

From: [Air.Pollution Control](#)
To: [APC Permitting](#)
Subject: FW: Blue Water Industries (BWI) Applications for Construction Permits for a Mobile Non-Metallic Mineral Processing Plant System
Date: Thursday, January 4, 2024 3:00:34 PM
Attachments: [BWIETN Portables Applic Submit 1-4-24.pdf](#)

From: Alisa Hatmaker <ahatmaker@bluewaterindustries.com>
Sent: Thursday, January 4, 2024 2:33 PM
To: Air.Pollution Control <Air.Pollution.Control@tn.gov>
Cc: Walt Hillis <WHillis@bluewaterindustries.com>; Tracy Kefauver <Tracy.Kefauver@tn.gov>; Younes Aleali <Younes.Aleali@tn.gov>; Will Collins <Will.Collins@tn.gov>
Subject: [EXTERNAL] Blue Water Industries (BWI) Applications for Construction Permits for a Mobile Non-Metallic Mineral Processing Plant System

***** This is an EXTERNAL email. Please exercise caution. DO NOT open attachments or click links from unknown senders or unexpected email - STS-Security. *****

Good Afternoon,

Attached, please find two (2) combined construction/operating permit applications and one permit amendment request for seven (7) locations along with supporting documentation. All information has been combined into one document.

Please note, the construction permit application fees are being submitted via email to tdec.fees@tn.gov in a separate email.

If you have any questions, please contact me.

Thanks,

Alisa Hatmaker
[Blue Water](#) Industries
9509 Diggs Gap Road
Heiskell, TN 37754
865-279-0702 (cell)
865-512-7622 (office)
ahatmaker@bluewaterindustries.com



Via Electronic Mail to Air.Pollution.Control@tn.gov

January 4, 2024

Michelle W. Owenby, Director
Division of Air Pollution Control
Tennessee Department of Environment & Conservation
William R. Snodgrass Tennessee Tower
312 Rosa L. Parks Avenue, 15th Floor
Nashville, TN 37243

**Re: BWI ETN LLC dba Blue Water Industries
Combined Construction/Operating Permit Applications
Mobile Crushing, Screening, & Conveying Non-Metallic Mineral Processing Plant System**

Dear Director:

Please find attached for your review, two (2) combined construction/operating permit applications for mobile processing equipment. The equipment contained within these permit applications is currently permitted at seven (7) other BWI locations. These applications are being submitted to permit the same equipment at two additional sites listed below so the equipment may be moved within the BWI East Tennessee region to supplement market demands as needed.

Location	ESR No.
BWI Greenback Quarry	53-0074
BWI Grasselli Quarry	45-0059

This system instead of being fixed and set in place on concrete pads would consist of multiple track-mounted self-propelled units and one unit that is mounted on a portable trailer. The units can be operated as a complete system, with only certain units being utilized, or even just one unit being utilized at any one time dictated by demands for diverse sizes of finished aggregate product. The units have onboard dual-purpose engines to propel the units and supply power to the processing equipment.

An amendment request is being submitted concurrently with these construction permit applications to add the two additional locations to the existing seven (7) permits. More specifically, the amendment request will be to add the locations to the table found in Appendix 4 – Startup Certification for startup notification and compliance testing.

Also, some of the equipment contained in the BWI Greenback Quarry application that is attached is permitted currently under Permit No. 080023. With this application, BWI requests that this permit be made inactive once the new permit being applied for is issued.

An equipment process flow diagram and combination equipment list/emissions calculation sheet are attached for reference. Also attached is the permit limitation agreement letter for each application.

The equipment systems proposed for permitting are affected facilities as listed in 40 CFR Part 60, Subpart OOO, Standards of Performance for Nonmetallic Mineral Processing Plants per 60.670 (a) (1) Applicability and designation of affected facility and 60.2 Definitions. As a result, emissions testing on the equipment will be conducted per the requirement for affected facilities. The emissions testing will be coordinated with the Division's Compliance Validation Program and a start-up letter will be submitted to the Division.

BWI has already completed emission testing on some of the units listed in the application under other permits/approvals by the Division so these will not be retested when they operate in the same method as they were previously tested. These tests and approvals are included with each application.



