

**PRECONSTRUCTION ANALYSIS
FOR
CREEKWOOD RESOURCES, LLC
206-0050
UNIT X001**



Creekwood Resources, LLC, (CWR) of Florence, AL, has applied to the ADEM - Air Division for an Air Permit which would authorize the construction and operation of a crushing, screening, and conveying circuit at the Alabama Granite Crushing Facility located in Opelika, Lee County. CWR is applying for an Air Permit for the following circuit:

**X001 – 300 TPH Crushing, Screening, and Conveying Circuit with Wet Suppression:
Includes Sand Washing Circuit (NSPS-OOO)**

X001 Process Description:

Aggregate material would be fed, by wheel loader, into the crushing, screening, and conveying circuit for processing. Processed material would then be conveyed to stockpiles or a wash screen for further processing. (See flow diagram in the application)

All equipment associated with this circuit was manufactured on or after April 22, 2008. 40 CFR Part 60, Subpart OOO NSPS limits visible emissions from uncontrolled crushers to 12% opacity and limits visible emissions from grinding mills, screening operations, bucket elevators, belt conveyors, bagging operations, storage bins, and enclosed truck or railcar loading stations, or from any other affected facility to 7% opacity. Wet processes are exempt from regulation by this subpart. In addition to the opacity requirements, there are periodic monitoring and testing requirements, as well as recordkeeping requirements to remain in compliance with NSPS Subpart OOO, as promulgated on April 28, 2009. Monthly inspections are required for all spray nozzles in wet suppression areas and for areas controlled by carry over moisture from upstream wet suppression. If inspections of the upstream spray nozzles are not conducted, the carry over areas will be subject to the five year interval retest requirement. All areas not controlled by wet suppression or carry over shall be required to retest every five years. Records of all periodic monitoring inspections, dates, results, and any corrective action taken shall be kept at the facility site, available for inspection.

CWR, will be required to conduct an EPA Method 9 visible emissions observation on the equipment associated with this circuit.

Process X001

<i>Manufacturer</i>	<i>Type</i>	<i>Maximum Operating Capacity</i>	<i>Manufacturer's Date</i>	<i>NSPS/SIP</i>	<i>Testing?</i>
Cedarapids	Jaw Crusher CR-1	300 TPH	2018	NSPS	Yes
Cedarapids	Vibrating Grizzly Feeder F-1	300 TPH	2018	SIP	No
Cedarapids	Conveyor C-1	300 TPH	2018	NSPS	Yes

Unbranded	Conveyor C-2	300 TPH	2015	NSPS	Yes
Unbranded	Conveyor C-3	100 TPH	2015	NSPS	Yes
Unbranded	Conveyor C-4	150 TPH	2012	NSPS	Yes
Unbranded	Conveyor C-5	300 TPH	2015	NSPS	Yes
Cedarapids	Secondary Crusher CR-2	300 TPH	2013	NSPS	Yes
Cedarapids	Primary Dump Hopper DH-1	300 TPH	2018	NSPS	Yes
Unbranded	Conveyor C-6	300 TPH	2016	NSPS	Yes
Unbranded	Conveyor C-7	100 TPH	2015	NSPS	Yes
Unbranded	Conveyor C-8	100 TPH	2012	NSPS	Yes
Unbranded	Conveyor C-9	100 TPH	2015	NSPS	Yes
Unbranded	Conveyor C-10	100 TPH	2015	NSPS	Yes
Unbranded	Conveyor C-11	150 TPH	2015	NSPS	Yes
Unbranded	Conveyor C-12	50 TPH	2017	NSPS	Yes
Unbranded	Surge Bin Dump Hopper DH-2	300 TPH	2015	NSPS	Yes
Deister	Triple Deck Screen SCR-1	300 TPH	2008	NSPS	Yes
Cedarapids	Triple Deck Screen SCR-2	300 TPH	2017	NSPS	Yes

The expected fugitive emissions rate for this circuit would be **0.46 TPY**. There is no allowable emissions rate for fugitive or dust emissions. Therefore, the uncontrolled, controlled, and expected emission rate calculations for this circuit can be found in Appendix A. Note: these calculations are furnished as public information and used to demonstrate the effectiveness of the wet suppression systems based on emissions factors taken from an EPA approved source of emission factors. By definition, fugitive emissions from this process would not be considered in determining Prevention of Significant Deterioration (PSD) or Title V applicability.

