facility Address: 4324 County Road 85, Vincent, AL 35178 *(Located east of intersection of CR-463 and CR-85)* Mine Manager: Steve Harbin Direct Phone: 305-505-9868			
2. Date of form completion:			
3. Source/Location of discharge (lat/long, if known):			
4. Date of Confirmed Release (receipt of test results):			
5. Type of Material discharged (gasoline, used/waste soil, lube oil, etc):			
6. Estimated discharge quantity (gallons):			
7. Discharge affected: [ ] Air [ ] Water [ ] Groundwater [ ] Surface Water			
8. Method of discovery:			
9. Cause of the release:			
10. Actions taken to stop discharge:			
11. Is/Was an evacuation necessary?			
Organizations Contact Information			
*Report a Discharge **in any amount** to the following:*			
Contact		**Date and Time contacted**	**Name of Individual Receiving Call**
Mine Manager: Steve Harbin	305-505-9868		
*Report a Discharge **of more than 25 gallons** to the following:*			
Emergency **Vincent Fire Dept.** **Vincent Police Dept.** **Shelby Co. EMA**	**911** 205-672-8070 205-672-2261 205-669-3999		
ADEM Ombudsman Field Operations (After Hours)	800-533-2336 205-942-6168 800-843-0699		
National Response Center	800-424-8802		
To the best of my knowledge and belief, all information on this form is true, accurate and complete. **Printed Name of Owner, Operator or Authorized Person** **Date**			

Appendix G

Reserved to Incorporate Contractor SPCC Plan as Approved by WRQ

Appendix D

Wood Construction Plans

CONSTRUCTION PLANS FOR:

WHITE ROCK QUARRIES

VINCENT HILLS QUARRY

WATER CLARIFICATION AREA

SHELBY COUNTY, ALABAMA

WOOD PROJECT NUMBER: 15420.4

INDEX OF DRAWINGS

Sheet Number	Sheet Title
C1	COVER SHEET
C2	GENERAL NOTES
C3	AERIAL OF PROJECT SITE
C4	EXISTING TOPOGRAPHY AND SITE FEATURES
C5	EXISTING GEOLOGIC PLAN & PROFILE
C6	OVERALL SITE PLAN
C7	HORIZONTAL LAYOUT PLAN
C8	POND A WEST AND EAST GRADING PLAN
C9	POND A WEST AND EAST SECTIONS
C10	POND A WEST AND EAST OUTFALL DETAILS
C11	POND A WEST AND EAST OUTFALL DETAILS
C12	POND B GRADING PLAN
C13	POND B SECTIONS
C14	POND B OUTFALL DETAILS
C15	POND B OUTFALL DETAILS
C16	POND B LINER PLAN
C17	POND B LINER DETAILS
C18	POND B EMERGENCY OVERFLOW SPILLWAY
C19	DISCHARGE PIPE GRADING PLAN
C20	DISCHARGE PIPE PROFILE, SECTIONS AND DETAILS
C21	DRY SEDIMENT STORAGE AREA GRADING PLAN
C22	DRY SEDIMENT STORAGE AREA SECTIONS AND DETAILS
C23	VISUAL BUFFER BERM GRADING AND COORDINATE PLAN
C24	VISUAL BUFFER BERM GRADING AND COORDINATE PLAN
C25	VISUAL BUFFER BERM SECTION AND COORDINATE TABULATION
C26	MANHOLE DETAILS

Project Location

SITE LOCATION MAP

SHELBY COUNTY, ALABAMA

SECTION 13, TOWNSHIP 19 SOUTH, RANGE 2 EAST

% PLANS

DATE

REVISIONS

wood.

ENVIRONMENT & INFRASTRUCTURE SOLUTIONS, INC.

[illegible]

Phone: [illegible]

Fax: [illegible]

[illegible]

CA-[illegible]

JEFFREY D. PEQUEEN, P.E.

AL REG. NO. [illegible]

DATE

PROJECT:

WATER CLARIFICATION AREA

VINCENT, ALABAMA

VINCENT HILLS QUARRY

WHITE ROCK QUARRIES

[illegible] NW 122ND AVENUE

HIALIAH, FL 33018

WOOD PROJECT No.

15420.4

REVISIONS

NO.	DATE	BY	APPROVED
	X	X	X

DESIGNED BY: MPR

DRAWN BY: NLP

CHECKED BY: MPR

APPROVED BY:

DATE: [illegible]

SHEET TITLE:

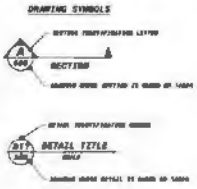
COVER SHEET

SHEET NUMBER: C1

REV. #: X

SHEET X OF X SHEETS

DRAWING SYMBOLS



A
400
SECTION

DETAIL TITLE
SCALE

ABBREVIATIONS

[illegible]

wood.

ENVIRONMENT & INFRASTRUCTURE SOLUTIONS, INC.
2000 E Edgewood Drive, Suite 212
Lakeland, FL 33803
Phone: 1.863.647.2345
Fax: 1.863.647.2802
www.woodpc.com
CA-0000

JEFFREY B. PEQUEEN, P.E.
FL. REG. NO. 7[illegible]

DATE

PROJECT:

WATER CLARIFICATION AREA

VINCENT, ALABAMA

VINCENT HILLS

VINCENT HILLS QUARRY

WHITE ROCK QUARRIES
10000 NW 122ND AVENUE
HIALEAH, FL 33018

WOOD PROJECT No:
15420.A

REVISIONS

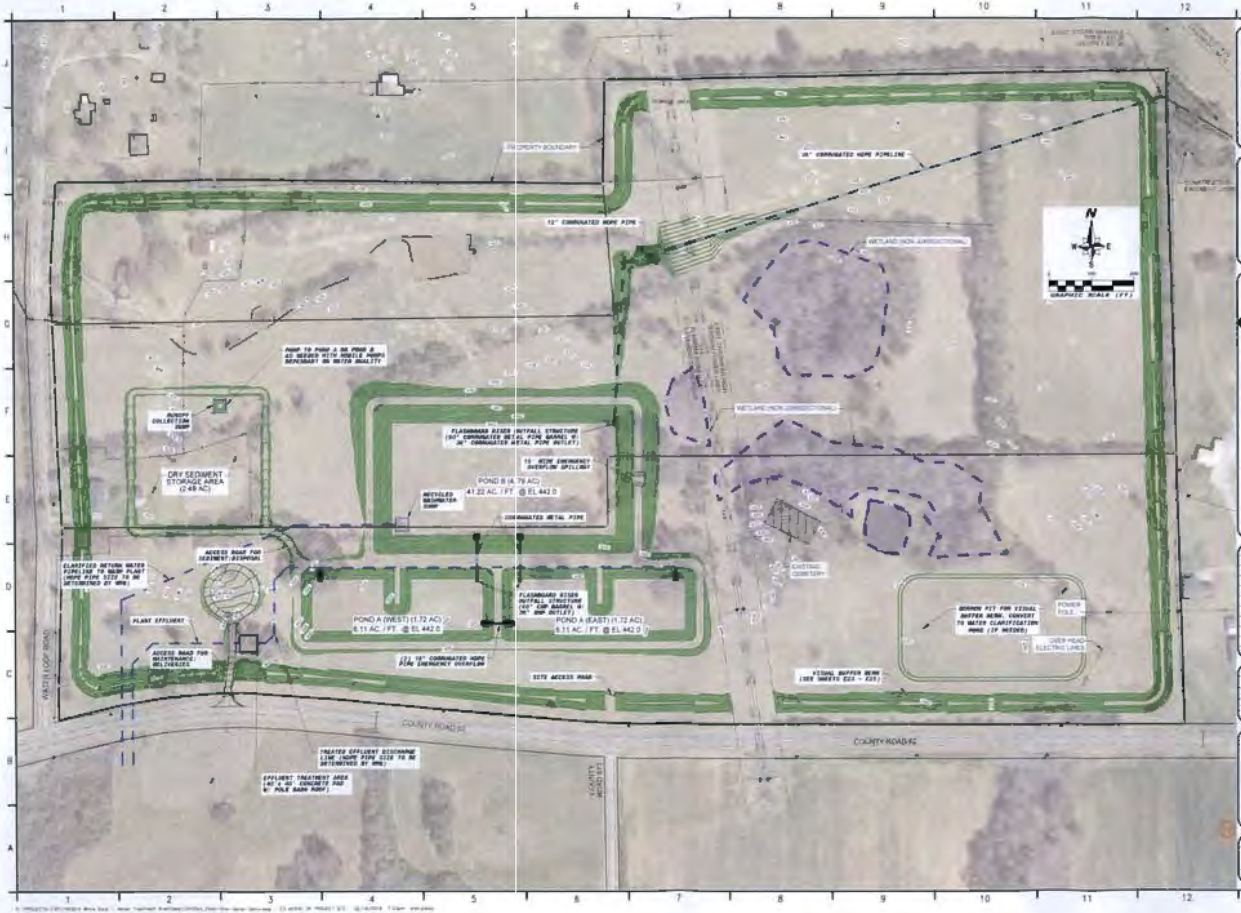
NO.	DATE	BY	APPROVED
	X	X	X

DESIGNED BY:	MPK
DRAWN BY:	KLP
CHECKED BY:	MPK
APPROVED BY:	
DATE:	6/18/19

SHEET TITLE:

GENERAL NOTES

SHEET NUMBER:	REV #
C2	X
SHEET X OF X SHEETS	



wood.

ENVIRONMENT & INFRASTRUCTURE SOLUTIONS, INC.
2000 E Edgewood Drive, Suite 214
Lakeland, FL 33803
Phone: 1.863.667.2345
Fax: 1.863.667.2002
www.woodplc.com
CA-0392

JEFFREY D. PEQUEEN, P.E.
AL. REG. NO. XXX
DATE

PROJECT:

WATER CLARIFICATION AREA

VINCENT, ALABAMA

VINCENT HILLS QUARRY

WHITE ROCK QUARRIES
16300 NW 122ND AVENUE
HIALIAH, FL 33018

WOOD PROJECT No:
15420.4

REVISIONS			
NO.	DATE	BY	APPROVED
X	X	X	X

DESIGNED BY:	MPR
DRAWN BY:	ALP
CHECKED BY:	MPR
APPROVED BY:	
DATE:	6/18/19

SHEET TITLE:

AERIAL OF PROJECT SITE

SHEET NUMBER:	REV. #
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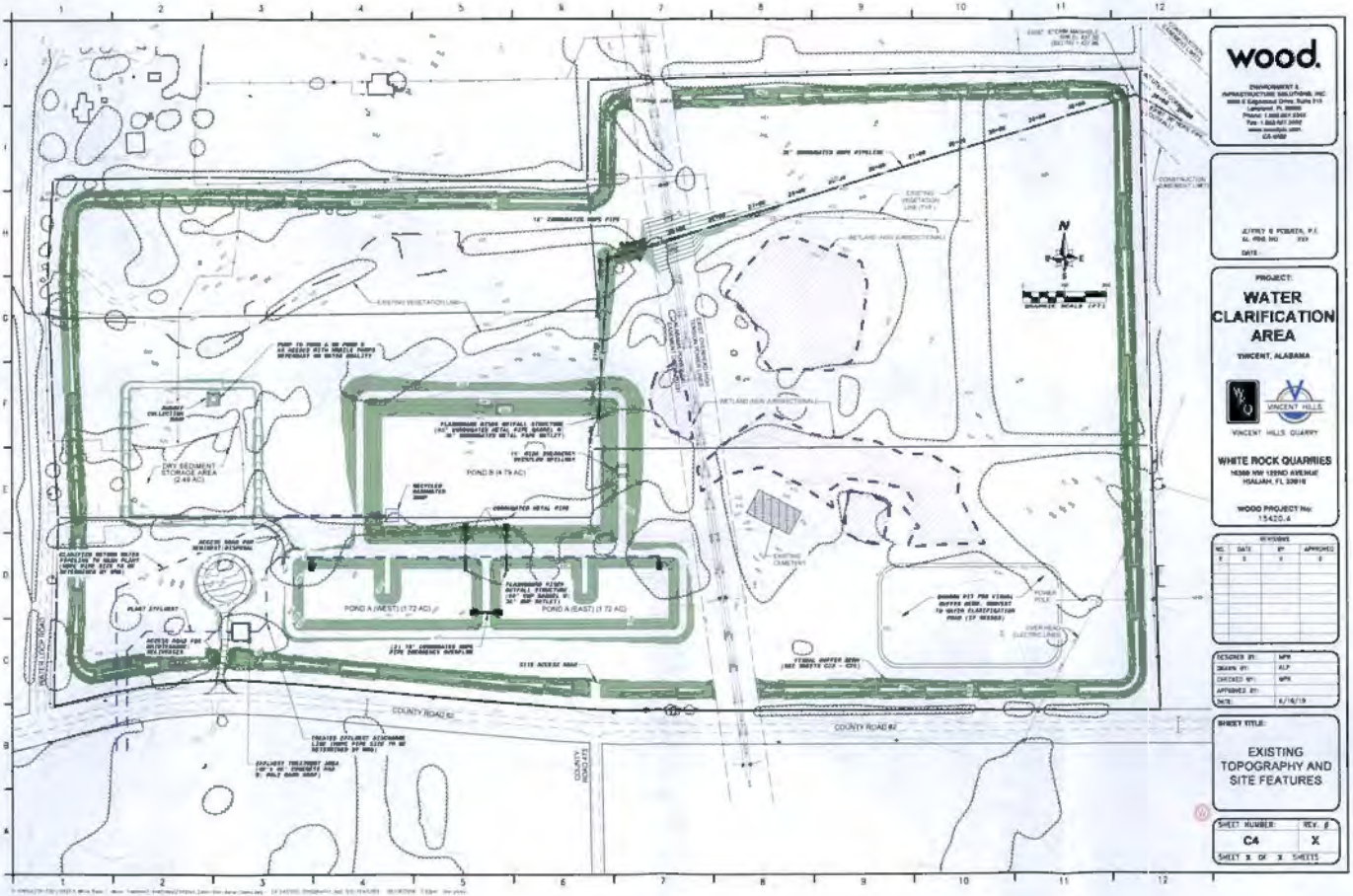
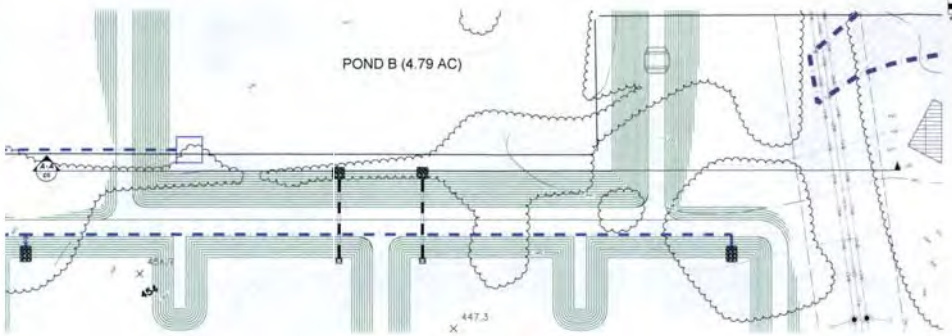
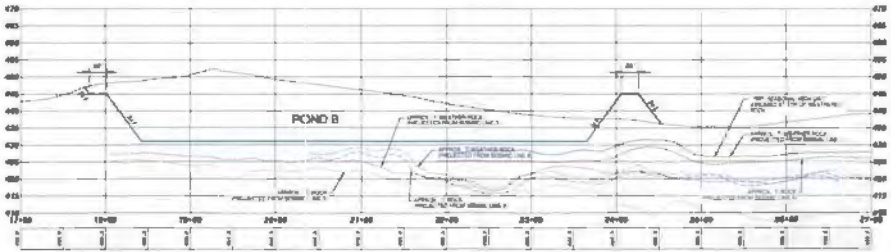
SHEET X OF X SHEETS



wood.
PROJECT:
WATER CLARIFICATION AREA
VINCENT, ALABAMA
VINCENT HILLS
VINCENT HILLS QUARRY
WHITE ROCK QUARRIES
WOOD PROJECT No:
15420.4
REVISIONS
DESIGNED BY:
DRAWN BY:
CHECKED BY:
APPROVED BY:
DATE:
SHEET TITLE:
EXISTING TOPOGRAPHY AND SITE FEATURES
SHEET NUMBER:
C4
REV. #
X
SHEET X OF X SHEETS
DRY SEDIMENT STORAGE AREA (2.49 AC)
POND B (4.79 AC)
POND A (WEST) (1.72 AC)
POND A (EAST) (1.72 AC)
EXISTING VEGETATION LINE
WETLAND (NON-JURISDICTIONAL)
EXISTING CEMETERY
POWER POLE
OVER HEAD ELECTRIC LINES
SITE ACCESS ROAD
COUNTY ROAD 62
COUNTY ROAD 47
WATER LOOP ROAD





SECTION A-A

NOTE:

DATA REFERENCED TO GEOPHYSICAL INVESTIGATION REPORT DATED JULY 5, 2018.

wood.