BWI ETN LLC
Combined Construction/Operating Permit Application
Mobile Crushing and Screening Plant
April 19, 2023

BWI is submitting the application fee payment via credit card to tdec.fees@tn.gov with this application submittal.

If you have any questions concerning this correspondence, please contact me at (865)-512-7628 or whillis@bluewaterindustries.com.

Sincerely,

Walt Hillis

Walt Hillis
Environmental Manager

Attachments



ESR 45-0059 CONSTRUCTION PERMIT APPLICATION



**NON-TITLE V PERMIT APPLICATION
FACILITY IDENTIFICATION**

Type or print and submit. Attach appropriate source description forms.			
SITE INFORMATION			
1. Organization's legal name and SOS control number [as registered with the TN Secretary of State (SOS)] BWI ETN LLC, d/b/a Blue Water Industries, 000931614			
2. Site name (if different from legal name) BWI Grasselli Quarry			
3. Is a construction permit application fee being submitted? Yes <input checked="" type="checkbox"/> No <input type="checkbox"/> (see instructions for appropriate fee to submit)			
4. Site address (St./Rd./Hwy.) Brock Way - SW of Park Street near US-11E			County name Jefferson
City New Market	Zip code 37821		5. NAICS or SIC code 212312
6. Site location (in lat. /long.)	Latitude 36-05-52.93	Longitude 83-32-10.22	
CONTACT INFORMATION (RESPONSIBLE PERSON)			
7. Responsible person/Authorized contact Walt Hillis			Phone number with area code 865-512-7628
Mailing address (St./Rd./Hwy.) 9509 Diggs Gap Road			Fax number with area code 865-512-7661
City Heiskell	State TN	Zip code 37754	Email address whillis@bluewaterindustries.com
CONTACT INFORMATION (TECHNICAL)			
8. Principal technical contact Walt Hillis			Phone number with area code 865-512-7628
Mailing address (St./Rd./Hwy.) 9509 Diggs Gap Road			Fax number with area code 865-512-7661
City Heiskell	State TN	Zip code 37754	Email address whillis@bluewaterindustries.com
CONTACT INFORMATION (BILLING)			
9. Billing contact Accounts Payable			Phone number with area code 904-512-7714
Mailing address (St./Rd./Hwy.) 200 W Forysth Street, Suite 1200			Fax number with area code NA
City Jacksonville	State FL	Zip code 32202	Email address apdept@bluewaterindustries.com

AIR CONTAMINANT SOURCE(S) INFORMATION

10. Description of air contaminant source(s) and Unique Source ID(s). List, identify, and briefly describe process emission sources, fuel burning installations, and incinerators that are contained in this application and include a Unique Source ID for each source. The Unique Source ID is a name/number/letter, which uniquely identifies the air contaminant source(s), like Boiler #1, Paint Line #1, Engine #1, etc. (see instructions for more details)

Proposed addition of a track-mounted mobile/portable chassis mounted crushing and screening plant that will consist of two jaw crusher units, one impact crusher unit, two cone crusher units, three scalping screen units, four sizing screen units. All units are track-mounted self-contained mobile units or portable trailer chassis unit. They area all powered by Tier III or Tier IV diesel engines that serve a dual purpose. The engines power the mobile units for propulsion and once in place for operations they power the onboard processing equipment. For the portable trailer chassis unit the engine powers the onboard processing equipment.

A flow diagram, equipment list and emission calcuations are included with this application.

11. Is the air contaminant source(s) in a nonattainment area? If "Yes", then minor source BACT must be addressed. Yes ☐ No ☒

12. Normal operation:	Hours/Day 8-10	Days/Week 5-6	Weeks/Year 50	Days/Year 250
13. Percent annual throughput	Dec. – Feb. 15	March – May 30	June – August 30	Sept. – Nov. 25

TYPE OF PERMIT REQUESTED (check appropriate box)

14. Operating permit <input type="checkbox"/>	Date construction started	Date completed	Date of ownership change (if applicable)
	Last permit number(s)	Emission Source Reference Number(s)	
Construction permit <input checked="" type="checkbox"/>	Last permit number(s) 005658P	Emission Source Reference Number(s) 01	