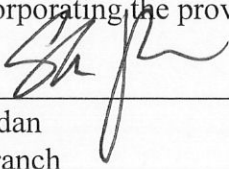
Expected emissions from the 2665 HP 2001 Caterpillar 3516 diesel generator reciprocating internal combustion engine have been calculated for informational purposes. It potentially could be an affected source under 40 CFR Part 63, Subpart ZZZZ, National Emission Standards for Hazardous Air Pollutants for Stationary Reciprocating Internal Combustion Engines (the "RICE MACT"). The proposed engine potentially could be considered a new affected source since it was constructed after June 12, 2006. According to §63.6590(c), any new stationary "RICE" located at an area source of HAP emissions must meet the requirements of the "RICE MACT" by meeting the requirements of 40 CFR 60, Subpart IIII, Standards of Performance for Stationary Compression Ignition Internal Combustion Engines. CRW has submitted calculations for a diesel-fired generator that would supply power for a short period of time until phase power can be accessed for this plant. However, under definition of nonroad engine in 40 CFR 1068.30, a portable engine is not a nonroad engine (and therefore a stationary engine) if it remains or will remain at a location for more than 12 consecutive months or a shorter period of time for an engine located at a seasonal source. It is not anticipated that the engine will be on the site for 12 consecutive months, and therefore would not be subject to RICE NESHAP. No further requirements would apply to the proposed engine or under Subpart ZZZZ. The calculations show

that expected emissions for each applicable criteria pollutant are below the 100 TPY Title V threshold.

This facility is not located within 100 km of the Sipsey Class I Wilderness. The construction and operation of this plant is not anticipated to significantly impact this area.

This facility would not be considered "major" for any criteria pollutant and, therefore, is not required to undergo the PSD process. This site would be considered a greenfield and CRW would be required to complete a 30-day public comment period. The Alabama Granite Crushing Facility will be located in Opelika, Lee County.

Based on this information, this analysis indicates that this source would meet the requirements of all ADEM - Air Division rules and regulations. I recommend that an Air Permit be issued to CRW incorporating the provisions of Appendix B and Appendix C, the cover letter.



Shane Jordan
Energy Branch
Air Division
January 7, 2020

Appendix A
CALCULATIONS
FOR
CREEKWOOD RESOURCES, LLC 206-0050
UNIT X001

X001- 300 TPH Crushing, Screening, and Conveying Circuit with Wet Suppression.

Equipment: 2 Crushers, 2 Screens, and 15 Associated Belt Conveyors (including 1 Feeder, 1 Dump Hopper and 1 Surge Bin)

Hours of Operation: 10 hrs/day x 5 days/wk x 52 wks/yr = 2600 hours /year

Pollution Control: Wet Suppression

Allowable Emission: There is no allowable particulate emission rate limiting fugitive emissions for any of these processes.

Uncontrolled Emissions: Emission factors taken from EPA - 600/2-78-004E

Crushing: 0.56 g/Met T

300 T	0.56 g	0.907 Met T	lb	= 0.34 lbs/hr
hr	Met T	T	453.6 g	

$$0.34 \text{ lbs/hr} \times 2 \text{ crushers} = 0.68 \text{ lbs/hr}$$

Screening: 0.0016 g/Met T

300 T	0.0016 g	0.907 Met T	Lb	= 0.001 lbs/hr
hr	Met T	T	453.6 g	

$$0.001 \text{ lbs/hr} \times 2 \text{ screens} = 0.002 \text{ lbs/hr}$$

Conveying: 0.32 g/ Met T

300T	0.32 g	0.907 Met T	Lb	= 0.19lbs/hr
hr	Met T	T	453.6 g	

$$0.19 \text{ lbs/hr} \times 16 \text{ (12 belt conveyors + 1 dump hopper, 1 feeder and 1 surge bin)} = 3.04 \text{ lbs/hr}$$

Total Uncontrolled Emissions:

Crushing	0.68 lbs/hr
Screening	0.002 lbs/hr
<u>Conveying</u>	<u>2.85 lbs/hr</u>
Total	3.53 lbs/hr or 15.5 TPY at 8760 hrs/yr

Total Controlled Emissions: Assuming 90% removal efficiency from the use of wet suppression