PROJECT:

WATER CLARIFICATION AREA

VINCENT, ALABAMA

VINCENT HILLS QUARRY

WHITE ROCK QUARRIES

WOOD PROJECT No.: 15420.4

REVISIONS			
NO.	DATE	BY	APPROVED
1	2	3	4

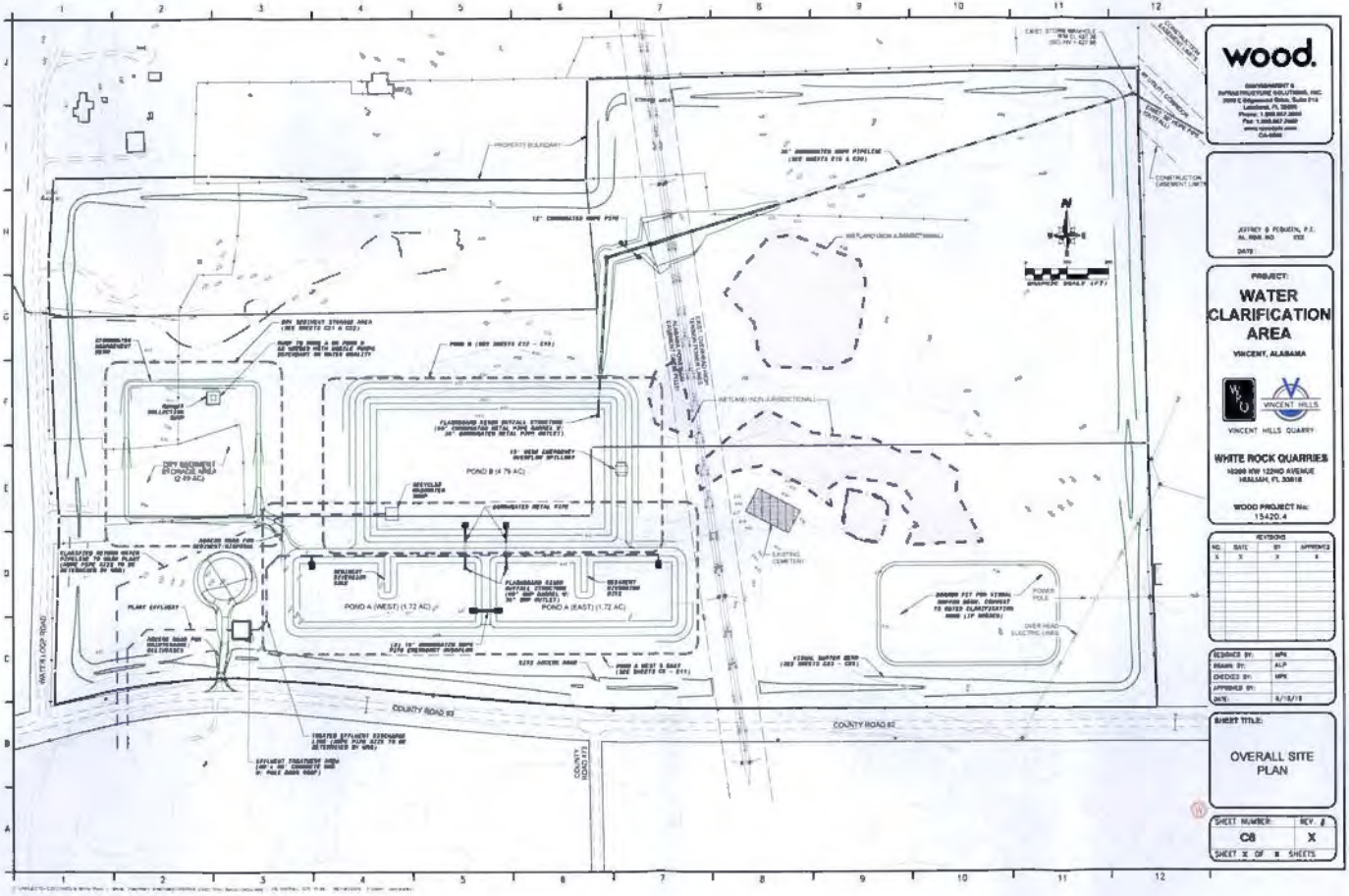
DESIGNED BY:	MPK
DRAWN BY:	ALP
CHECKED BY:	MPK
APPROVED BY:	
DATE:	6/18/19

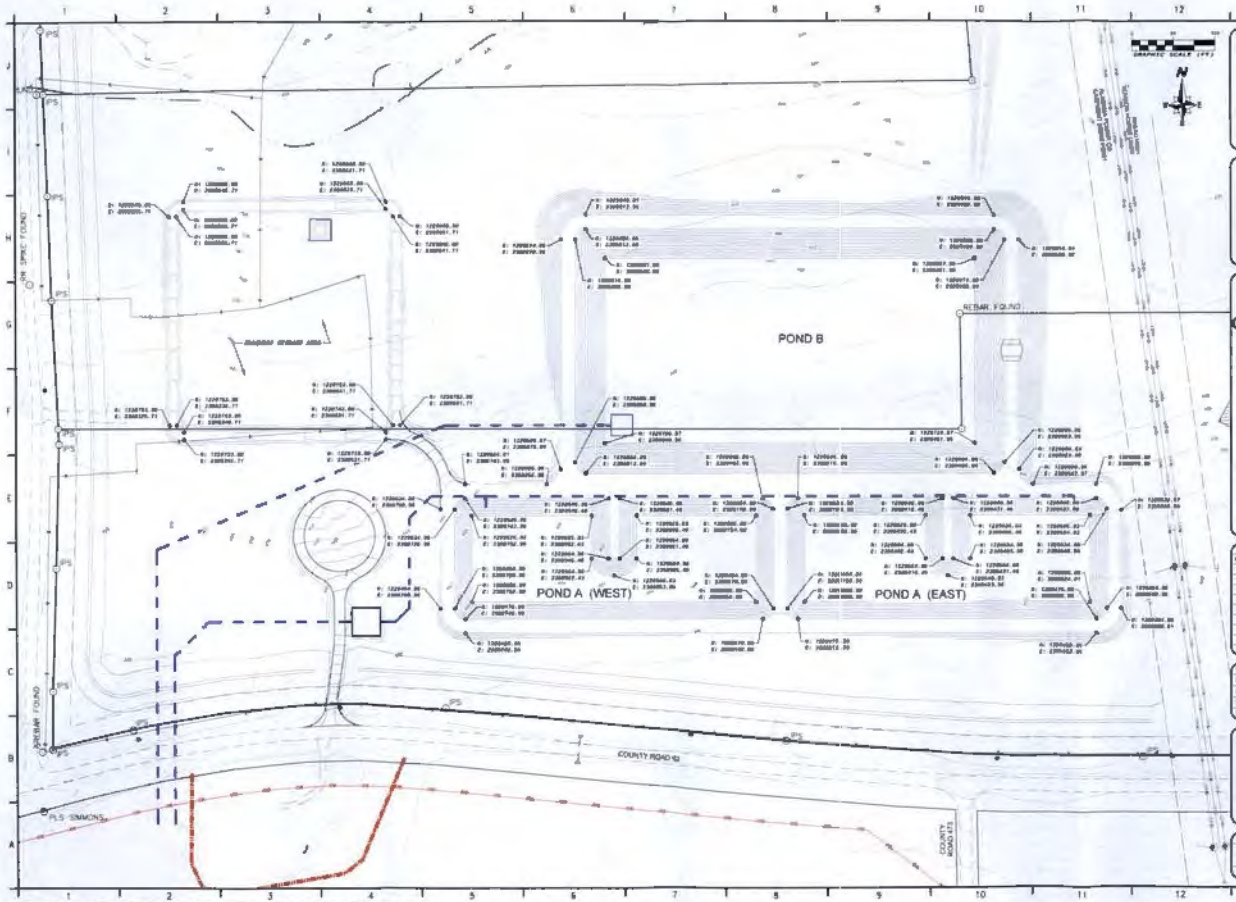
SHEET TITLE:

EXISTING GEOLOGIC PLAN & PROFILE

SHEET NUMBER	REV. #
C5	X

SHEET X OF X SHEETS


PROPERTY BOUNDARY
12" CORRUGATED HDPE P310
30" CORRUGATED HDPE PIPELINE
(SEE SHEETS C10 & C20)
CONSTRUCTION EASEMENT LIMITS
EXISTING CONTOUR
DRY SEDIMENT STORAGE AREA
(SEE SHEETS C21 & C22)
POND B (SEE SHEETS C12 - C15)
FLASHBOARD RISER INFLOW STRUCTURE
(24" CORRUGATED METAL PIPE RISER) &
30" CORRUGATED METAL PIPE OUTLET)
10' VEM EMERGENCY OVERFLOW SPILLWAY
POND B (4.79 AC)
RECYCLE WELL
DRY SEDIMENT STORAGE AREA
(2.49 AC)
CORRUGATED METAL PIPE
200CBS ROAD FOR MIDWEST ACCESS
FLASHBOARD RISER INFLOW STRUCTURE
(30" CMP RISER) &
30" CMP OUTLET)
MIDWEST SEDIMENT BASIN
POND A (WEST) (1.72 AC)
POND A (EAST) (1.72 AC)
PLANT EFFLUENT
(2) 15" CORRUGATED HDPE P274 EMERGENCY SPILLWAY
EXISTING ASPHALT ROAD
POND A WEST & EAST
(SEE SHEETS C9 - C11)
EXISTING CEMETERY
200CBS PET FOR VERBAL BARRIER MARK. CONNECT TO RATED CLARIFICATION BASIN (IF NEEDED)
POWER POLE
OVER HEAD ELECTRIC LINES
VERBAL BARRIER MARK
(SEE SHEETS C23 - C25)
WATER LOOP ROAD
COUNTY ROAD 93
COUNTY ROAD 92
COUNTY HIGHWAY
TREATED EFFLUENT DISCHARGE
EFFLUENT TREATMENT AREA
N
W
E
S
GRAPHIC SCALE (FT)
wood.
JEFFREY D PEQUEEN, P.E.
DATE:
PROJECT:
WATER CLARIFICATION AREA
VINCENT, ALABAMA
VINCENT HILLS QUARRY
WHITE ROCK QUARRIES
16388 NW 122ND AVENUE
HAMILTON, FL 32568
WOOD PROJECT No:
15420.4
REVISIONS
NO. DATE BY APPROVED
X X X X
DESIGNED BY: MPK
DRAWN BY: ALP
CHECKED BY: MPK
APPROVED BY:
DATE: 6/15/18
SHEET TITLE:
OVERALL SITE PLAN
SHEET NUMBER: C8
REV. #: X
SHEET X OF X SHEETS



wood.

ENVIRONMENT & INFRASTRUCTURE SOLUTIONS, INC.
[illegible]
Lakeland, FL [illegible]
Phone: 1.863.667.2640
Fax: 1.863.667.2662
www.woodplc.com
CA-[illegible]

JEFFREY D. PEDERSEN, P.E.
AL REG. NO. [illegible]
DATE:

PROJECT:

WATER CLARIFICATION AREA

VINCENT, ALABAMA

VINCENT HILLS QUARRY

WHITE ROCK QUARRIES
[illegible] NW 120ND AVENUE
HIALIAH, FL 33018

WOOD PROJECT No:
15420.4

REVISIONS

NO.	DATE	BY	APPROVED
X	X	X	X

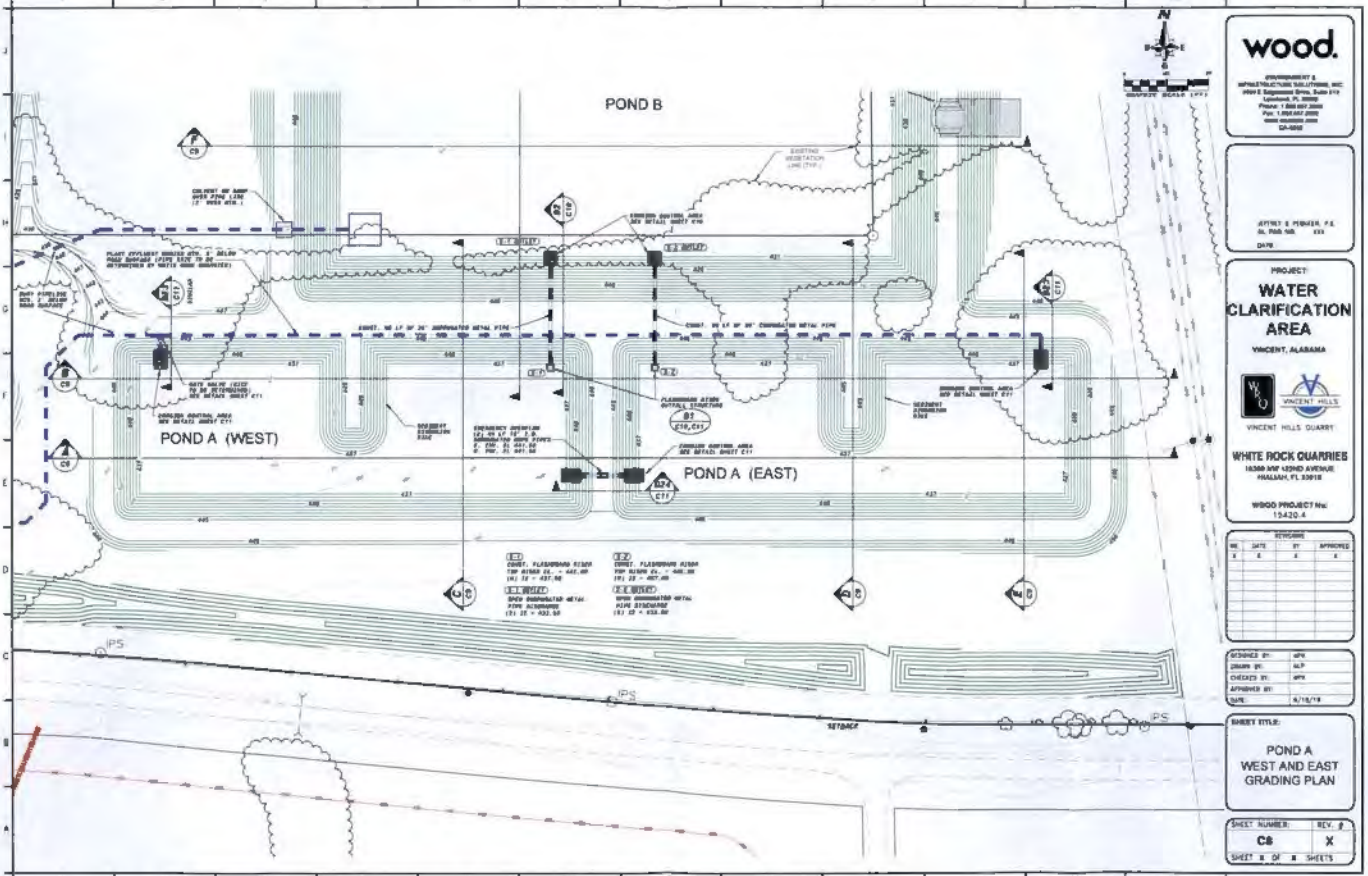
DESIGNED BY:	MPR
DRAWN BY:	ALP
CHECKED BY:	MPR
APPROVED BY:	
DATE:	9/16/16

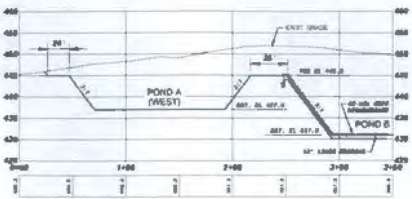
SHEET TITLE:

HORIZONTAL LAYOUT PLAN

SHEET NUMBER:	REV. #
C7	X

SHEET X OF X SHEETS


POND B
POND A (WEST)
POND A (EAST)
IPS
SETBACK
wood.
PROJECT:
WATER CLARIFICATION AREA
VINCENT, ALABAMA
VINCENT HILLS QUARRY
WHITE ROCK QUARRIES
WSGD PROJECT No:
15420.4
SHEET TITLE:
POND A WEST AND EAST GRADING PLAN
SHEET NUMBER:
C8
REV. #
X



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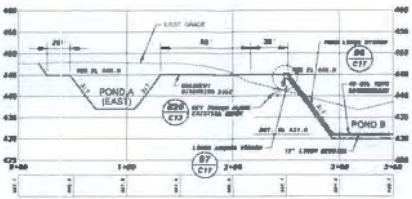

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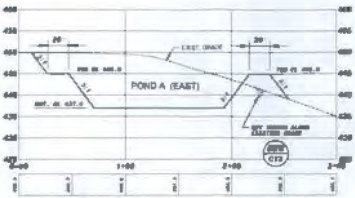

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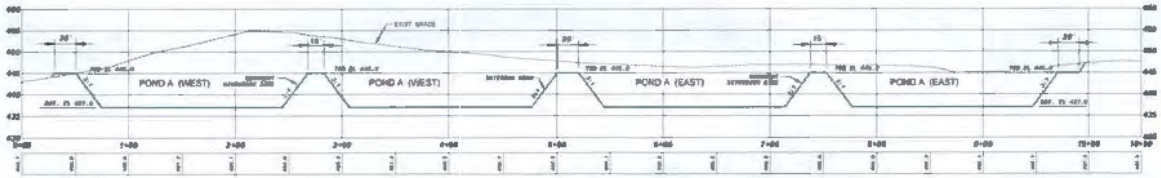

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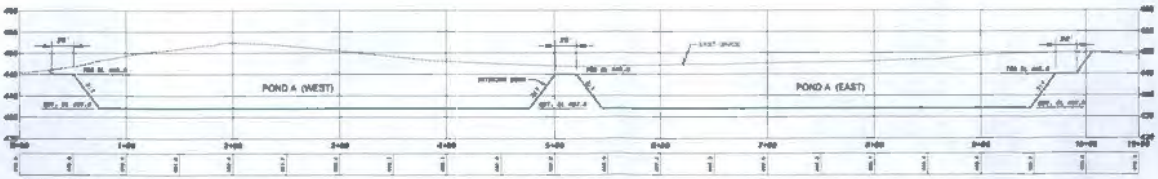


SECTION A

wood.

ENVIRONMENT & INFRASTRUCTURE SOLUTIONS, INC.

JEFFREY S. PEDUZZI, P.E.