If you chose Construction permit above, then choose either New Construction, Modification, or Location Transfer

New Construction <input checked="" type="checkbox"/>	Starting date 2/1/2024	Completion date 2/28/2024
Modification <input type="checkbox"/>	Date modification started or will start	Date completed or will complete
Location Transfer <input type="checkbox"/>	Transfer date	Address of last location

15. Describe changes that have been made to this equipment or operation(s) since the last construction or operating permit application:

None

16. Comments

SIGNATURE

Based upon information and belief formed after a reasonable inquiry, I, as the responsible person of the above mentioned facility, certify that the information contained in this application is accurate and true to the best of my knowledge. As specified in TCA Section 39-16-702(a)(4), this declaration is made under penalty of perjury.

17. Signature (application must be signed before it will be processed)

Walt Hillis

Date

01/04/2024

Signer's name (type or print)

Walt Hillis

Title

Environmental Manager

Phone number with area code

865-512-7628



**NON-TITLE V PERMIT APPLICATION
ROCK CRUSHING SOURCE DESCRIPTION**

Type or print. Submit for each rock crushing operation. Submit with the APC 100.

GENERAL IDENTIFICATION AND DESCRIPTION

1. Organization's legal name and SOS control number [as registered with the TN Secretary of State (SOS)] BWI ETN LLC, d/b/a Blue Water Industries, 000931614 (Grasselli Quarry)	2. Emission Source Reference Number 45-0059
3. Is this air contaminant source subject to an NSPS or NESHAP rule? Yes <input checked="" type="checkbox"/> No <input type="checkbox"/> If Yes, list rule citation, including Part, Subpart, and applicable Sections: Subpart 000	

EQUIPMENT INFORMATION

The applicant must submit an equipment list and flow diagram. The applicant may use the table below to list the equipment or attach a separate sheet of paper for the equipment list. The equipment list must include each crusher, screen, conveyor, bin, pugmill, feeder, agricultural lime, etc. The flow diagram must show each piece of equipment labeled with a reference number.

4. Equipment type (Note 1)	Flow diagram reference number (Note 2)	Size (Note 3)	Operating rate (Tons/Hr.)		Date of manufacture
			Design	Actual	
See Attached Equipment List ,					
Calculations, and Flow Diagram for					
Proposed New Equipment					

EMISSION INFORMATION

5. Air contaminants. Emission estimates for each air contaminant emitted from this point should be based on stack sampling results or engineering calculations. Calculations should be attached on a separate sheet. (see instructions for more details)

Particulate Matter emission data:	Flow diagram ref. no. (Note 5)	Average Emissions (Lbs./Hr.)	Maximum Emissions (Lbs./Hr.)	Average Emissions (Tons/Yr)	Potential Emissions (Tons/Yr)	Emissions Estimation method (Note 6)	Control devices (Note 6)	Control efficiency (%)
Primary crushing	See	Attached	Emission	Calculation	Sheet	AP-42	061	90%
Secondary crushing	See	Attached	Emission	Calculation	Sheet	AP-42	061	90%
Tertiary crushing								
Agricultural lime								
Open storage								
Enclosed storage								
Conveying & Transferring	See	Attached	Emission	Calculation	Sheet	AP-42	061	90%
Loading out								
Traffic dust								
Other (specify) Screens	See	Attached	Emission	Calc.	Sheet	AP-42	061	90%
Other (specify) Feeders	See	Attached	Emission	Calc.	Sheet	AP-42	061	90%
Totals	See	Attached	Emission	Calc.	Sheet	AP-42	061	90%

Note 1: Equipment type: The applicant must list each crusher, screen, conveyor, bin, pugmill, feeder, agricultural lime, etc.

Note 2: Flow diagram reference number: The applicant must attach a flow diagram. The flow diagram must show each piece of equipment, including each crusher, screen, conveyor, bin, pugmill, feeder, agricultural lime, etc. Each piece of equipment must be labeled with a reference number.

Note 3: Size: For crushers, size is the design operating rate (in ton/hr.). For screens, size is the dimensions of the top deck of the screen. For conveyors, size is the width of the conveyor. For bins, size is the design capacity in tons.