3.53 lbs	0.10 (90% efficiency)	= 0.353 lbs/hr
hr		

OR

1.55 TPY at 8760 hrs/yr

Expected Emissions: Based on 2600 Actual Hours of Operation

0.353 lbs	2600 hrs	T	= 0.46 TPY
hr	yr	2000 lbs	

CALCULATIONS FOR ENGINE

Equipment: One 2665 Hp 2001 Diesel Engine

Hours of Operation: 2600 hours /year

Pollution Control: Not applicable

Allowable Emission Rate: 40 CFR 60, Subpart ZZZZ

Uncontrolled Emissions: Emission factors taken from AP-42 3.4-1, Table 3.4-1 Gaseous Emission Factors for Large Stationary Diesel and All Stationary Dual-Fuel Engines.

No. 2 Diesel Fuel Combustion Emissions:

NO_x Emissions

NO_x Emission Factor 0.024lb/Hp-hr, AP-42 Table 3.4-1.

2665 Hp	0.024lb Hp-hr	2600 hrs Yr	1T 2000lbs	= 83.2 T Yr
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SO_x Emissions

SO_x Emission Factor 8.09 E-03S₁ lb/Hp-hr, where S₁ = % Sulfur in the Fuel (1.5%=S₁) Oil, AP-42, Table 3.4-1.

2665 Hp	.00809(1.5)lb HP-hr	2600 hrs Yr	1T 2000lb	= 42.0 T Yr
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CO Emissions

CO Emission Factor 5.5 E-03 lb/Hp-hr, AP-42, Table 3.4-1.

2665 HP	0.0055lb Hp-hr	2600 hrs 1Yr	1T 2000lbs	= 19.1 T Yr
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PM Emissions

PM Emission Factor 0.0007 lb/Hp-hr, AP-42, Table 3.4-1.

2665 Hp	0.0007 lb Hp-hr	2600 hrs Yr	1 T 2000 lbs	= 2.43 T Yr
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Appendix B

**Creekwood Resources, LLC
Opelika, Lee County, Alabama
Permit No. 206-0050-X001**

Provisos

1. This permit is issued on the basis of Rules and Regulations existing on the date of issuance. In the event additional Rules and Regulations are adopted, it shall be the permit holder's responsibility to comply with such rules.
2. This permit is not transferable. Upon sale or legal transfer, the new owner or operator must apply for a permit within 30 days.
3. A new permit application must be made for new sources, replacements, alterations or design changes which may result in the issuance of, or an increase in the issuance of, air contaminants, or the use of which may eliminate or reduce or control the issuance of air contaminants.
4. All air pollution control equipment shall be operated at all times while this process is operational. In the event of scheduled maintenance, unscheduled maintenance, or a breakdown of the pollution control equipment, the process shall be shutdown as expeditiously as possible (unless this act and subsequent re-start would clearly cause greater emissions than continuing operations of the process for a short period). The Department shall be notified of all such events **that exceed 1 hour** within 24 hours. The notification shall include all pertinent facts, including the duration of the process operating without the control device and the level of excess emissions which have occurred. Records of all such events, regardless of reporting requirements, shall be made and maintained for a period of five years. These records shall be available for inspection.
5. This process, including all air pollution control devices and capture systems for which this permit is issued shall be maintained and operated at all times in a manner so as to minimize the emissions of air contaminants. Procedures for ensuring that the above equipment is properly operated and maintained so as to minimize the emission of air contaminants shall be established.
6. This permit expires and the application is cancelled if construction has not begun within 24 months of the date of issuance of the permit.
7. On completion of construction of the device(s) for which this permit is issued, written notification of the fact is to be submitted to the Chief of the Air Division. The notification shall indicate whether the device(s) was constructed as proposed in the application. The device(s) shall not be operated until authorization to operate is granted by the Chief of the Air Division. Failure to notify the Chief of the Air Division of completion of construction and/or operation without authorization could result in revocation of this permit.

Permit No.: 206-0050-X001

8. Prior to a date to be specified by the Chief of the Air Division in the authorization to operate, emission tests are to be conducted by persons familiar with and using the EPA Sampling Train and Test Procedure as described in the Code of Federal Regulations, Title 40, Part 60, for the following pollutants. Written tests results are to be reported to the Air Division within 15 working days of completion of testing.