DATE:

PROJECT:

WATER CLARIFICATION AREA

VINCENT, ALABAMA

VINCENT HILLS QUARRY

WHITE ROCK QUARRIES

18300 NW 122ND AVENUE
HIALIAH, FL 33014

WOOD PROJECT No:
15420.4

REVISIONS

NO.	DATE	BY	APPROVED
X	X	X	X

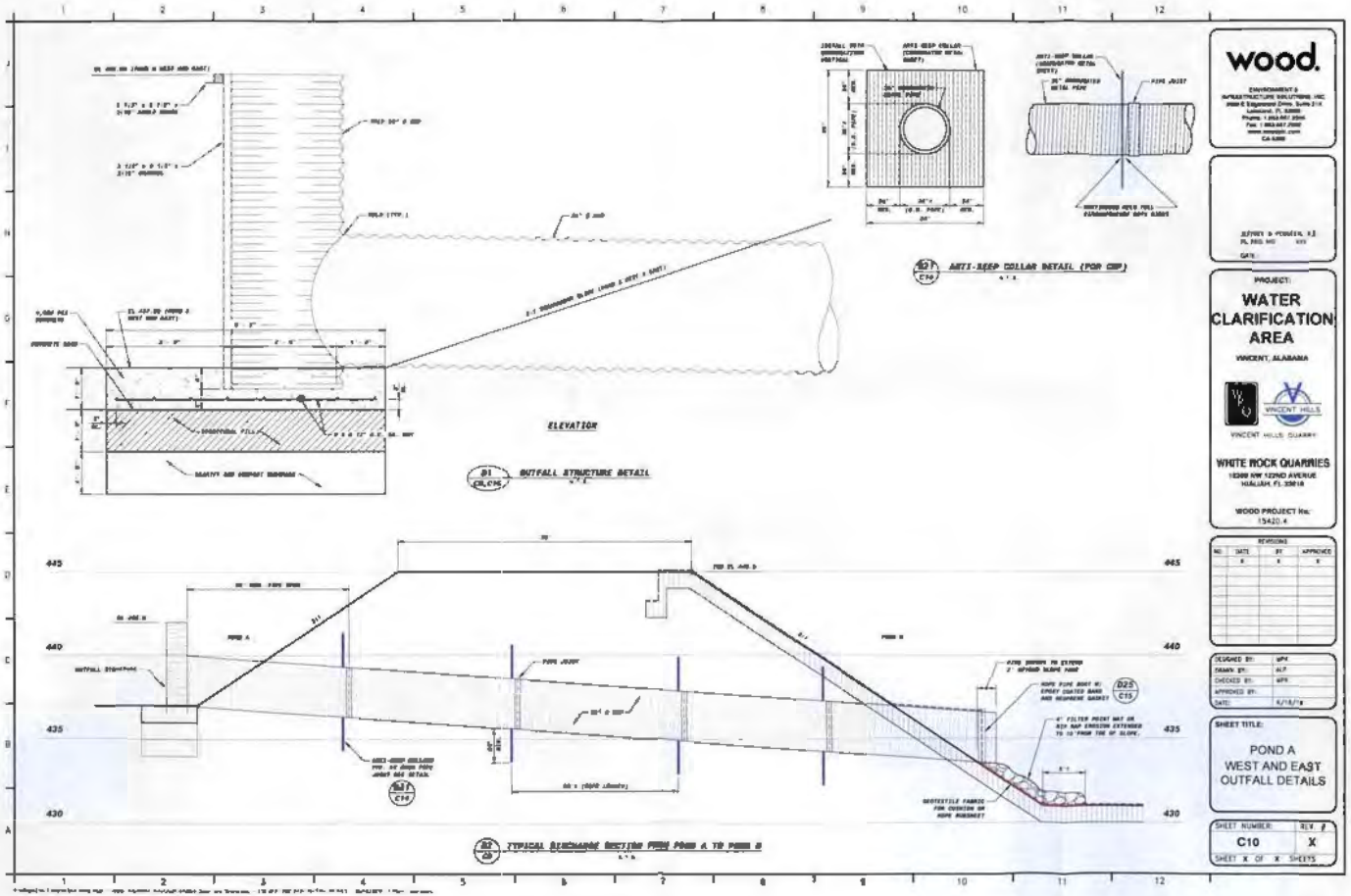
DESIGNED BY:	MPK
DRAWN BY:	ALP
CHECKED BY:	MPK
APPROVED BY:	
DATE:	6/18/19

SHEET TITLE:

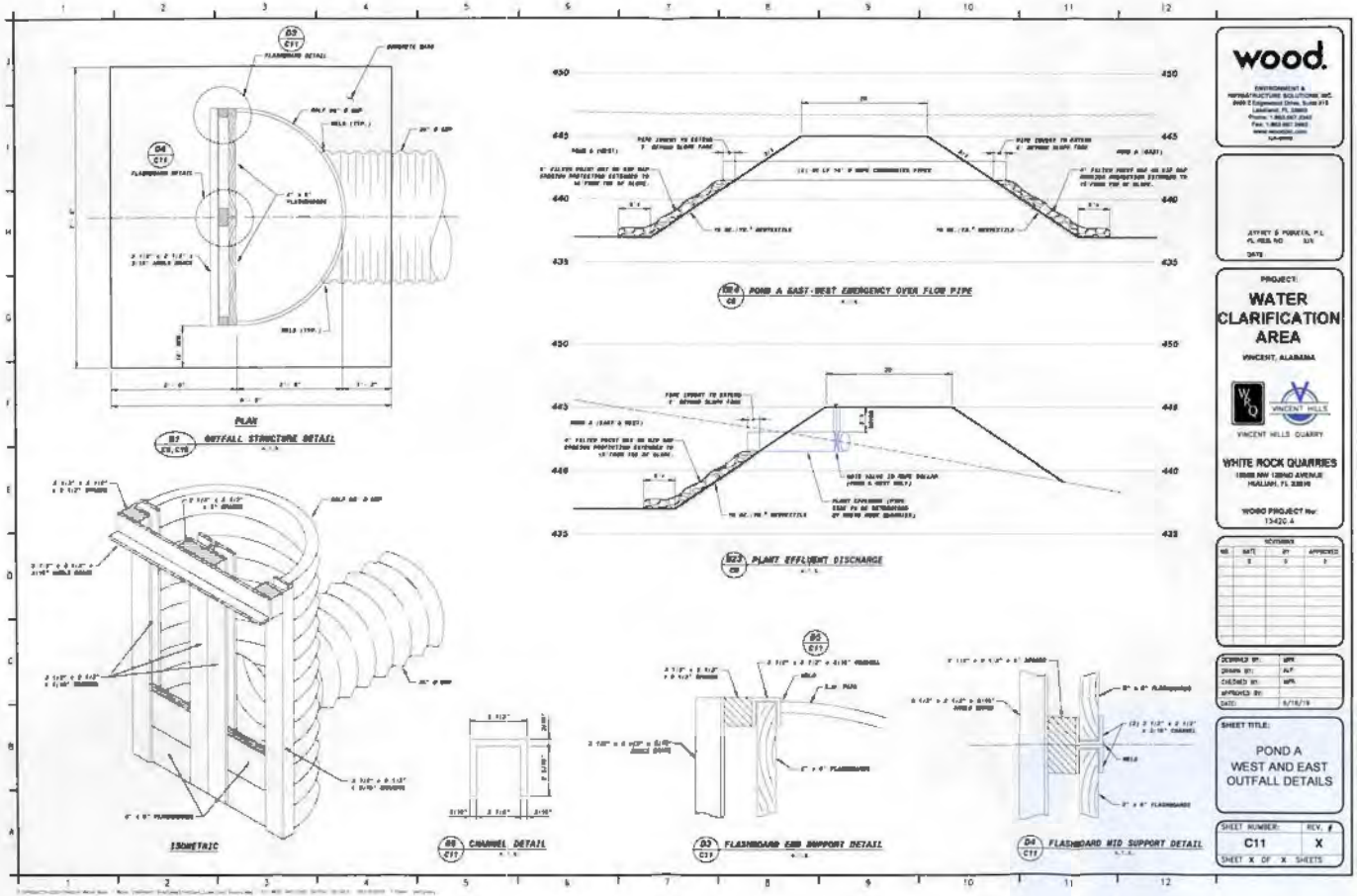
POND A
WEST AND EAST
SECTIONS

SHEET NUMBER:	REV. #
C9	X

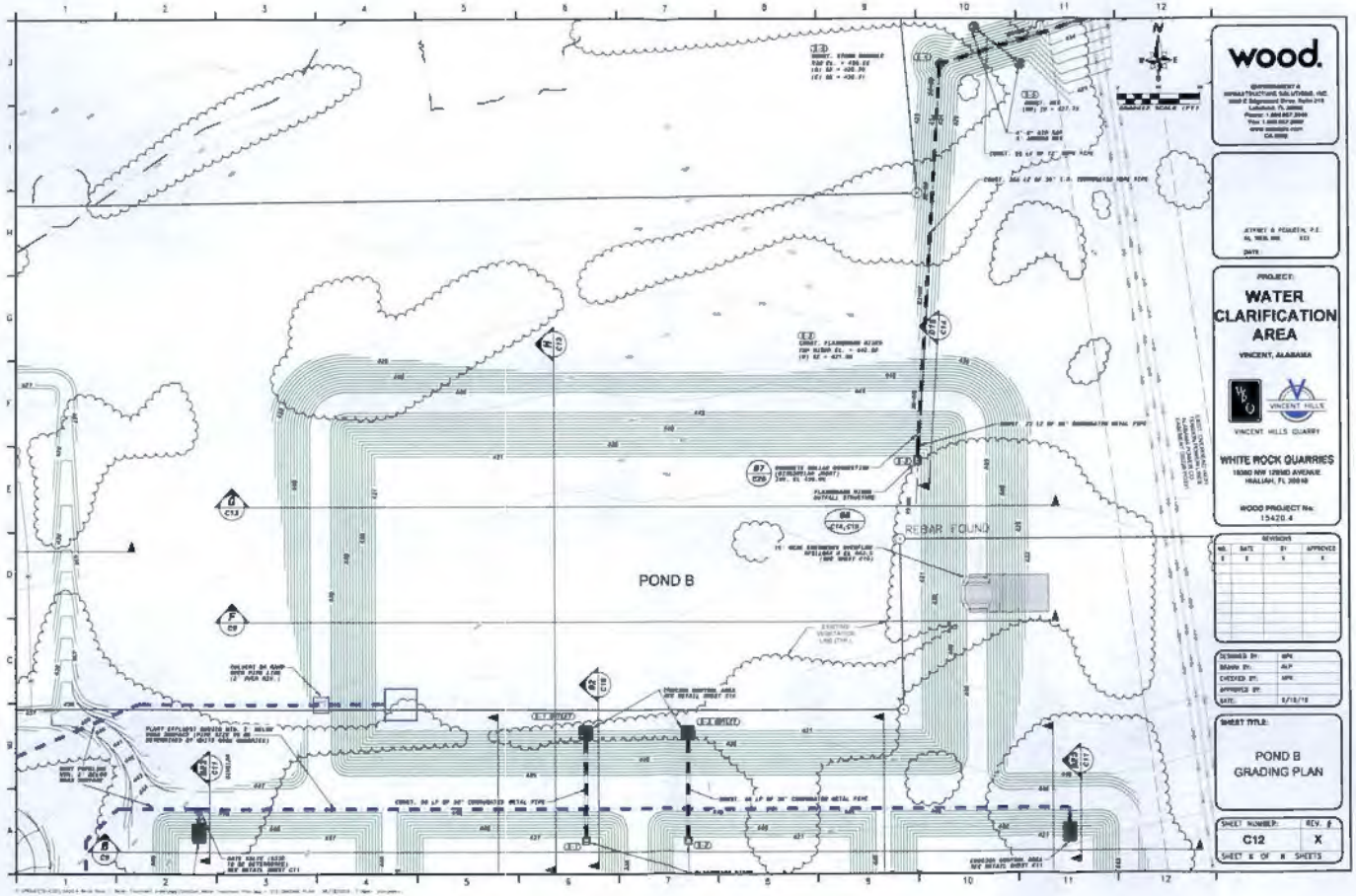
SHEET X OF X SHEETS

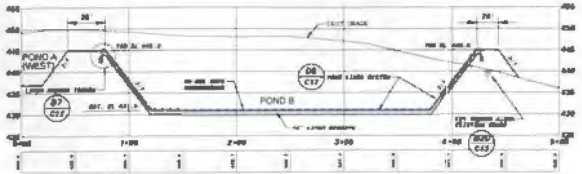


ELEVATION
B1 OUTFALL STRUCTURE DETAIL
ANTI-SEEP COLLAR DETAIL (FOR CMP)
TYPICAL DISCHARGE SECTION FROM POND A TO POND B
445
440
435
430
wood.
PROJECT:
WATER CLARIFICATION AREA
VINCENT, ALABAMA
VINCENT HILLS QUARRY
WHITE ROCK QUARRIES
WOOD PROJECT No: 15420.4
REVISIONS
DESIGNED BY:
DRAWN BY:
CHECKED BY:
APPROVED BY:
DATE:
SHEET TITLE:
POND A
WEST AND EAST
OUTFALL DETAILS
SHEET NUMBER:
C10
REV. #
X
SHEET X OF X SHEETS

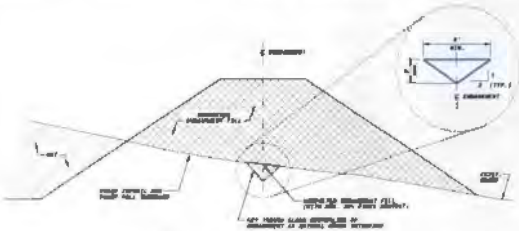


PLAN
OUTFALL STRUCTURE DETAIL
ISOMETRIC
CHANNEL DETAIL
POND A EAST-WEST EMERGENCY OVER FLOW PIPE
PLANT EFFLUENT DISCHARGE
FLASHBOARD END SUPPORT DETAIL
FLASHBOARD MID SUPPORT DETAIL
wood.
PROJECT:
WATER CLARIFICATION AREA
VINCENT, ALABAMA
VINCENT HILLS QUARRY
WHITE ROCK QUARRIES
WOOD PROJECT No: 13420.4
SHEET TITLE:
POND A WEST AND EAST OUTFALL DETAILS
SHEET NUMBER: C11
REV. #: X
SHEET X OF X SHEETS

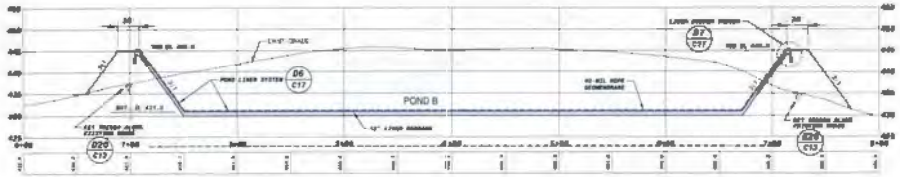

POND B
REBAR FOUND
wood.
PROJECT:
WATER CLARIFICATION AREA
VINCENT, ALABAMA
VINCENT HILLS QUARRY
WHITE ROCK QUARRIES
WOOD PROJECT No: 15420.4
REVISIONS
POND B GRADING PLAN
SHEET NUMBER: C12
REV. #: X



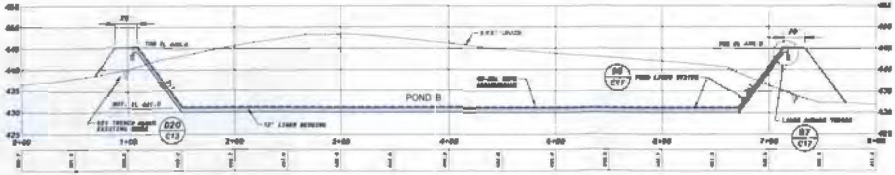
SECTION H



D20 C13 EMBANKMENT FOUNDATION AND KEY TRENCH DETAIL



SECTION G



SECTION F

wood.

ENVIRONMENT & INFRASTRUCTURE SOLUTIONS, INC.

JEFFREY D. PEBLEIN, P.E.
AL REG. NO. XXX
DATE

PROJECT:

WATER CLARIFICATION AREA

VINCENT, ALABAMA

VINCENT HILLS QUARRY

WHITE ROCK QUARRIES

WOOD PROJECT No: 15420.4

REVISIONS

NO.	DATE	BY	APPROVED
X	X	X	X

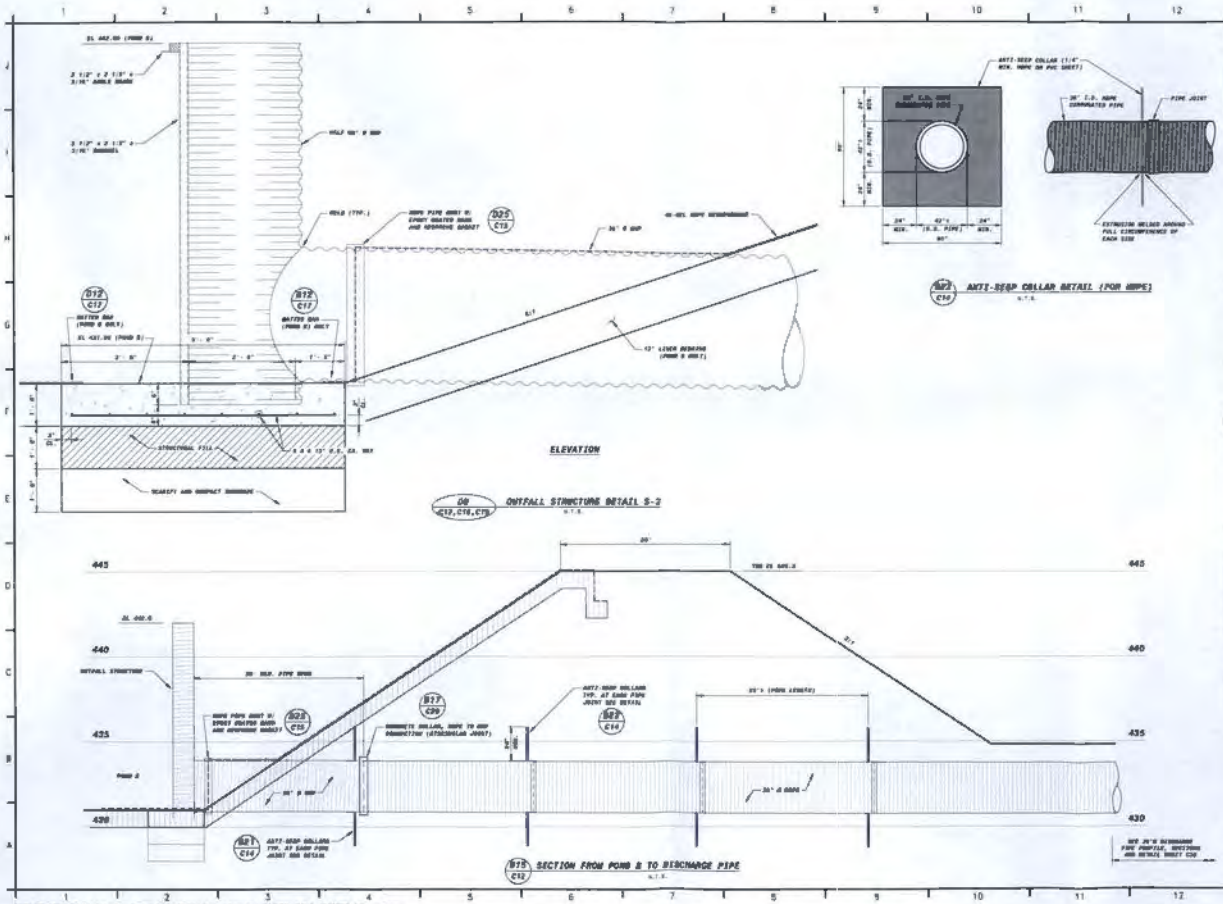
DESIGNED BY:	MHI
DRAWN BY:	ALP
CHECKED BY:	WPR
APPROVED BY:	
DATE:	8/18/19

SHEET TITLE:

POND B SECTIONS

SHEET NUMBER:	REV. #
C13	X

SHEET X OF X SHEETS



wood.