Note 4: Explain in comments, if necessary.

Note 5: As identified on the flow diagram required in item #3

Note 6: Refer to the instructions for the estimation method and control device codes.

6. Control device. Description of proposed monitoring, recordkeeping, and reporting to assure compliance with emission limits. Include operating parameters of control device (flow rate, temperature, pressure drop, etc.).
Wet Suppression, log of wet suppression inspection and maintenance, production logs

ROAD INFORMATION

7. Roads:	Paved (Miles of road)	Unpaved (Miles of road)	Watered (Miles & frequency)	Other control (specify)
Plant yard				
Access roads				

STOCKPILE INFORMATION

8. Stockpiles:	Estimated annual tons	Turnover rate (Tons/Month)	Wetted as piled	No. of sides enclosed	Other dust control	Loading method (e.g. loader, conveyor) Load in Load out	
Coarse: Over 1"	50,000	Varies	As Needed	NA	Wet	Loader	Loader
Fine: 1" to 1/4"	25,000	Varies	As Needed	NA	Wet	Loader	Loader
1/4" and less	25,000	Varies	As Needed	NA	Wet	Loader	Loader
MFG. Sand							
Other (specify)							

9. Comments

Equipment in application is mobile equipment either track-mounted or portable on a trailer.

SIGNATURE

If this form is being submitted at the same time as an APC 100 form, then a signature is not required on this form. Date this form regardless of whether a signature is provided. If this form is NOT being submitted at the same time as an APC 100 form, then a signature is required.

Based upon information and belief formed after a reasonable inquiry, I, as the responsible person of the above mentioned facility, certify that the information contained in this application is accurate and true to the best of my knowledge. As specified in TCA Section 39-16-702(a)(4), this declaration is made under penalty of perjury.

10. Signature <i>Walt Hillis</i>		Date 01/04/2024
Signer's name (type or print) Walt Hillis	Title Environmental Manager	Phone number with area code 865-512-7628



Via Electronic Mail to Air.Pollution.Control@tn.gov

January 4, 2024

Michelle W. Owenby, Director
Division of Air Pollution Control
Tennessee Department of Environment & Conservation
William R. Snodgrass Tennessee Tower
312 Rosa L. Parks Avenue, 15th Floor
Nashville, TN 37243

**Re: BWI ETN LLC dba Blue Water Industries
BWI Grasselli – ESR No. 45-0059
Construction Permit Application
Mobile Crushing, Screening, & Conveying Non-Metallic Processing Plant System
Permit Limitation Agreement Letter**

Dear Director:

On behalf of BWI Grasselli Quarry, the following permit limitations are agreed upon for the aggregate processing equipment for which a Construction Permit Application is being submitted for installation at the existing permitted facility.

The maximum production capacity shall not exceed a combined total production limit of 450,000 tons per calendar year for all sources listed in the permit.

BWI Grasselli Quarry shall demonstrate compliance with the above-identified limitation by recordkeeping.

On behalf of BWI Grasselli Quarry, I agree to the above limitations. I am authorized to represent and bind the facility in environmental affairs.

If you have any questions concerning this correspondence, please contact me at (865)-512-7628 or whillis@bluewaterindustries.com.

Sincerely,

Signature	<u>Walt Hillis</u>
Name (Printed)	<u>Walt Hillis</u>
Title	<u>Environmental Manager</u>
Date	<u>01/04/2024</u>