Particulates	()	Carbon Monoxide	()
Sulfur Dioxide	()	Nitrogen Oxides	()
Volatile Organic Compounds	()	Visible Emissions	(X)

9. Submittal of other reports regarding monitoring records, fuel analyses, operating rates, and equipment malfunctions may be required as authorized in the Department's air pollution control rules and regulations. The Department may require stack emission testing at any time.
10. Additions and revisions to the conditions of this Permit will be made, if necessary, to ensure that the Department's air pollution control rules and regulations are not violated.
11. Nothing in this permit or conditions thereto shall negate any authority granted to the Department pursuant to the Alabama Environmental Management Act or regulations issued thereunder.
12. This permit is issued with the condition that, should obnoxious odors arising from the plant operations be verified by Air Division inspectors, measures to abate the odorous emissions shall be taken upon a determination by the Alabama Department of Environmental Management that these measures are technically and economically feasible.
13. The Air Division must be notified in writing at least 10 working days in advance of all emission tests to be conducted and submitted as proof of compliance with the Department's air pollution control rules and regulations.

To avoid problems concerning testing methods and procedures, the following shall be included with the notification letter:

- (a) The date the test crew is expected to arrive, the date and time anticipated of the start of the first run, how many and which sources are to be tested, and the names of the persons and/or testing company that will conduct the tests.
- (b) A complete description of each sampling train to be used, including type of media used in determining gas stream components, type of probe lining, type of filter media, and probe cleaning method and solvent to be used (if test procedure requires probe cleaning).

Permit No.: 206-0050-X001

- (c) A description of the process(es) to be tested, including the feed rate, any operating parameter used to control or influence the operations, and the rated capacity.
- (d) A sketch or sketches showing sampling point locations and their relative positions to the nearest upstream and downstream gas flow disturbances.

A pretest meeting may be held at the request of the source owner or the Department. The necessity for such a meeting and the required attendees will be determined on a case-by-case basis. All test reports must be submitted to the Air Division within 15 days of the actual completion of the test, unless an extension of time is specifically approved by the Air Division.

14. Precautions shall be taken to prevent fugitive dust emanating from plant roads, grounds, stockpiles, screens, dryers, hoppers, ductwork, etc.

Plant or haul roads and grounds shall be maintained in the following manner so that dust will not become airborne. A minimum of one, or a combination, of the following methods shall be utilized to minimize airborne dust from plant or haul roads and grounds:

- (a) by the application of water any time the surface of the road is sufficiently dry to allow the creation of dust emissions by the act of wind or vehicular traffic;
- (b) by reducing the speed of vehicular traffic to a point below that at which dust emissions are created;
- (c) by paving;
- (d) by the application of binders to the road surface at any time the road surface is found to allow the creation of dust emissions;

Should one, or a combination, of the above methods fail to adequately reduce airborne dust from plant or haul roads and grounds, alternative methods shall be employed, either exclusively or in combination with one or all of the above control techniques, so that dust will not become airborne. Alternative methods shall be approved by the Department prior to utilization.

15. If this plant relocates to another site, this plant's Air Permit remains valid for this site unless or until it is revoked for failure to comply with ADEM Air Division Rules and Regulations.
16. The owner or operator of this plant must provide written notification of the intent to relocate the plant to this site at least two weeks in advance. The written notification should include the planned construction beginning date and the projected startup date.

Permit No.: 206-0050-X001

Failure to provide this written notification is a violation of this permit condition and is grounds for revocation of this permit.

17. Any performance tests required shall be conducted and data reduced in accordance with the test methods and procedures contained in each specific permit condition unless the Director (1) specifies or approves, in specific cases, the use of a reference method with minor changes in methodology, (2) approves the use of an equivalent method, or (3) approves the use of an alternative method, the results of which he has determined to be adequate for indicating whether a specific source is in compliance.
18. All equipment associated with this process is subject to the New Source Performance Standards (40 CFR 60, Subpart OOO - Standards of Performance for Nonmetallic Mineral Processing Plants, applicability date, April 22, 2008). This NSPS limits visible emissions from crushers to 12% opacity and visible emissions from grinding mills, screening operations, bucket elevators, belt conveyors, bagging operations, storage bins and enclosed truck and railcar loading stations to 7% opacity. This NSPS exempts wet operations from regulation.
19. Compliance with the opacity standards for sources subject to NSPS-Subpart OOO will be determined by conducting visible emission observations in accordance with the most recent version of EPA Reference Method 9 of Appendix A-4 of the CFR, Title 40, Part 60. When determining compliance with the fugitive emissions standard for grinding mills, screening operations, bucket elevators, belt conveyors, bagging operations, storage bins and enclosed truck and railcar loading stations or from any other affected facility of this circuit, the duration of the Method 9 observations are required to be 30 minutes or five six minute averages. No more than 3 points may be tested concurrently by the same observer. The specified criteria of NSPS - Subpart OOO must be met.