ENVIRONMENT & INFRASTRUCTURE SOLUTIONS, INC.

JEFFREY D. PEDECIN, P.E.
FL REG. NO.

DATE:

PROJECT:

WATER CLARIFICATION AREA

VINCENT, ALABAMA

VINCENT HILLS QUARRY

WHITE ROCK QUARRIES
18300 NW 122ND AVENUE
HIALIAH, FL 33018

WOOD PROJECT No:
15423.4

REVISIONS

NO.	DATE	BY	APPROVED
	X	X	X

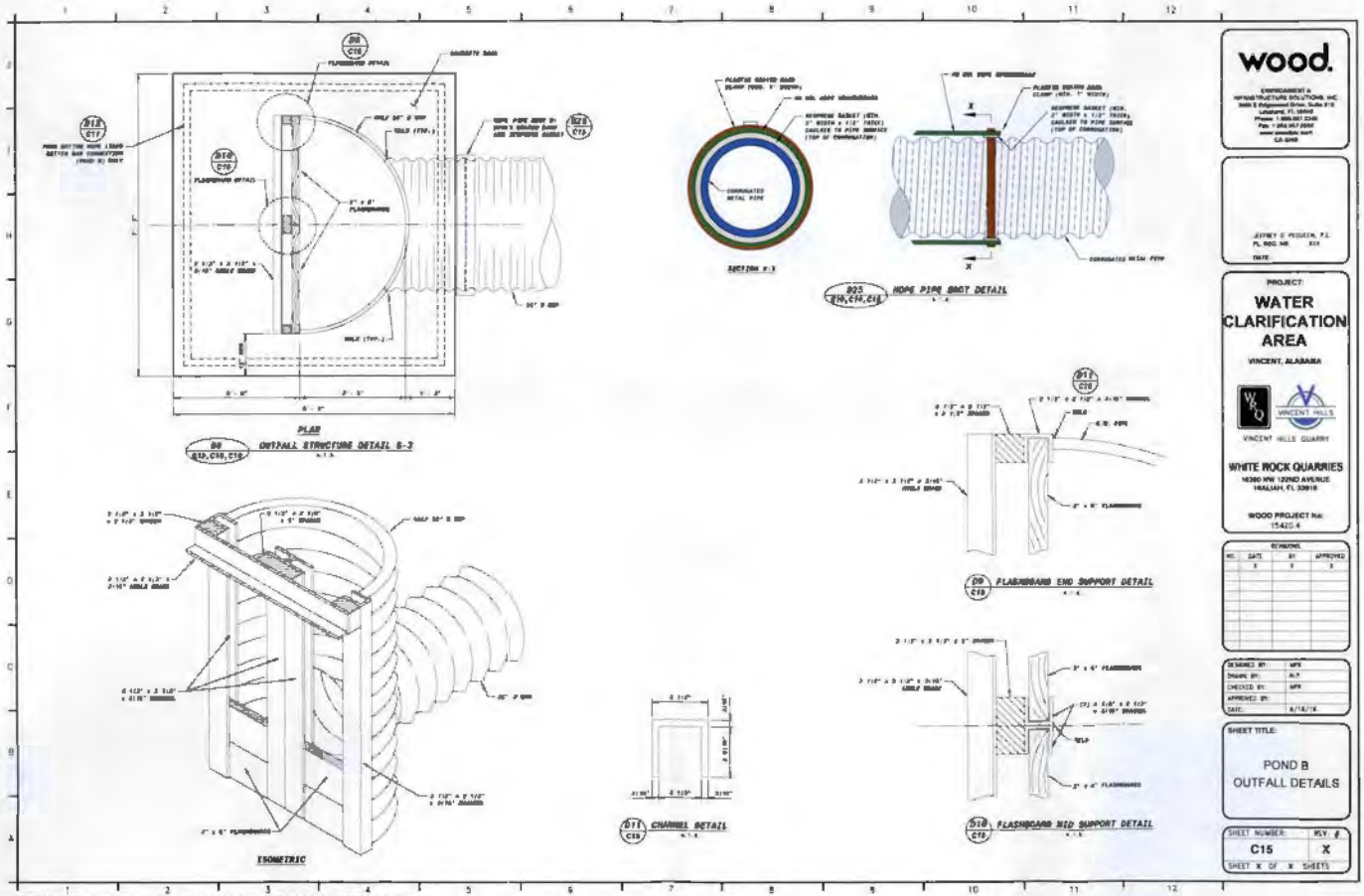
DESIGNED BY:	MPR
DRAWN BY:	ALP
CHECKED BY:	MPR
APPROVED BY:	
DATE:	8/18/19

SHEET TITLE:

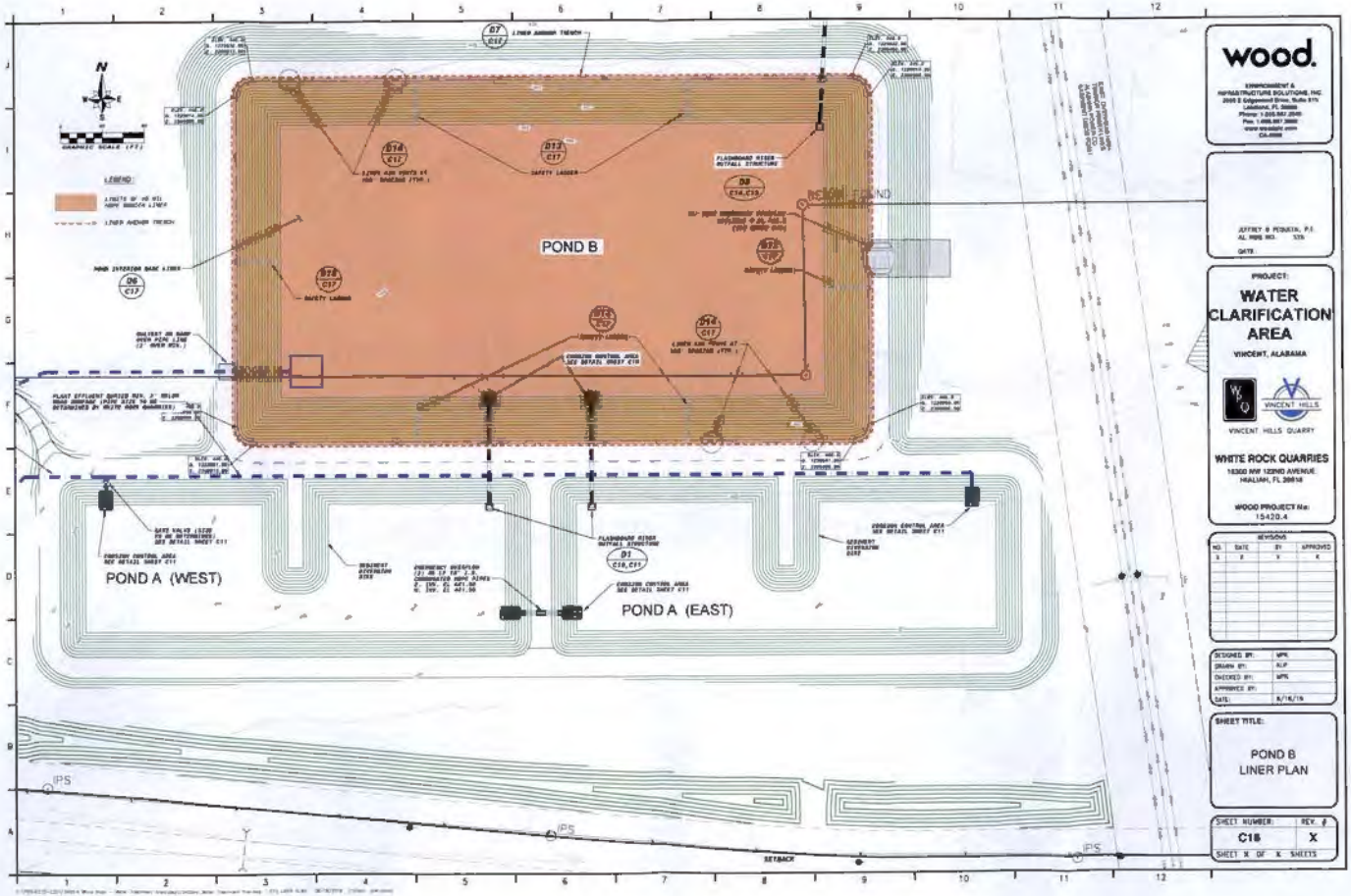
POND B
OUTFALL DETAILS

SHEET NUMBER:	REV. #
C14	X

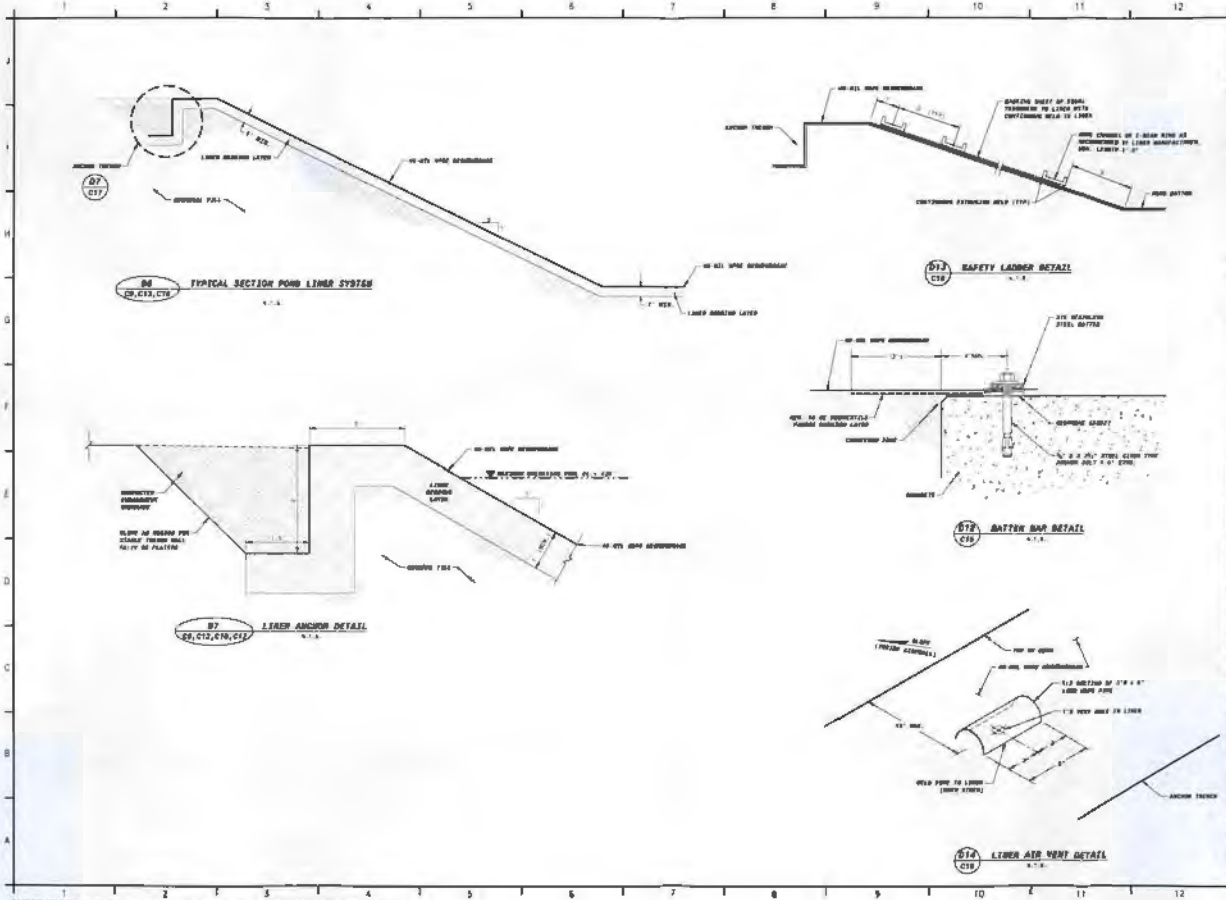
SHEET X OF X SHEETS



PLAN
OUTFALL STRUCTURE DETAIL S-3
SECTION X-X
HDPE PIPE SHOT DETAIL
FLASHBOARD END SUPPORT DETAIL
FLASHBOARD MID SUPPORT DETAIL
CHANNEL DETAIL
ISOMETRIC
wood.
PROJECT:
WATER CLARIFICATION AREA
VINCENT, ALABAMA
VINCENT HILLS QUARRY
WHITE ROCK QUARRIES
WOOD PROJECT No:
15420.4
SHEET TITLE:
POND B
OUTFALL DETAILS
SHEET NUMBER:
C15
X
SHEET X OF X SHEETS



POND B
POND A (WEST)
POND A (EAST)
LEGEND:
LINER ANCHOR TRENCH
SAFETY LADDER
FLASHBOARD RISER OUTFALL STRUCTURE
SEDIMENT DIVERSION DIKE
IPS
SETBACK
wood.
PROJECT:
WATER CLARIFICATION AREA
VINCENT, ALABAMA
VINCENT HILLS QUARRY
WHITE ROCK QUARRIES
WOOD PROJECT No: 15420.4
REVISIONS
DESIGNED BY:
DRAWN BY:
CHECKED BY:
APPROVED BY:
DATE:
SHEET TITLE:
POND B
LINER PLAN
SHEET NUMBER:
C18
REV. #
X
SHEET X OF X SHEETS



wood.

ENVIRONMENT & INFRASTRUCTURE SOLUTIONS, INC.
[illegible] Edgewood Drive, Suite 315
Lakeland, FL 33803
Phone: 1.863.667.2345
Fax: 1.863.667.2662
www.woodplc.com
CA-6300

JEFFREY B PEGUEIR, P.E.
FL REG. NO. [illegible]
DATE

PROJECT:

WATER CLARIFICATION AREA

VINCENT, ALABAMA

VINCENT HILLS QUARRY

WHITE ROCK QUARRIES
18300 NW 122ND AVENUE
HIALIAH, FL 33018

WOOD PROJECT No:
15420.4

REVISIONS

NO.	DATE	BY	APPROVED
	X	X	X

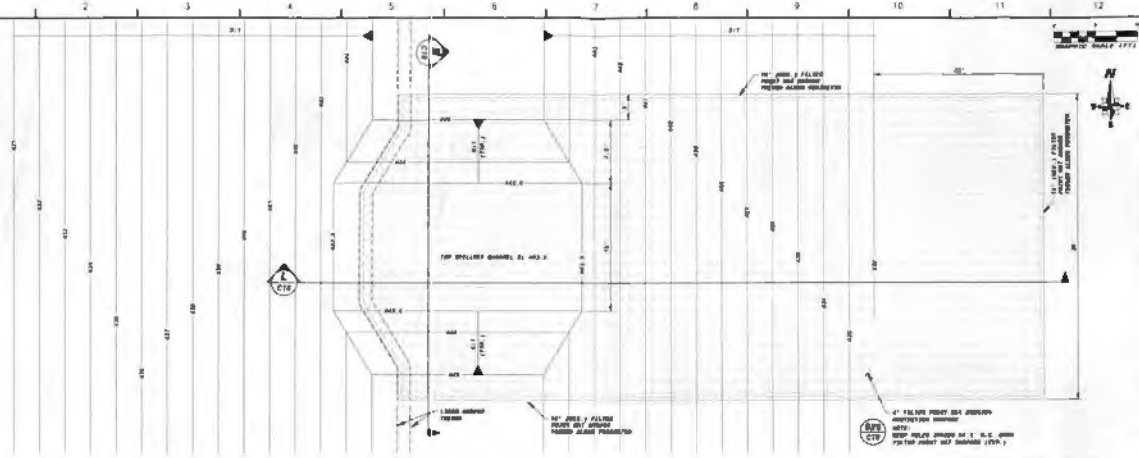
DESIGNED BY:	MPK
DRAWN BY:	ALP
CHECKED BY:	MPK
APPROVED BY:	
DATE:	8/18/19

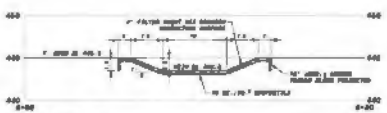
SHEET TITLE:

POND B
LINER DETAILS

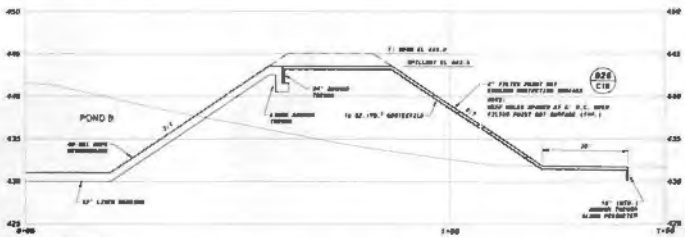
SHEET NUMBER:	REV. #
C17	X

SHEET X OF X SHEETS





SECTION M



SECTION L

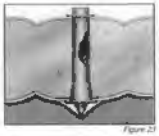


Figure 23

Figure 24

Figure 25

Weep Tubes
(for Uniform Section Linings)

Plastic weep tubes (drains) are pre-installed at designated locations along the fabric forms. In relieve hydrostatic pressure (Fig. 22). The tubes have a flange at one end and a point at the other end of a 0.75 inch (19 mm) diameter barrel. The pointed end has four small holes that allow the passage of water but retain large soil particles. There is a flanged cap that is placed over the pointed end and locks in place. Weep tubes are available in lengths of 3, 4, 6, 8, and 10 inches (76, 102, 152, 203, and 254 mm) when measured between the assembled weep tubes flanges. The location of weep tubes, if required, are clearly marked on the fabric form panel shop drawings.