EQUIPMENT CALCULATIONS & FLOW DIAGRAM

BWI ETN LLC dba Blue Water Industries - Portable Non-Metallic Processing Plant System									Wet Suppression Controlled Emissions: (Total Particulate Matter (TSP), PM-10, & PM-2.5)								
PERMIT AMENDMENT APPLICATION 1/4/2024									Emission Factors for Crushed Stone Processing Operations (lb/Ton), Table 11.19.2-2 (English Units), AP-42 Revised 8/04								
MOBILE CRUSHING, SCREENING, & CONVEYING PLANT SYSTEM									Tables 4&5 of APC 109 (Rev. 12-17)-Non-Title V Permit Application Rock Crushing Source Description Addendum								
Equipment List & Emission Calculations									TSP (CONTROLLED)			PM-10 (CONTROLLED)			PM-2.5 (CONTROLLED)		
Equipment Type/Process	Description	Flow ID #	Date Mfg.	NSPS	NSPS Code	Design Operating Rate (ton/hr)	Actual Operating Rate (ton/hr)	Annual Production (tons/yr)	Emission factor (lb/ton)	Emissions (lb/hr)	Emissions (ton/yr)	Emission factor (lb/ton)	Emissions (lb/hr)	Emissions (ton/yr)	Emission factor (lb/ton)	Emissions (lb/hr)	Emissions (ton/yr)
McCloskey J40V2 Jaw Crusher, CAT Tier IV Engine (track-mounted /self-propelled)																	
Feeder Box	14' X 7'	JF1	2018	No	4	450	350	450,000	0.000016	0.007	0.004	0.000016	0.007	0.004	0.000016	0.007	0.004
Jaw Crusher	J40V2	JCR1	2018	Yes	7	450	350	450,000	0.0012	0.540	0.270	0.00054	0.243	0.122	0.000100	0.045	0.023
Main Conveyor	36"	JC1	2018	Yes	7	450	350	450,000	0.00014	0.063	0.032	0.000046	0.021	0.010	0.000013	0.006	0.003
KPI-JCI Impact Crusher 5260, CAT Tier III Engine (track-mounted /self-propelled)																	
Feeder Box	50"x15'	IF1	2013	Yes	7	450	350	450,000	0.000016	0.007	0.004	0.000016	0.007	0.004	0.000016	0.007	0.004
Impact Crusher	5260 HIS	ICR1	2013	Yes	7	450	350	450,000	0.0012	0.540	0.270	0.00054	0.243	0.122	0.000100	0.045	0.023
Main Conveyor	40"	IC1	2013	Yes	7	450	350	450,000	0.00014	0.063	0.032	0.000046	0.021	0.010	0.000013	0.006	0.003
Side Conveyor	24	IC2	2013	Yes	7	50	35	100,000	0.00014	0.007	0.007	0.000046	0.002	0.002	0.000013	0.001	0.001
Metso Lokotrack Jaw LT105, CAT Tier III Engine (track-mounted /self-propelled)																	
Vibratory Grizzly Feeder	48"x14'	LTJ-F1	2000	Yes	6	450	350	450,000	0.000016	0.007	0.004	0.000016	0.007	0.004	0.000016	0.007	0.004