The observations will be made by an observer currently certified to make EPA Method 9 visible emission observations. The opacity observations will be conducted within 60 days of the source achieving maximum production rate but no later than 180 days of initial start-up of the facility. The visible observation report will be submitted to the Department within 15 days of taking the observations

20. The permittee shall not use as a defense in an enforcement action that maintaining compliance with conditions of this permit would have required halting or reducing the permitted activity.
21. The issuance of this permit does not convey any property rights of any sort, or any exclusive privilege.
22. Precautions shall be taken by the permittee and its personnel to ensure that no person shall ignite, cause to be ignited, permitted to be ignited, or maintain any open fire in such a manner as to cause the Department's rules and regulations applicable to open burning to be violated.

Permit No.: 206-0050-X001

23. Periodic monitoring is required for all affected facilities controlled by direct wet suppression and/or water carryover. Each spray nozzle shall be examined monthly to assure water is appropriately supplied to the nozzle and that the water is sprayed from the nozzle correctly. Any corrective action indicated shall be taken within 24 hours of the inspection and completed as expediently as possible.
24. The permittee shall keep this permit under file or on display at all times at the site where the facility for which the permit is issued is located and shall make the permit readily available for inspection by any or all persons who may request to see it.
25. Should this facility, at any time, exceed the limits set forth in this permit, this Department must be notified within ten (10) days of the exceedance.
26. Recordkeeping is required for all monthly periodic monitoring inspections. Records shall be kept on the facility site, either in a handwritten log book or in electronic version suitable for inspection upon request by Air Division inspectors and will be retained for at least two (2) years following the date of the inspection. Records of the inspection date, results, and any corrective action taken shall be recorded. In addition, if wet suppression is not utilized during the inspection, any other control method used should be recorded or circumstances shall be noted.

Date
Date

Appendix C

date

Mr. Jeffrey Major
Creekwood Resources, LLC
2701 Mall Dr, Suite 7-102
Florence, AL 35630

Dear Mr. Major:

**RE: Facility No. 206-0050
Unit X001**

The enclosed Air Permit is issued pursuant to the Department's air pollution control rules and regulations. Please note the conditions (provisions) which must be met in order to retain this Air Permit.

New sources of air pollution receiving approval by an Air Permit must notify the Chief of the Air Division upon completion of construction and prior to operation. Authorization to Operate must then be received from the Chief of the Air Division. Failure to notify the Chief of the Air Division upon completion of construction and/or operation without authorization can result in the revocation of the Air Permit.

Upon receiving the enclosed Air Permit, please review **all** of the provisions.

Should you have any questions or if clarification of permit conditions is required, please do not hesitate to contact Shane Jordan at (334) 274-4228 in Montgomery.

Sincerely,

Ronald W. Gore, Chief
Air Division

RWG/SDJ

Enclosures

AIR PERMIT

PERMITTEE: CREEKWOOD RESOURCES, LLC
FACILITY NAME: ALABAMA GRANITE CRUSHING FACILITY
LOCATION: OPELIKA, LEE COUNTY, ALABAMA

PERMIT NUMBER	DESCRIPTION OF EQUIPMENT, ARTICLE OR DEVICE
206-0050-X001	300 TPH Crushing, Screening and Conveying Circuit with Wet Suppression (NSPS-OOO)

In accordance with and subject to the provisions of the Alabama Air Pollution Control Act of 1971, Ala. Code §§ 22-28-1 to 22-28-23, as amended, the Alabama Environmental Management Act, Ala. Code §§ 22-22A-1 to 22-22A-17, as amended, and rules and regulations adopted there under, and subject further to the conditions set forth in this permit, the Permittee is hereby authorized to construct, install and use the equipment, device or other article described above.

ISSUANCE DATE: Date