Weep tubes are assembled by forcing the pointed end of the weep tube through both the top and bottom layers of the fabric form and locking the flanged cap over the pointed end (Fig. 23). A small square of filter fabric can be placed over the in-place flanged cap and secured with a fastener (Fig. 24) or the fabric form can be placed over a continuous layer of filter fabric as shown in Figure 23. In either case the filter fabric should prevent fine soil particles from passing through the weep tube.

FILTER POINT WEEP HOLE DETAIL (D26 / C18)
TYPICAL AT ALL FILTER POINT MAT SURFACES
(SPACING AT 5' O.C. TYP.)
N.T.S.

wood.
ENVIRONMENT & INFRASTRUCTURE SOLUTIONS, INC.
3660 E Edgewood Drive, Suite 419
Lakeland, FL 33803
Phone: 1-855-001-3500
Fax: 1-855-007-3500
www.woodplc.com
CA-3868

JEFFREY S. PERRITT, P.E.
AL REG NO. XXX
DATE

PROJECT:
WATER CLARIFICATION AREA
VINCENT, ALABAMA

VINCENT HILLS QUARRY

WHITE ROCK QUARRIES
10000 NW 132ND AVENUE
HIALEAH, FL 33018

WOOD PROJECT No:
13420.4

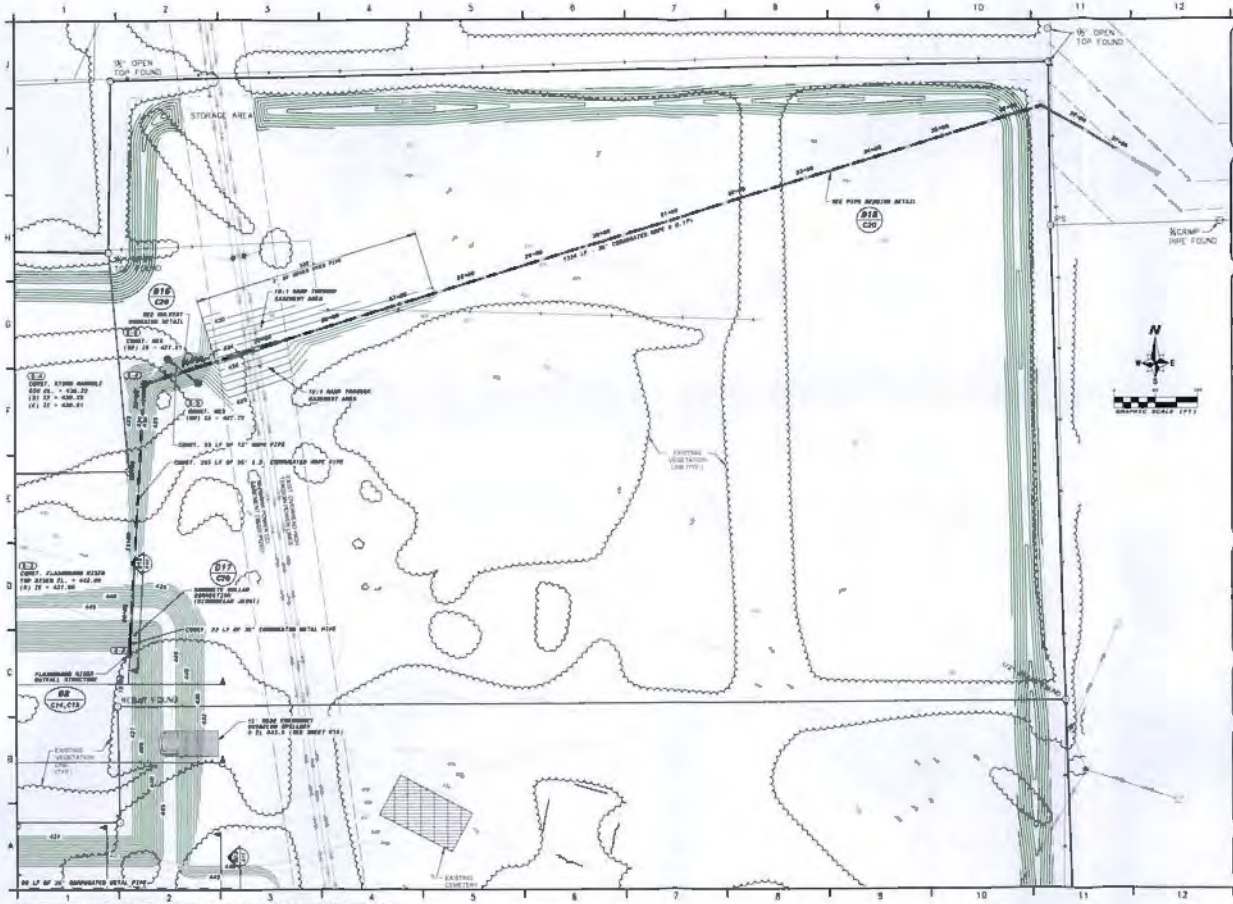
REVISIONS

NO.	DATE	BY	APPROVED
X	X	X	X

IN WORKS BY:	XXX
Drawn By:	XXX
CHECKED BY:	XXX
APPROVED BY:	
DATE:	8/16/19

SHEET TITLE:
POND B EMERGENCY OVERFLOW SPILLWAY

SHEET NUMBER:	REV. #
C18	X
SHEET X OF X SHEETS	



wood.

PROJECT:

WATER CLARIFICATION AREA

VINCENT, ALABAMA

VINCENT HILLS QUARRY

WHITE ROCK QUARRIES

WOOD PROJECT No: 15420.4

REVISIONS

NO.	DATE	BY	APPROVED
X	X	X	X

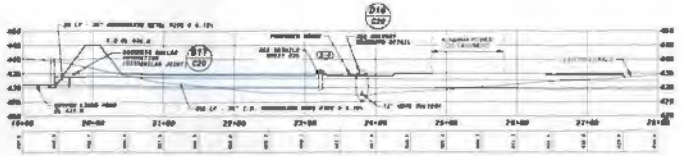
DESIGNED BY:	MPR
DRAWN BY:	ALF
CHECKED BY:	MPR
APPROVED BY:	
DATE:	6/18/18

SHEET TITLE:

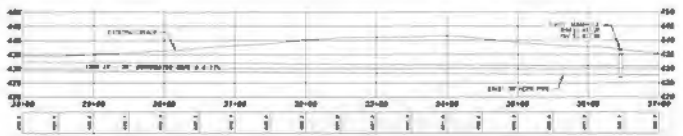
DISCHARGE PIPE GRADING PLAN

SHEET NUMBER:	REV. #
C18	X

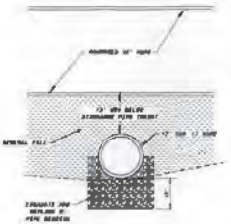
SHEET X OF X SHEETS



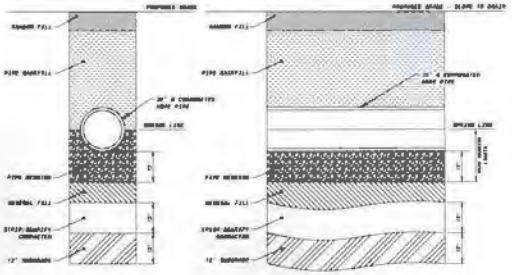
PIPE DISCHARGE (Outfall)



PIPE DISCHARGE (Outfall)



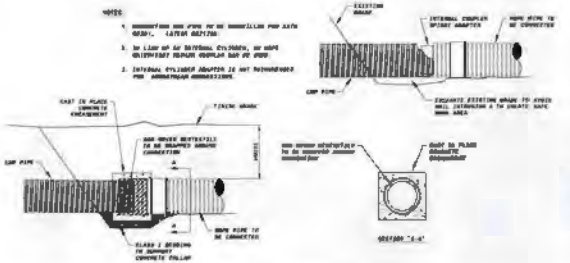
D18 C19, C20 CULVERT DETAIL



SECTION VIEW

SIDE VIEW

D18 C19 PIPE BEDDING DETAIL



D17 C14, C15, C16, C17 HDPE TO CMP CONNECTION DETAIL DISSIMILAR JOINT

wood.

ENVIRONMENT & INFRASTRUCTURE SOLUTIONS, INC.

PROJECT:

WATER CLARIFICATION AREA

VINCENT, ALABAMA

VINCENT HILLS QUARRY

WHITE ROCK QUARRIES

WOOD PROJECT No. 15420.4

REVISIONS			
NO.	DATE	BY	APPROVED
X	X	X	X

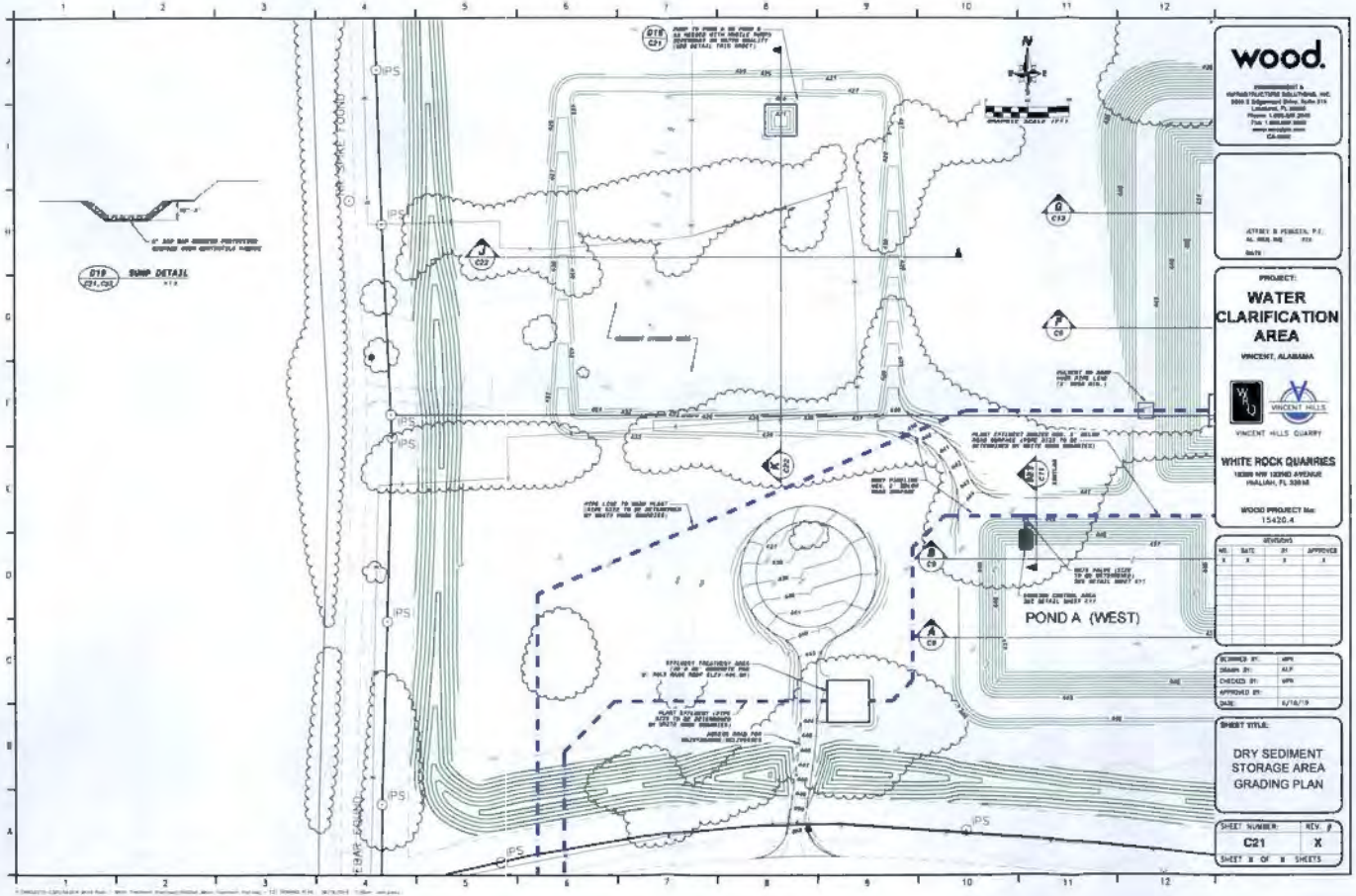
DESIGNED BY:	MPR
DRAWN BY:	KLP
CHECKED BY:	MPR
APPROVED BY:	
DATE:	8/18/16

SHEET TITLE:

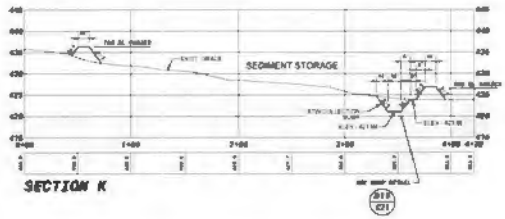
DISCHARGE PIPE PROFILE, SECTIONS AND DETAILS

SHEET NUMBER	REV. #
C20	X

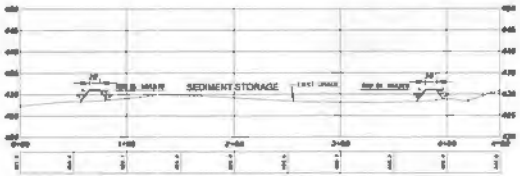
SHEET 6 OF 6 SHEETS



wood.
PROJECT:
WATER CLARIFICATION AREA
VINCENT, ALABAMA
VINCENT HILLS QUARRY
WHITE ROCK QUARRIES
WOOD PROJECT No:
15420.4
REVISIONS
SHEET TITLE:
DRY SEDIMENT STORAGE AREA GRADING PLAN
SHEET NUMBER:
C21
REV. #
X
SHEET # OF # SHEETS
POND A (WEST)
SUMP DETAIL
D19
C21, C22
IPS



SECTION K



SECTION J

wood.

ENVIRONMENT & INFRASTRUCTURE SOLUTIONS, INC.
2800 E Edgewood Drive, Suite 210
Lakeland, FL 33803
Phone: 1.863.667.2343
Fax: 1.863.667.2443
www.woodplc.com
CA-5393

JEFFREY B. PODUCK, P.E.
AL REG. NO. 135
DATE:

PROJECT:

WATER CLARIFICATION AREA

VINCENT, ALABAMA

VINCENT HILLS QUARRY

WHITE ROCK QUARRIES
18300 NW 122ND AVENUE
HIALIAH, FL 33018

WOOD PROJECT No.:
15420.4

REVISIONS

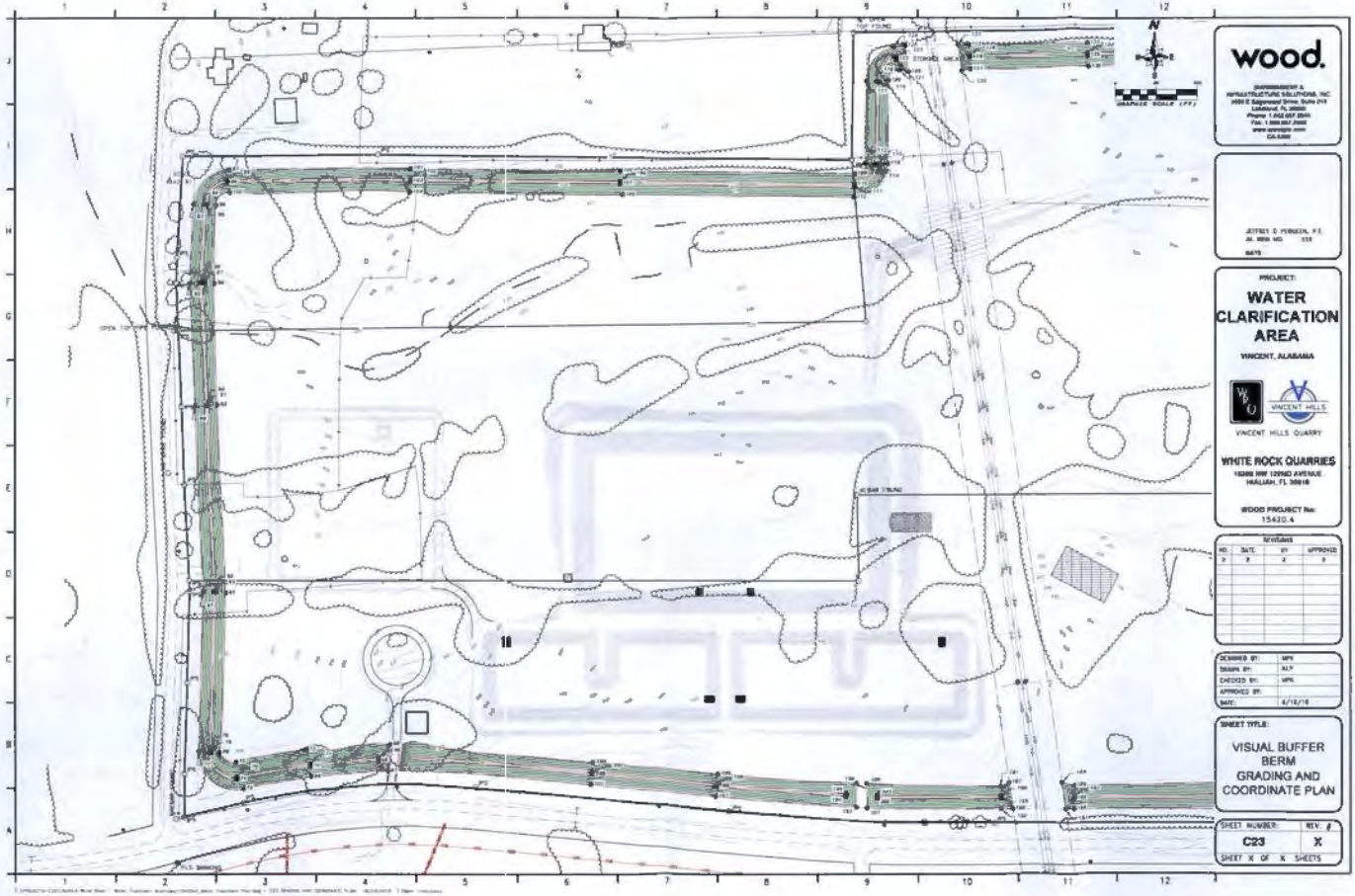
NO.	DATE	BY	APPROVED
X	X	X	X

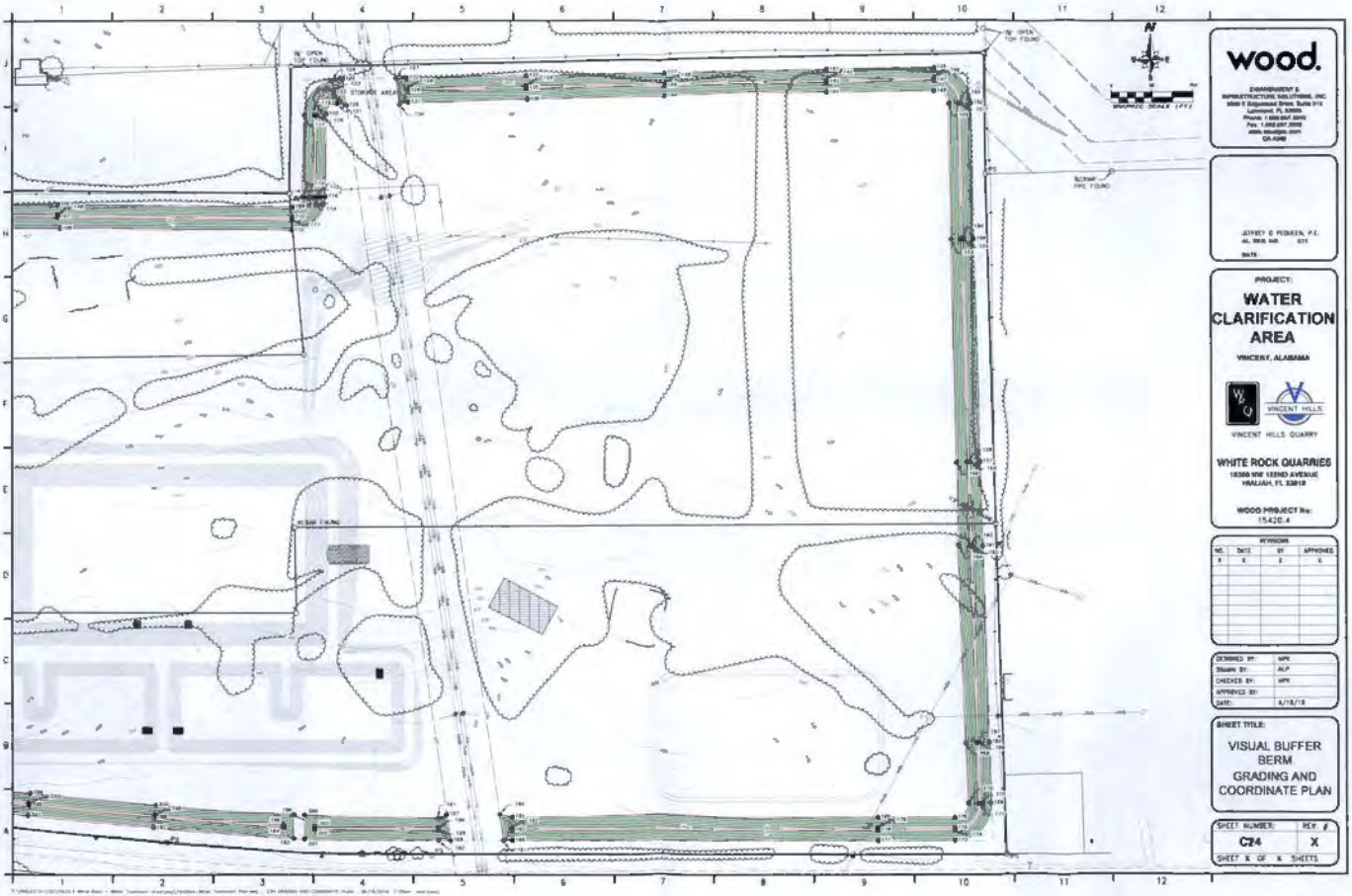
DESIGNED BY:	MPA
DRAWN BY:	ALP
CHECKED BY:	MPA
APPROVED BY:	
DATE:	8/18/19

SHEET TITLE:

DRY SEDIMENT STORAGE AREA SECTIONS AND DETAILS

SHEET NUMBER:	REV. #
C22	X
SHEET X OF X SHEETS	


wood.
PROJECT:
WATER CLARIFICATION AREA
VINCENT, ALABAMA
VINCENT HILLS QUARRY
WHITE ROCK QUARRIES
WOOD PROJECT No:
15430.4
SHEET TITLE:
VISUAL BUFFER BERM GRADING AND COORDINATE PLAN
SHEET NUMBER:
C23
REV.
X
SHEET X OF X SHEETS


wood.
JEFFREY D PEDERSEN, P.E.
PROJECT:
WATER CLARIFICATION AREA
VINCENT, ALABAMA
VINCENT HILLS QUARRY
WHITE ROCK QUARRIES
WOOD PROJECT No:
15420.4
REVISIONS
DESIGNED BY:
DRAWN BY:
CHECKED BY:
APPROVED BY:
DATE:
SHEET TITLE:
VISUAL BUFFER BERM GRADING AND COORDINATE PLAN
SHEET NUMBER:
C24
REV. #
X
SHEET X OF X SHEETS

POINT #	NORTH	EAST	ELEV.
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96	1229486.58	2388529.83	498.23
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72	1229469.82	2388503.83	499.83
73	1229362.89	2388527.88	499.85
74	1229384.73	2388568.99	499.78
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POINT #	NORTH	EAST	ELEV.
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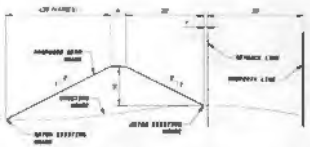

TYP BTA VISUAL BUFFER BERM SECTION

NTS

wood.

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JEFFREY D. PEDERSEN, P.E.
NO. 59826 STATE OF FLORIDA
DATE

PROJECT:

WATER CLARIFICATION AREA

VINCENT, ALABAMA

VINCENT HILLS QUARRY

WHITE ROCK QUARRIES
16368 NW 126ND AVENUE
HIALIAH, FL 33018

WOOD PROJECT No:
15420.4

REVISIONS			
NO	DATE	BY	APPROVED
0	X	X	X

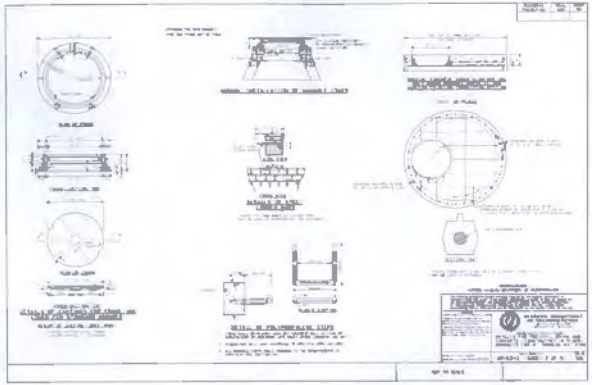
DESIGNED BY:	MPR
DRAWN BY:	ALT
CHECKED BY:	MPR
APPROVED BY:	
DATE:	6/18/19

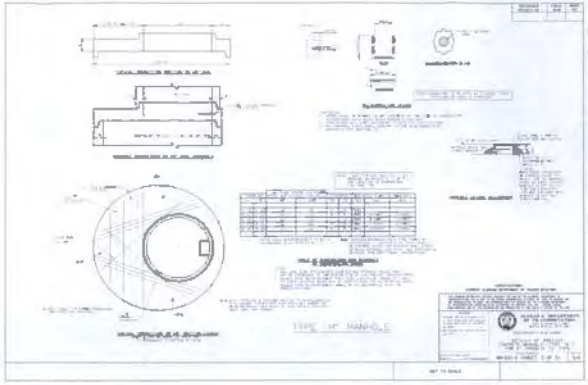
SHEET TITLE:

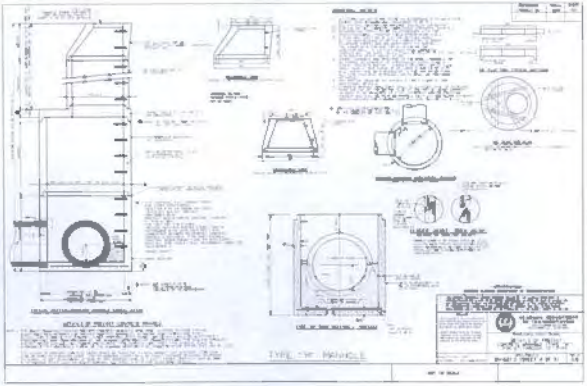
VISUAL BUFFER BERM SECTION AND COORDINATE TABULATION

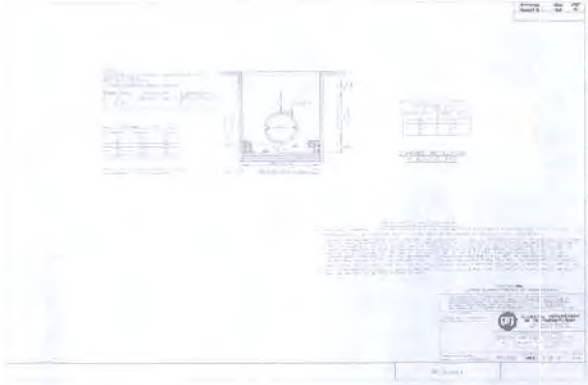
SHEET NUMBER:	REV. #
C25	X

SHEET X OF X SHEETS









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JEFFREY D PEDUCCH, P.E.
FL REG. NO. 333
DATE:

PROJECT:

WATER CLARIFICATION AREA

VINCENT, ALABAMA

VINCENT HILLS QUARRY

WHITE ROCK QUARRIES
12300 NW 123ND AVENUE
HIALIAH, FL 33018

WOOD PROJECT No:
15420.4

REVISIONS

NO.	DATE	BY	APPROVED
	X	X	X

DESIGNED BY:	MPR
DRAWN BY:	ALF
CHECKED BY:	MPR
APPROVED BY:	
DATE:	8/18/19

SHEET TITLE:

MANHOLE DETAILS

SHEET NUMBER:	REV. #
C26	X

SHEET X OF X SHEETS

Appendix E

Best Management Practices (BMPs)

& Typicals

ACCESS ROADS

Description

Access roads are graveled areas or pads that allow construction equipment and workers to enter and leave the work site from a public right-of-way, street, alley, sidewalk or parking area. This practice provides for the delivery and removal of construction equipment and materials in a manner that will protect vegetative cover, prevent erosion, and protect water quality.

Pollutants Controlled and Impacts

Access roads effectively confine construction equipment to one or more specific area(s), thereby minimizing the amount of vegetation disturbed and reducing the potential for soil erosion.

Relationship With Other BMPs

Drainage from the roads should be diverted to vegetated areas or sediment ponds. (See Diversion BMP). Use Seeding and Mulching or Sodding if vegetation is needed alongside the road.

Design Considerations:

Roads should be designed based on the following specifications:

a. The road should be a minimum of 10 feet wide, or wide enough to accommodate the width of the largest piece of equipment. Design the road with no shoulders.
b. Side slopes should be 2:1 or less.
c. To be effective, the length of the aggregate portion of the road should not be less than 50 feet.
d. Stone size should be 2 inches. Reclaimed or recycled concrete of an equivalent diameter may also be used.
e. The road should consist of not less than 6 inches of the 2-inch aggregate. Aggregate should be placed in uniform, compacted layers of not more than 6 inches, nor less 3 inches.

After Construction:

If the mud and soil attached to truck tires does not fall off onto the gravel, truck tires should be washed on an area stabilized with crushed stone. The wash area should drain into a Sediment Basin or other suitable outlet. Wash racks may also be used.

Maintenance

Proper maintenance may include adding additional layers of stone when the original stone becomes covered with mud. After each storm event, inspect the road for erosion and make any necessary repairs. It is also important to check and maintain any BMPs that are used in conjunction with this BMP, especially those for drainage. All sediment dropped or eroded onto public rights-of-way should be removed immediately by sweeping.

CHECK DAMS

Description

Check dams are constructed across drainage ways to reduce concentrated flows in the channel and protect vegetation in the early stages of growth. They can consist of stones, sandbags or gravel, and are most commonly used in the bottom of channels that will be stabilized at a later date. Although check dams also collect sediment and hence act as filters, their primary purpose is to reduce erosive velocities.

Pollutants Controlled and Impacts

By reducing runoff velocities in drainage ways, check dams reduce the potential for erosion to occur. Although they also help filter sediment, they should in no way replace other Filters, or Sediment Basins.

Application

When to Apply
Check dams are to be used when it is not practical to divert flow to a stabilized outlet, or where weather conditions prevent the timely installation of vegetation or non-erosive liners. Apply during the construction of ditches and diversions, and before vegetation is established.

Where to Apply
Apply this practice across drainage ways, as needed, to reduce concentrated flows to non-erosive velocity.

Design:

1. Check dams are usually used in a series. They should be spaced so that the toe of the upstream dam is at the same elevation as the top of the downstream dam.
2. The side slope of the dam should be 2:1 or flatter.
3. The middle of the dam should be 9 inches lower than the outer edges at natural ground elevation. This allows water to flow over the center of the check dam, as opposed to around the sides where it would erode the banks. In areas of heavy flows, additional stone may be needed immediately below the check dam to help dissipate energy and to prevent undercutting of the check dam.
4. Stone size should be increased with increased slope and velocity. The stone should be big enough to stay in place during anticipated high flows. When larger sizes of stone are used, place smaller stones immediately downstream of and adjacent to the check dam to prevent undercutting of the dam.
5. Straw bales are not recommended for use as check dams.

After Construction:

Temporary check dams may only be removed after the vegetation or permanent lining has been established. Some check dams may remain as permanent structures.

Maintenance

Check dams should be inspected after each rain to ensure there is no piping under the structure or around its banks. Correct all damage immediately. Sediment should be removed when it accumulates to ½ the height of the dam, to ensure water can flow through the dam and to prevent large flows from carrying sediment over the dam. That sediment should be placed in the Spoil Pile or other approved upland area.

Add stones, as needed, to maintain design height and cross section. Also, be sure that culverts and other structures below the check dams are not damaged or blocked due to any displaced stone.

DUST CONTROL

Description

Dust is generated from rock crushers and when vegetation is removed and soil is exposed to wind. Light winds can pick up and transport silty soils, fine sands and clays. Course sands can also become erodible when winds are strong. Soil particles and any attached chemicals such as fertilizer and pesticides may settle out in surface waters. Airborne particles can scour leaves and tender shoots of vegetation. Clouds of dust can create a traffic hazard.

Dust control measures should be implemented to prevent the soil and attached pollutants from leaving the site. Acceptable dust control practices include watering, using mulch, establishing vegetation, and using spray-on adhesives.

Pollutants Controlled and Impacts

Maintaining an effective dust control program helps keep the lighter soils (silt, clay) on the site and sustains the textural qualities necessary for good vegetative growth. It also prevents sediment and attached chemicals such as fertilizer and pesticides from entering surface waters.

Relationship With Other BMPs

Dust control is an alternative control measure for temporary and permanent vegetation on areas that are to be surfaced with impervious materials. Mulching is another method of dust control.

Specifications

1. Use seeding, mulching and sodding to cover bare soil and prevent dust. Follow specifications in the Seeding and Mulching or Sodding BMPs.
2. On larger areas, consider planting trees and shrubs as wind breaks. Follow specifications in the Trees, Shrubs and Ground Covers BMP.
3. Watering should be done at a rate that prevents dust but does not cause soil erosion.
4. Use spray-on adhesives according to Table 1, below. These adhesives are recommended only if other methods cannot be used. Many of these adhesives are messy, sticky and form fairly impenetrable surfaces.

Table 1

Type of Emulsion	Water Dilution	Nozzle Type	Apply Gal/Acre
Anionic asphalt emulsion	7:1	Course spray	1,200
Latex emulsion	12.5:1	Fine spray	235
Resin-in-water emulsion	4:1	Fine spray	300

Source: Excerpted from the Maryland Erosion and Sediment Control Planning and Design Manual.

Maintenance

To prevent dust from becoming a public nuisance and causing offsite damages, dust control should be ongoing during earth change activities.

DIVERSIONS

Description

A diversion is a graded channel and ridge constructed across a slope, perpendicular to the direction of runoff. It functions to protect other BMPs and sensitive areas by intercepting and diverting runoff and carrying it to a stabilized area. Diversions can be bare channels, vegetated channels or channels lines with a hard surface material.