Jaw Crusher	C105	LTJ-CR1	2000	Yes	6	450	350	450,000	0.0012	0.540	0.270	0.00054	0.243	0.122	0.000100	0.045	0.023
Main Conveyor	42"	LTJ-C1	2000	Yes	6	450	350	450,000	0.00014	0.063	0.032	0.000046	0.021	0.010	0.000013	0.006	0.003
Side Conveyor	18"	LTJ-C2	2000	Yes	6	50	35	100,000	0.00014	0.007	0.007	0.000046	0.002	0.002	0.000013	0.001	0.001
KPI-JCI GT200 Cone Crusher, Cummins Tier IV Engine (track-mounted /self-propelled)																	
Belt Feeder	42"	GT BF1	2019	Yes	7	385	360	450,000	0.00014	0.054	0.032	0.000046	0.018	0.010	0.000013	0.005	0.003
Cone Crusher	1200LS	GT CR1	2019	Yes	7	385	360	450,000	0.0012	0.462	0.270	0.00054	0.208	0.122	0.000100	0.039	0.023
Under Crusher Conveyor	36"	GT C1	2019	Yes	7	385	360	450,000	0.00014	0.054	0.032	0.000046	0.018	0.010	0.000013	0.005	0.003
McCloskey Cone Crusher C38V2, CAT Tier III Engine (track-mounted /self-propelled)																	
Belt Feeder	42"	MC BF1	2014	Yes	7	350	325	450,000	0.00014	0.049	0.032	0.000046	0.016	0.010	0.000013	0.005	0.003
Cone Crusher	C38 V2	MC CR1	2014	Yes	7	350	325	450,000	0.0012	0.420	0.270	0.00054	0.189	0.122	0.000100	0.035	0.023
Under Crusher Conveyor	42"	MC C1	2014	Yes	7	350	325	450,000	0.00014	0.049	0.032	0.000046	0.016	0.010	0.000013	0.005	0.003
McCloskey R155 Scalping Screen, CAT Tier IV Engine (track-mounted /self-propelled)																	
Feed Hopper	16' X 6'	RF1	2018	Yes	7	450	350	450,000	0.00014	0.063	0.032	0.000046	0.021	0.010	0.000013	0.006	0.003
Double Deck Screen	16' X 5' DD	RS1	2018	Yes	7	450	350	450,000	0.0022	0.990	0.495	0.00074	0.333	0.167	0.000050	0.023	0.011
Feed Conveyor	55"	RC1	2018	Yes	7	450	350	450,000	0.00014	0.063	0.032	0.000046	0.021	0.010	0.000013	0.006	0.003
Collection Conveyor	48"	RC2	2018	Yes	7	450	350	450,000	0.00014	0.063	0.032	0.000046	0.021	0.010	0.000013	0.006	0.003
Tail Conveyor	55"	RC3	2018	Yes	7	450	350	450,000	0.00014	0.063	0.032	0.000046	0.021	0.010	0.000013	0.006	0.003
Side Conveyor	36"	RC4	2018	Yes	7	225	200	200,000	0.00014	0.032	0.014	0.000046	0.010	0.005	0.000013	0.003	0.001
Mid Conveyor	36"	RC5	2018	Yes	7	225	200	200,000	0.00014	0.032	0.014	0.000046	0.010	0.005	0.000013	0.003	0.001

BWI ETN LLC dba Blue Water Industries - Portable Non-Metallic Processing Plant System PERMIT AMENDMENT APPLICATION 1/4/2024 MOBILE CRUSHING, SCREENING, & CONVEYING PLANT SYSTEM Equipment List & Emission Calculations									Wet Suppression Controlled Emissions: (Total Particulate Matter (TSP), PM-10, & PM-2.5) Emission Factors for Crushed Stone Processing Operations (lb/Ton), Table 11.19.2-2 (English Units), AP-42 Revised 8/04 Tables 4&5 of APC 109 (Rev. 12-17)-Non-Title V Permit Application Rock Crushing Source Description Addendum								
Equipment Type/Process	Description	Flow ID #	Date Mfg.	NSPS	NSPS Code	Design Operating Rate (ton/hr)	Actual Operating Rate (ton/hr)	Annual Production (tons/yr)	TSP (CONTROLLED)			PM-10 (CONTROLLED)			PM-2.5 (CONTROLLED)		
									Emission factor (lb/ton)	Emissions (lb/hr)	Emissions (ton/yr)	Emission factor (lb/ton)	Emissions (lb/hr)	Emissions (ton/yr)	Emission factor (lb/ton)	Emissions (lb/hr)	Emissions (ton/yr)
McCloskey S130 Screen, CAT Tier III Engine (track-mounted /self-propelled)																	
Feed Hopper	14' X 6'	SF1	2013	Yes	7	450	350	450,000	0.00014	0.063	0.032	0.000046	0.021	0.010	0.000013	0.006	0.003
Double Deck Screen	14' X 5' DD	SS1	2013	Yes	7	450	350	450,000	0.0022	0.990	0.495	0.00074	0.333	0.167	0.000050	0.023	0.011
Under Feeder Conveyor	48"	SC1	2013	Yes	7	450	350	450,000	0.00014	0.063	0.032	0.000046	0.021	0.010	0.000013	0.006	0.003
Main Feed Conveyor	42"	SC2	2013	Yes	7	450	350	450,000	0.00014	0.063	0.032	0.000046	0.021	0.010	0.000013	0.006	0.003
Tail Conveyor	48"	SC3	2013	Yes	7	450	350	450,000	0.00014	0.063	0.032	0.000046	0.021	0.010	0.000013	0.006	0.003
Side Conveyor	26"	SC4	2013	Yes	7	225	200	200,000	0.00014	0.032	0.014	0.000046	0.010	0.005	0.000013	0.003	0.001
Side Conveyor	26"	SC5	2013	Yes	7	225	200	200,000	0.00014	0.032	0.014	0.000046	0.010	0.005	0.000013	0.003	0.001
McCloskey S190 3D Screen, CAT Tier III Engine (track-mounted /self-propelled)																	
VGF/Feeder Box	5' x 15'	MS BF1	2015	Yes	7	450	350	450,000	0.00014	0.063	0.032	0.000046	0.021	0.010	0.000013	0.006	0.003
Sizing Screen	5 x 20 TD	MS S1	2015	Yes	7	450	350	450,000	0.00220	0.990	0.495	0.000740	0.333	0.167	0.000050	0.023	0.011
Feed Conveyor	48"	MS C1	2015	Yes	7	450	350	450,000	0.00014	0.063	0.032	0.000046	0.021	0.010	0.000013	0.006	0.003
Main Conveyor	42"	MS C2	2015	Yes	7	450	350	450,000	0.00014	0.063	0.032	0.000046	0.021	0.010	0.000013	0.006	0.003
Tail Conveyor	48"	MS C3	2015	Yes	7	450	350	450,000	0.00014	0.063	0.032	0.000046	0.021	0.010	0.000013	0.006	0.003
Side Conveyor	32"	MS C4	2015	Yes	7	225	200	200,000	0.00014	0.032	0.014	0.000046	0.010	0.005	0.000013	0.003	0.001
Side Conveyor	32"	MS C5	2015	Yes	7	225	200	200,000	0.00014	0.032	0.014	0.000046	0.010	0.005	0.000013	0.003	0.001
3D Transfer Conveyor	26"	MS C6	2015	Yes	7	225	200	200,000	0.00014	0.032	0.014	0.000046	0.010	0.005	0.000013	0.003	0.001
3D Auxillary Conveyor	26"	MS C7	2015	Yes	7	225	200	200,000	0.00014	0.032	0.014	0.000046	0.010	0.005	0.000013	0.003	0.001
AMS FT3620 Screen Unit, CAT Tier IV Engine (track-mounted /self-propelled)																	
Feeder Box	14.5' x 8.5'	AMS F1	2013	Yes	7	450	350	450,000	0.00014	0.063	0.032	0.000046	0.021	0.010	0.000013	0.006	0.003
Sizing Screen	6x20 TD	AMS S1	2013	Yes	7	450	350	450,000	0.0022	0.990	0.495	0.00074	0.333	0.167	0.000050	0.023	0.011
Conveyor (Under AMS F1)	48"	AMS C1	2013	Yes	7	450	350	450,000	0.00014	0.063	0.032	0.000046	0.021	0.010	0.000013	0.006	0.003
Conveyor (AMS S1 Feed)	48"	AMS C2	2013	Yes	7	450	350	450,000	0.00014	0.063	0.032	0.000046	0.021	0.010	0.000013	0.006	0.003
Conveyor (Crossover)	24"	AMS C3	2013	Yes	7	450	350	450,000	0.00014	0.063	0.032	0.000046	0.021	0.010	0.000013	0.006	0.003
Conveyor, overs (back discharge)	24"	AMS C4	2013	Yes	7	225	200	200,000	0.00014	0.032	0.014	0.000046	0.010	0.005	0.000013	0.003	0.001
Conveyor (front side discharge)	30"	AMS C5	2013	Yes	7	225	200	200,000	0.00014	0.032	0.014	0.000046	0.010	0.005	0.000013	0.003	0.001
Conveyor (back side discharge)	30"	AMS C6	2013	Yes	7	225	200	200,000	0.00014	0.032	0.014	0.000046	0.010	0.005	0.000013	0.003	0.001
Conveyor, fines (front discharge)	48"	AMS C7	2013	Yes	7	225	200	200,000	0.00014	0.032	0.014	0.000046	0.010	0.005	0.000013	0.003	0.001