Pollutants Controlled and Impacts

Diversions located down-gradient of a site will intercept sheet flow carrying sediment, and if diverted to a sediment basin or other stabilized area, will help minimize offsite sedimentation. Diversions can also be used to direct runoff away from highly erodible areas or other sensitive areas such as wetlands.

Application

Where to Apply
Diversions should be used:

- where it is necessary to prevent offsite drainage from crossing over into excavated areas
- where it is necessary to protect adjoining areas from excessive runoff
- to break up concentration of water on long gentle slopes and on undulating land surfaces generally considered too flat or irregular for terracing.
- To divert water away from buildings and other permanent structures.
- To intercept and channel runoff to other areas to prevent onsite erosion.

Relationship with Other BMPs

Diversions are often used to protect critical areas. Diverted runoff should outlet to a stabilized area such as a Sediment Basin, detention or retention basin, or other Stabilized Outlet. Closed conduit outlets may be suitable on steep slopes where ordinary outlets are unacceptable. When movement of sediment into a diversion channel is a significant problem, consider installing a vegetated Buffer/Filter Strip up-gradient of the diversion.

Maintenance

Before final stabilization, the diversion should be inspected after every rainfall. Sediment should be removed from the diversion channel and repairs made as necessary. Seeded areas that fail to establish a vegetative cover should be reseeded as necessary. Maintain a vigorous sod by applying lime and fertilizer, as needed, in accordance with agricultural practices.

Once the diversion is established, remove excess growth of woody vegetation by mowing. Mowing other than to control woody vegetation should be done according to the diversion design.

Keep vehicular traffic off the diversion except for maintenance.

EQUIPMENT MAINTENANCE AND STORAGE AREAS

Description

The maintenance, repair, cleaning, and storage of construction machinery, vehicles, and equipment should be confined to areas specifically designed and designated for that purpose. This practice includes both open and covered equipment maintenance and storage areas, and emphasizes the importance of controlling runoff from both kinds of storage areas. It is applicable to construction sites as well as existing permanent storage facilities.

Pollutants Controlled and Impacts

Equipment storage areas that properly control runoff will prevent oil, grease, solvents, hydraulic fluids, sediment, wash water, and other pollutants from being carried off the area and entering surface waters. Proper use of this practice will also prevent pollution from filtering into the ground.

Relationship With Other BMPs

Where possible, the identification of an appropriate maintenance/storage area should be done before any construction is done on the site. Diversions should be considered to keep runoff from entering the storage area.

General Considerations for All Equipment Maintenance/Storage Areas:

1. Runoff from equipment maintenance/storage areas should be directed to stabilized outlets designed to assimilate the volume and type of pollutants discharged to them.
2. Heavy equipment should be well-maintained to prevent leaks.
3. Vehicles and other equipment should *not* be washed at locations where the runoff will flow directly into a watercourse or storm sewer.
4. Store, cover and isolate construction materials, including topsoil and chemicals, to prevent runoff of pollutants and contamination of groundwater, following the design guidance below.
5. A spill response plan should be developed which includes the procedures that will be taken in the case of a spill. This is discussed further in "Proper Storage, Use and Disposal of Chemicals" below.
6. A waste management plan should be developed. Empty canisters, cans or other chemical containers (i.e. from hydraulic fluids, etc.), scrap wood, scrap metal, and all other waste materials are to be disposed of daily or kept in sealed waste containers until they can be disposed of offsite in a landfill. Waste materials are *not* to be buried onsite.
7. Specific areas should also be designated and maintained for employee parking.

Maintenance

Outside equipment/maintenance storage areas should be inspected daily to ensure equipment isn't being stored within the drip line of trees and to ensure the vehicles and equipment aren't leaking. Also make sure waste materials are being properly disposed of. Periodic checks of the equipment wash areas should also be done to ensure it is not failing. Additional stone may be needed to maintain the wash area.

Ongoing maintenance of structural equipment maintenance/storage areas should include periodic inspections of the structure to check for cracks in the floor, and for other structural flaws.

SEDIMENTATION BASINS

Description

Sediment basins are man-made depressions in the ground where runoff water is collected and stored to allow suspended solids to settle out. They are used in conjunction with erosion control measures to prevent offsite sedimentation. They may consist of a dam, barrier or excavation, a principal and emergency outlet structure, and water storage space. Their primary purpose is to trap sediment and other course material. Secondary benefits can include runoff control and preserving the capacity of downstream reservoirs, ditches, canals, diversions, waterways and streams.

Pollutants Controlled and Impacts

Properly designed and maintained sediment basins can be very effective in preventing sedimentation of downstream areas. Course and medium size particles and associated pollutants will settle out in the basin. Suspended solids, attached nutrients, and adsorbed non-persistent pesticides may break down before proceeding downstream. Because sediment basins also retain water, they may help recharge the ground water.

Sediment basins are not as effective in controlling fine particles (i.e. silt, clay) as sand and other course particles.

Relationship with Other BMPs

In general, this practice should be used to help prevent offsite sedimentation. Flow-in Diversions are often directed to sediment basins. Dewatering operations may require the use of sediment basins. Energy dissipators should be included at all outfalls to prevent erosion and/or scouring.

SOIL/OVERBURDEN STOCKPILES

Description

Soil/overburden stockpiles are excavated materials consisting of topsoil or subsoil that have been removed and temporarily stored during the construction or mining activity.

Pollutants Controlled and Impacts

Properly placed and stabilized these stockpiles will not cause any undue soil erosion/deposition.

Relationship With Other BMPs

Stockpiles are usually created during Land Clearing operations. Filter fencing is usually put in at the base of the storage pile to prevent soil from leaving the site. Stockpile should be stabilized following specifications in the Seeding BMP.

For Spoil From Construction Sites:

1. Stockpiles may be located around the perimeter of the project away from the construction activity, or located in the immediate vicinity of the construction. Do not locate stockpiles in or immediately adjacent to wetlands and watercourses or such that any runoff from the stockpile will end up in wetlands and watercourses. Include the location of the stockpile(s) on the soil erosion/sedimentation control plan.
2. Where it is not possible to move the stockpile upland, place the stockpile behind a bench or berm to prevent erosion. This is especially important on steep slopes.
3. If runoff can occur, place filter fencing at the base of the spoil pile to help retain soil until vegetation is stabilized.
4. Seed all stockpiles (temporary and permanent) following in accordance with agricultural practices.
5. Consider placing Construction Barriers around the stockpile to prevent access by people and equipment.

Maintenance

When vegetative stabilization is promptly and effectively applied, very little maintenance is required. The guidelines below should be followed on all sites:

1. Periodic inspections should be done to ensure excessive erosion hasn't occurred. If runoff or wind erosion has occurred, reduce the side slopes of the stockpile, or stabilize the stockpile with pieces of sod laid perpendicular to the slope, and staked.
2. When filter fencing is used around a spoil pile, periodic checks should be made to ensure that piping has not occurred under the fencing and to ensure the fence has not collapsed due to soil slippage or access by construction equipment. Repair any damaged fencing immediately.
3. Berms at the base of the stockpile that become damaged should be replaced.

GENERAL EROSION CONTROL TECHNIQUES

A. Erosion control implementation will be conducted under the guidance of persons experienced in construction techniques and erosion controls. This person(s) will have the authority to take special actions as necessary to prevent water quality deterioration. It is recognized that soil types are site specific and contribute significantly to erodibility characteristics and will be a factor in design and implementation of BMPs. Erosion control techniques to be used may include:

1. Water diversion and energy dispersion structures located at the discharge end of the diversion that will divert runoff onto level, vegetated areas, terracing, riprap, drop structures, or other satisfactory areas of dispersion.
2. Temporary erosion controls such as hay bales and/or silt fences will be installed in the natural drainage areas before or during the time of disturbance. BMP typicals are attached.
3. Erosion control methods of a more permanent nature, i.e., geotextiles, riprap, matting, etc. may be considered in areas necessitating more drastic controls.
4. Roadsides, drilling locations, and slopes that are steep enough to induce high velocity flow and erosion, should be limed, fertilized, seeded, and/or mulched as necessary and as soon as practical after construction and in accordance with accepted soil conservation practices.
5. All areas that are disturbed, regardless of location, will be paved, covered with gravel, or vegetated as soon as practical. All erosion controls will be maintained until the disturbed area is covered or permanent vegetation is re-established.
6. To aid in maintenance of vegetation in disturbed areas, on site topsoil if available, should be reused on the surface of each site.

SILT FENCE MATERIAL SPECIFICATIONS

1. Silt fences consist of a geotextile filter fabric mounted on post, or a geotextile filter fabric attached to posts by means of adjustable belts or loops or other means that will securely hold the fabric in an upright position.
2. Filter fabric shall be a polymetric fabric from a plastic yarn of a long-chain synthetic polymer composed of at least 85% by weight of propylene ethylene, amide, ester or vinyledenechloride and shall contain stabilizers and/or inhibitors added to the base plastic to make the filaments resistant to deterioration due to ultraviolet and heat exposure for at least six months.
3. After forming, the fabric shall be processed so that the filaments retain their relative positions with respect to each other. The fabric shall be free of defects or flaws that significantly affect its physical and/or filtering properties. Geotextile fabrics shall retain at least 80% of the minimum specified Grab Strength at the end of the six month test.

SEEDING AND MULCHING SPECIFICATIONS

1. All seed used shall be labeled in accordance with U.S. Department of Agriculture Rules and Regulations under the Federal Seed Act. All seed shall be furnished in sealed bags. Seed that has become wet and moldy or otherwise damaged in transit or in storage will not be used.

2. Seed Mixtures are Recommended as follows:

Spring and Summer Mixture (April – August)		
Pensacola Bahiagrass	-	20 lbs./acre
Hulled Common Burmudagrass	-	5 lbs./acre
Hulled Sericea Lespedeza	-	5 lbs./acre
Browntop Millet	-	15 lbs./acre
Crimson Clover	-	5 lbs./acre

Fall and Winter Mixture (September – March)		
Pensacola Bahiagrass	-	18 lbs./acre
Unhulled Common Bermuda	-	7 lbs./acre
Unhulled Sericea Lespedeza	-	5 lbs./acre
Kentucky 31 Fescue	-	7 lbs./acre
Common Annual Rye	-	7 lbs./acre
Crimson Clover Inoculated	-	3 lbs./acre
Ladino Clover Inoculated	-	3 lbs./acre

Note: These are recommended blends. Other blends of seeds may be utilized.

3. Fertilizer shall be 13-13-13 or equivalent grade, (1-1-1-ratio), pelletized, uniform in composition, free flowing, and suitable for application with approved equipment. The fertilizer shall be delivered to the site in bags or other convenient containers, each fully labeled, conforming to the applicable state fertilizer laws, and bearing the name, trade name or trademark and warranty of the producer. Rate should be equivalent to 500 lbs. per acre of actual fertilizer (13-13-13) or adjusted accordingly depending on fertilizer blend used and/or soil composition.
4. Dolomitic Limestone – Lime shall be applied at the rate of 2000 lbs. per acre or as required by soil composition.
5. Mulch – For use in hydraulic application of seed, lime and fertilizer, shall consist of a pulped ecology by-product made from printer's scrap paper that contains wood cellulose. The mulch shall contain no growth or germination-inhibiting factors and shall, after application, assume a contrasting color to the soil to facilitate visual metering to aid in applying the product over the area to be seeded. On an air-dry weight basis, the fiber shall contain a maximum of 8% moisture. The pH ratio shall be applied at the rate of 1200 lbs. per acre. The mulch shall after addition and agitation in slurry tanks with fertilizers, grass seeds, water, and other approved additives become uniformly suspended to form a homogeneous slurry. Hay or straw mulch may also be an acceptable method of mulching.

BMP TYPICALS

BMPs FOR QUARRY OPERATIONS

Vincent Hills will implement source reduction measures in every effort to eliminate or reduce the amount of loading in its stormwater runoff. Reduction measures include preventative maintenance, good housekeeping, chemical substitution or elimination, material storage and inventory practices, and spill prevention. Vincent Hills will also implement source control measures where reduction measures cannot be employed. These controls include raw material storage/separation/covering, waste handling and disposal, and inspection/cleaning of pollution control device/equipment. Control measures also include BMPs designed to route all stormwater from the Plant site to the Quarry, where it will be treated and discharged via an NPDES outfall.

A. Good Housekeeping Measures

Good housekeeping practices are designed to maintain a clean and orderly work environment. A clean and orderly work are: (1) reduces the possibility of accidental spills caused by mishandling of chemical or petroleum products, (2) reduces safety hazards to plant personnel, (3) make it easier for plant personnel to conduct routine inspections, and (4) limits the loading in stormwater runoff.

Procedures that will be implemented to promote good housekeeping including improved operation and maintenance of industrial machinery, material storage practices, material inventory controls, routine and regular cleanup schedules, maintaining well organized work areas, and employee training. The Facility will implement the following specific BMPs.

1. Monthly stormwater inspections of the plant area by the Environmental Manager or his designee;
2. Good housekeeping training sessions with key Facility employees;
3. Maintenance of bulletin boards identifying good housekeeping procedures, tips and reminders to be employed at the Facility; and
4. Routine cleaning of floors and ground surfaces using brooms, shovels or vacuum trucks.

B. Inspections

Inspections will be conducted to evaluate whether pollution devices/measures/reductions/controls are effective in preventing or removing pollutants from stormwater. These inspections will require the inspector to look at all disturbed areas, material storage areas, the land application area, and production areas at the site. The Facility's Environmental Manager or his designee will conduct inspections of the Facility. Routine inspections of Plant operations will be conducted (during normal operating and as required by the NPDES Permit) at least monthly and a facility-wide comprehensive inspection will be conducted annually. Inspection of the land application area will be conducted at least quarterly. The monthly inspections will be conducted during both dry and wet weather conditions to evaluate conditions that increase the loading of stormwater runoff.

Increased frequency of inspections will be determined by the types and amounts of materials handled at the Facility, existing BMPs at the Facility, and any other factors that may be relevant, such as the age of the equipment (in general, older facilities will be inspected at more frequent intervals). The following lists identify key equipment and plant areas to be inspected.

1. Areas where spills and leaks are likely to occur (or where they have occurred);
2. Material storage areas (tank farms, drum storage, raw materials);
3. Outdoor material processing areas;
4. Material handling areas (e.g., loading, unloading, transfer); and
5. Waste generation, storage, treatment and disposal areas.

Inspections will be followed, as needed, with a written inspection report. When deemed necessary, the inspection report will include a discussion of:

1. Whether pollution control measures were installed and/or performing correctly;
2. Whether any damage or failure of BMPs were identified; and

3. The measures needed and taken to correct or remedy any noted problems.

Inspection records will note the date and time of the inspection, who conducted the inspections, what areas were inspected, what problems were found, and steps taken to correct any problems, including who has been notified. Records will be kept until at least one year after coverage under the applicable NPDES Permit expires.

C. Material Storage Practices

Since materials are frequently purchased in bulk and are subsequently stored around the plant site, their management and storage is an important part of this BMP Plan. The following BMPs will be implemented for material storage:

1. Provide adequate isle space to facilitate material transfer and easy inspection;
2. Store drums, containers, pallets, etc., away from traffic routes to prevent accidental spills;
3. Stack containers according to manufacturer's instructions to prevent container damage due to excessive weight distribution;
4. Assign the responsibility of materials inventory to a limited number of people who are trained to handle the materials and wastes; and
5. Place adequate spill containment around containers storing petroleum or chemical products pursuant to the Facility's SPCC Plan.

D. Material Inventory Procedures

Material inventories will be updated (hazardous and non-hazardous materials) annually at the Facility. These inventories will track material storage and their usage rate. Also, inventories will identify which materials pose the most risk to the environment. This list will allow the Environmental Manager to evaluate the Facility's inventory practices and help to identify chemicals that possibly can be substituted or eliminated. Inventories will be accomplished by:

1. Reviewing MSDS sheets;
2. Labeling containers to show contents, purchase date, expiration date, health hazards, and any other information that will identify the proper management of each chemical;
3. Identifying materials that require special handling, storage, and/or disposal requirements;
4. Identifying usage rates and determining if less toxic substitutes can be used; and
5. Identifying storage practices and management of all raw and finished materials.

E. Preventative Maintenance

Vincent Hills has identified areas or practices that could contribute to loading in stormwater runoff. Pertinent items include petroleum-lubricated equipment, sediment removal structures (weirs, dust control baghouses) and raw material storage areas. These items/areas will be inspected and maintained at least monthly. More frequent inspections will be conducted, as needed. Maintenance will include the routine servicing of all petroleum equipment to ensure no petroleum leaks are occurring. Also, all weir structures will be cleaned out and evaluated, as needed, to determine how their performance can be improved.

F. Employee Training

Employee training will be conducted at least annually and will address information on good housekeeping measures at the Facility and specifically address measures for equipment and vehicle washing. Additionally, employees will be informed of the management team structure and the procedures for addressing environmental issues. Vincent Hills will, in addition, post bulletin boards with updated good housekeeping tips, procedures, and reminders.

G. Spill Prevention and Response

Establishing standard operating procedures such as safety and spill prevention procedures, along with proper employee training, can reduce accidental releases caused from spills and leaks. Avoiding spills and leaks is preferable to cleaning them up after they occur, not only from an environmental standpoint, but also because spills cause increased operating costs and lower productivity. A Spill Prevention, Control and Countermeasure (SPCC) Plan has been developed for this site and will be implemented as required.

H. Sediment/Erosion Control and Runoff Management

Periodic inspections of the Facility will be conducted during dry weather and wet weather rain events to identify areas that, due to topography, activities, or other factors, have a potential for significant soil erosion or sediment transport, and identify structural, vegetative, and/or stabilization measures to be used to limit such erosion. Also, Vincent Hills will also evaluate treatment systems/BMPs employed to remove/minimize sediment from stormwater runoff. Stormwater monitoring will allow the Facility to determine the effectiveness of the BMPs employed.

Advanced BMPs at this site include the use of chemical coagulation/flocculation to remove suspended solids from water that is discharged from the Quarry. Specific BMPs that will be used in the Quarry operations are included as Appendix B.

I. Recordkeeping and Reporting

Record keeping requirements will continue through one year after termination of this NPDES Permit at the Facility and as required by the Facility's NPDES Permit. Also, all sampling reports must be maintained for six (6) years after sampling or until one (1) year after termination of the Facility's NPDES Permit.

Records may include the following (as appropriate):

Spill Incidents:

1. The date and time of the spill incident;
2. Weather conditions and their duration;
3. Cause of the spill event;
4. Environmental problems caused from the event;
5. Response procedures;
6. Parties notified; and
7. Recommended revisions to the Facility BMPs, operating procedures and/or equipment necessary to prevent any recurrences.

Inspections and maintenance activities:

Inspection and maintenance activity documentation will allow review and examination of the BMP procedures at the Facility. Documentation includes:

1. Field notebooks;
2. Timed and dated photographs;
3. Inspection/maintenance logs;
4. Drawings/maps; and
5. Videotapes.

SPECIFIC STORMWATER BMPs

A. Outdoor Container Storage of Liquids

Products and wastes are stored outdoors in tanks, containers, and drums. To prevent or minimize releases from these areas, the following actions will be taken:

1. Shelter materials from rainfall, run-on, runoff, and wind dispersal by using one or more of the following practices (where practical):
   a. Storing material indoors;
   b. Covering outdoor containers with a tarp or outdoor storage areas with a roof;
   c. Diverting or minimizing stormwater run-on or run-off by enclosing the area or other similar mechanisms
2. Review and update, as needed, the SPCC plan employed at this site;
3. Provide secondary containment for petroleum and chemical products in accordance with 40 CFR 112.7, the Facility's SPCC Plan and NPDES Permit.
4. Provide spill response training for personnel who handle petroleum and chemical products; and
5. Regularly remove and properly dispose of water that collects in secondary containment structures.

B. Outdoor Storage of Raw Materials, Products, and By-Products

Items stored outdoors include raw material and recyclable materials. Also, as previously discussed, all petroleum and chemical products will be stored and managed in accordance with 40 CFR 112.7. To prevent or reduce stormwater pollution, Vincent Hills will (where practical):

1. Inspect outdoor storage containers to detect any sign of deterioration (remedy as needed);
2. Maintain outdoor waste storage containers in good condition;
3. Protect material and products from rain, run-on, runoff, and wind dispersal by storing them indoors, covering them, or providing them with secondary containment;
4. Slope bulk storage areas to prevent water from collecting;
5. Place materials on pallets to avoid contact with storm water run-on and runoff; and
6. Stabilize, where necessary, areas with sediment erosion/siltation.

C. Waste Handling and Disposal

Waste generated at this Facility will include office waste, salvage materials, waste from the Facility's break room, and process waste. Wastewater (such as discarded chemicals and chemical solutions, secondary containment wastewater; and purge water from environmental activities and sanitary wastewater) will be managed to prevent releases to the ground and water. To prevent the discharge of wastes from waste handling and disposal practices to stormwater, the following will be implemented (where practical):

1. Provide supervision and training in proper waste-handling practices;
2. Provide secondary containment for chemical and/or petroleum containers;
3. Inspect waste containers for signs of deterioration (at least monthly or as required by state and local regulations) and remedy deteriorating conditions;
4. Implement the Facility's SPCC Plan;
5. Equip waste handling and storage areas with spill kits containing dry, absorbent materials for spill response;
6. Routinely inspect waste management areas for spills and leaks;
7. Maintain an active waste-minimization program (including material substitution, recycling, and process equipment modification);
8. Segregate and separate waste to preclude compatibility problems;

9. Cover, enclose, or berm wastewater management areas to prevent contact with stormwater run-on or runoff; and
10. Minimize spills and fugitive losses from waste handling systems.

D. Vehicle and Equipment Washing

Quarry machinery may be washed with high-pressure water sprayers. Only the exterior of equipment will be washed and all rinse water drains back to the Quarry for treatment to remove solids prior to discharge tot eh process water treatment ponds. The following BMPS will be implemented to minimize the impact of discharges from onsite vehicle and equipment washing and cleaning:

1. Pressure washing will occur only in designated areas;
2. Wash areas must be sloped so that runoff waters will drain to a location on site where the water will be treated to remove solids;
3. Washing of vehicle motors is prohibited;
4. Detergents will not be used to wash vehicles; and
5. Instructions will be posted describing proper use of cleaning equipment.

E. Monitoring Plan

All monitoring will be conducted in accordance with the Effluent discharge limitations under the Facility's NPDES Permit. These parameters have and will be monitored in accordance with the analytical procedures/methods in 40 CFR 136.

F. Comprehensive Site Compliance Evaluation

Vincent Hills will perform an annual comprehensive review or evaluation of the Facility's BMP practices and stormwater management. This evaluation will:

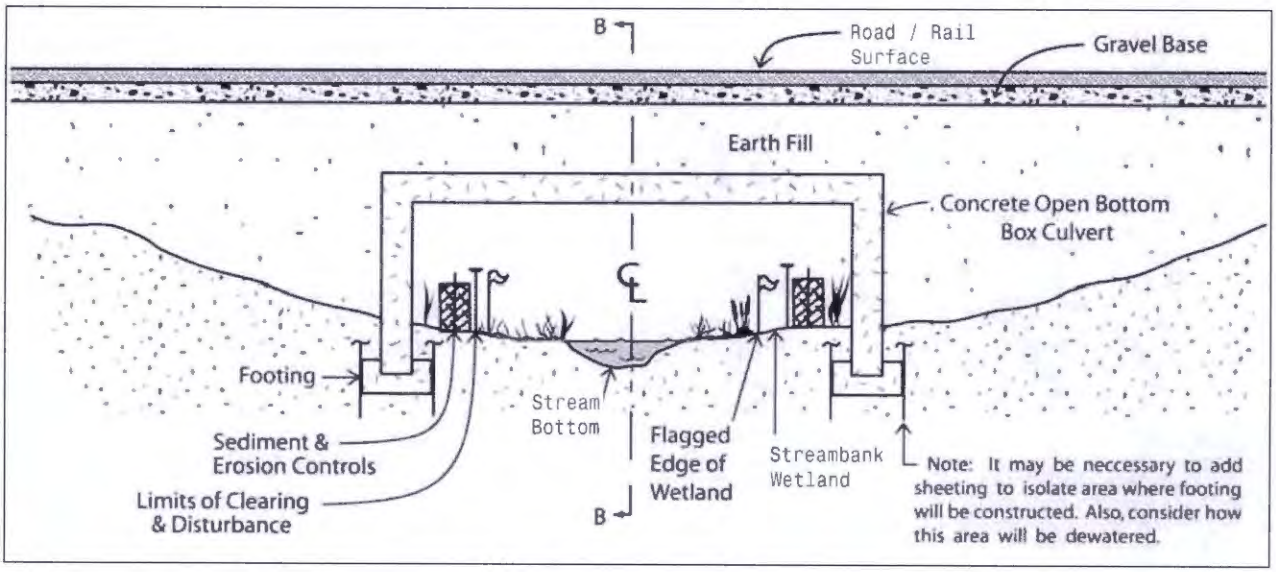
1. Confirm/update the potential pollution sources at the Facility;
2. Determine the effectiveness of the BMP Plan; and
3. Assess the Facility's compliance with the terms and conditions of its NPDES Permit.

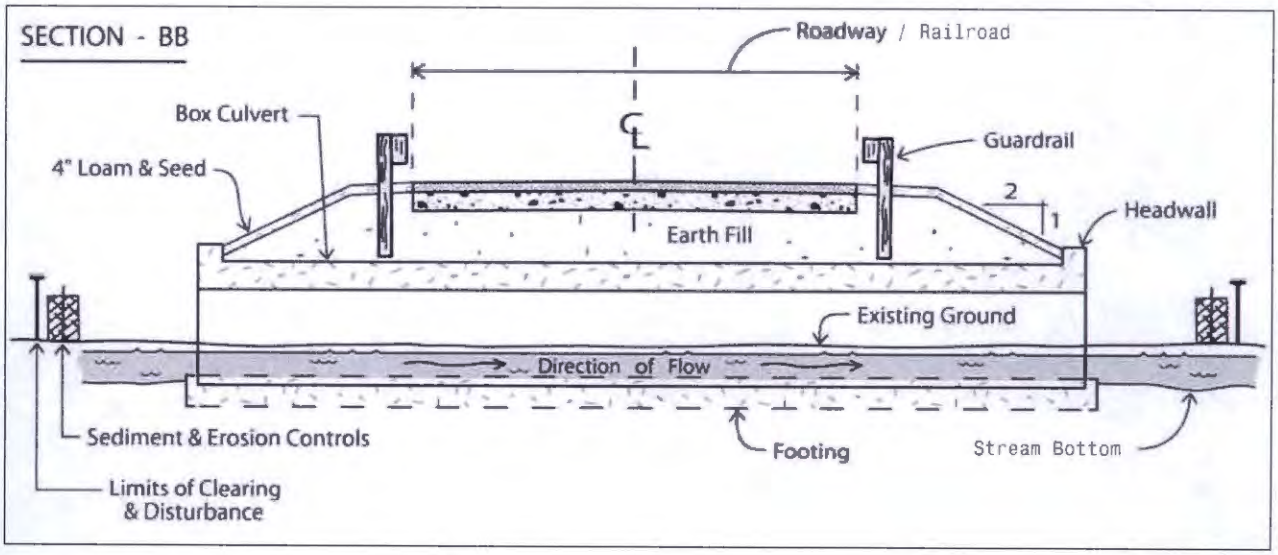
This annual evaluation can be performed during one of the monthly site inspections and will be performed by, or under the supervision of, the Plant Environmental Manager. The following items will be included in the annual review:

1. A review of the stormwater and BMP management practices at the Facility;
2. A review of the materials and inventory used at the Facility;
3. A review of Facility operations and procedures to determine if additional sources of loading to stormwater runoff;
4. Inspection of drainage area for each outfall;
5. Evaluation the effectives of source reduction measures employed at the Facility;
6. Evaluation of source control measures from process or stormwater;
7. Inventory and review any equipment needed to implement BMPs at the Facility; and
8. The annual site inspection will be summarized in a report that documents all incidents of non-compliance and recommendations for improvements. The report will include the dates of inspection, inspection findings, follow-up actions needed, and the names of the persons who performed the inspection.

Appendix F

Stream Crossing Detail





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DATE:	REVISED:	DRAWN BY:
10/31/12	11/6/12	MAJ

WHITE ROCK QUARRIES
VINCENT HILLS PLANT
TYPICAL OPEN-BOTTOM BOX CULVERT DETAILS FOR ROADWAYS AND RAILROADS SHELBY COUNTY, ALABAMA

SCALE:	PROJECT NO.:
NTS	23-15420.1

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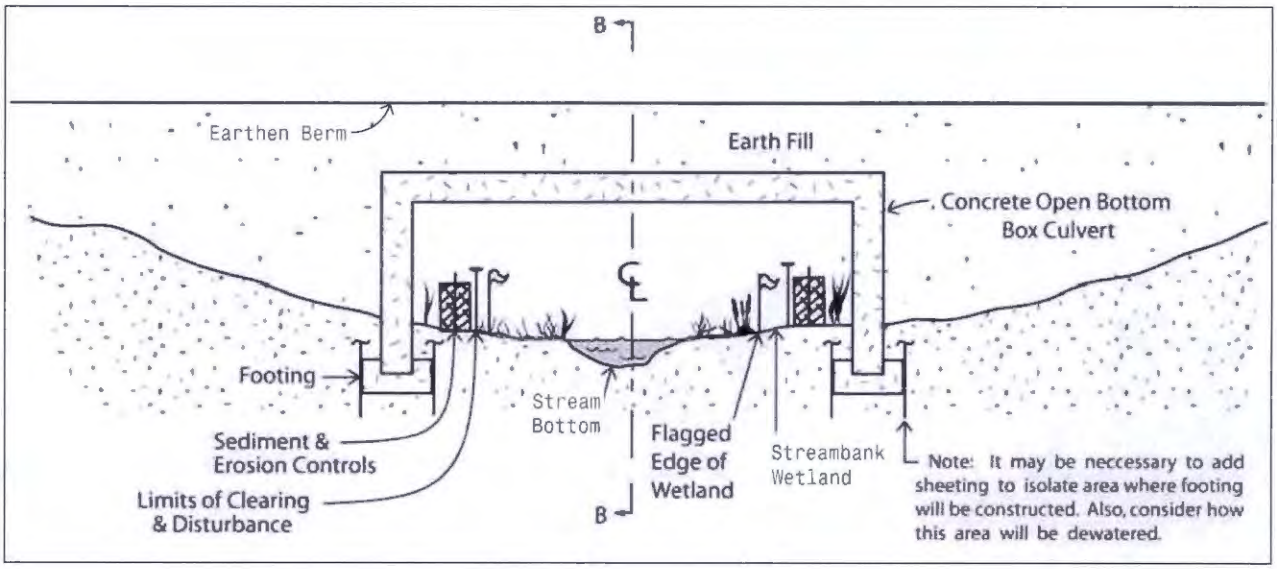

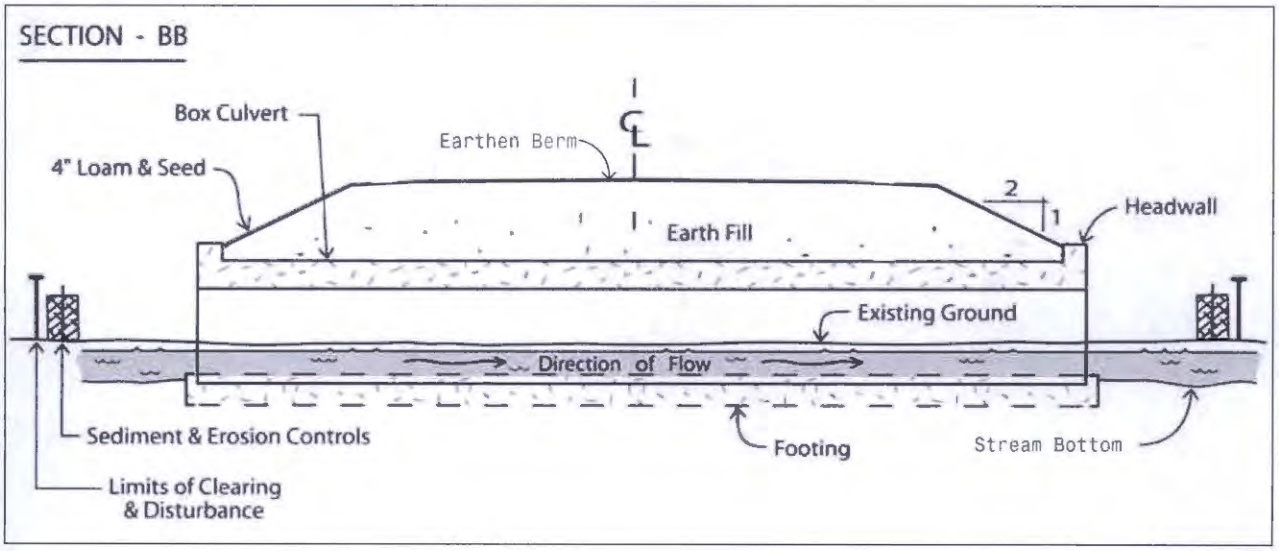

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DATE: 10/31/12 | REVISED: 11/6/12 | DRAWN BY: MAJ

WHITE ROCK QUARRIES
VINCENT HILLS PLANT
TYPICAL OPEN-BOTTOM BOX CULVERT DETAILS FOR EARTHEN BERMS SHELBY COUNTY, ALABAMA

SCALE: NTS | PROJECT NO.: 23-15420.1

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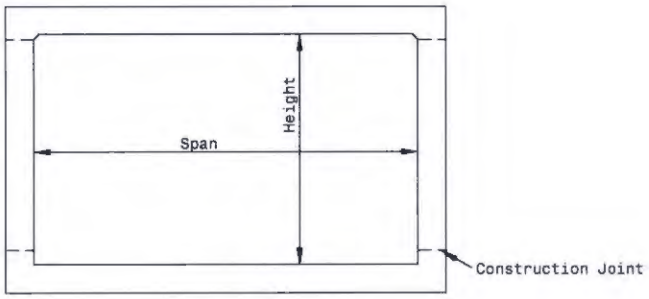

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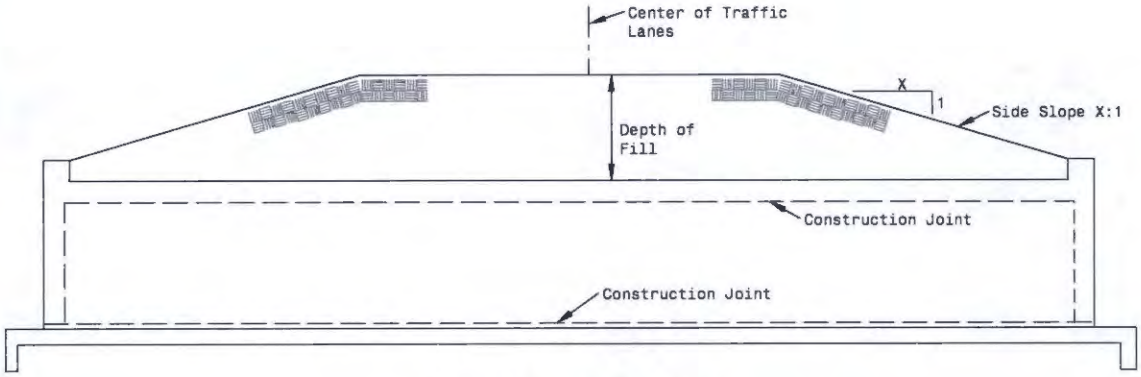

TYPICAL SECTION

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WHITE ROCK QUARRIES
VINCENT HILLS PLANT
TYPICAL BOX CULVERT DETAILS
SHELBY COUNTY, ALABAMA

DATE:	REVISED:	DRAWN BY:	SCALE:	PROJECT NO.:
10/31/12	11/6/12	MAJ	NTS	23-15420.1

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