PERMIT AMENDMENT APPLICATION **1/4/2024**
MOBILE CRUSHING, SCREENING, & CONVEYING PLANT SYSTEM
Equipment List & Emission Calculations

Tables 4&5 of APC 109 (Rev. 12-17)-Non-Title V Permit Application Rock Crushing Source Description Addendum

Equipment Type/Process	Description	Flow ID #	Date Mfg.	NSPS	NSPS Code	Design Operating Rate (ton/hr)	Actual Operating Rate (ton/hr)	Annual Production (tons/yr)	TSP (CONTROLLED)			PM-10 (CONTROLLED)			PM-2.5 (CONTROLLED)		
									Emission factor (lb/ton)	Emissions (lb/hr)	Emissions (ton/yr)	Emission factor (lb/ton)	Emissions (lb/hr)	Emissions (ton/yr)	Emission factor (lb/ton)	Emissions (lb/hr)	Emissions (ton/yr)
Astec PSP 2618VM Screen, Tier II John Deere Engine (portable / trailer mounted)																	
VGF/Feeder Box	8' X 14'	PSP F1	2012	Yes	7	450	350	450,000	0.00014	0.063	0.032	0.000046	0.021	0.010	0.000013	0.006	0.003
Sizing Screen	6 X 18 DD	PSP S1	2012	Yes	7	450	350	450,000	0.00220	0.990	0.495	0.000740	0.333	0.167	0.000050	0.023	0.011
Under Feeder Conveyor	32"	PSP C1	2012	Yes	7	450	350	450,000	0.00014	0.063	0.032	0.000046	0.021	0.010	0.000013	0.006	0.003
Delivery Conveyor	36"	PSP C2	2012	Yes	7	450	350	450,000	0.00014	0.063	0.032	0.000046	0.021	0.010	0.000013	0.006	0.003
Side Conveyor	24"	PSP C3	2012	Yes	7	225	200	200,000	0.00014	0.032	0.014	0.000046	0.010	0.005	0.000013	0.003	0.001
Side Conveyor	24"	PSP C4	2012	Yes	7	225	200	200,000	0.00014	0.032	0.014	0.000046	0.010	0.005	0.000013	0.003	0.001
Fines Conveyor	36"	PSP C5	2012	Yes	7	225	200	200,000	0.00014	0.032	0.014	0.000046	0.010	0.005	0.000013	0.003	0.001
Metso Lokotrack ST2.8 Screener, CAT Tier III Engine (track-mounted /self-propelled)																	
Pan Apron Feeder	4x13	LT-PF1	2017	Yes	7	450	350	450,000	0.00014	0.063	0.032	0.000046	0.021	0.010	0.000013	0.006	0.003
Screen	5x16 DD	LT-C1	2017	Yes	7	450	350	450,000	0.00014	0.063	0.032	0.000046	0.021	0.010	0.000013	0.006	0.003
Conveyor, transfer	48"	LT-S1	2017	Yes	7	450	350	450,000	0.00220	0.990	0.495	0.000740	0.333	0.167	0.000050	0.023	0.011
Conveyor, stockpile	48"	LT-C2	2017	Yes	7	225	200	200,000	0.00014	0.032	0.014	0.000046	0.010	0.005	0.000013	0.003	0.001
Conveyor, stockpile	32"	LT-C3	2017	Yes	7	225	200	200,000	0.00014	0.032	0.014	0.000046	0.010	0.005	0.000013	0.003	0.001
Conveyor, transfer	48"	LT-C4	2017	Yes	7	225	200	200,000	0.00014	0.032	0.014	0.000046	0.010	0.005	0.000013	0.003	0.001
Conveyor, stockpile	32"	LT-C5	2017	Yes	7	225	200	200,000	0.00014	0.032	0.014	0.000046	0.010	0.005	0.000013	0.003	0.001
TEREX TRS 550 Screener, CAT Tier4F Engine (track-mounted /self-propelled)																	
Pan Apron Feeder	4x13	TRX-PF1	2014	Yes	7	450	350	450,000	0.00014	0.063	0.032	0.000046	0.021	0.010	0.000013	0.006	0.003
Screen	5x16 DD	TRX-S1	2014	Yes	7	450	350	450,000	0.00220	0.990	0.495	0.000740	0.333	0.167	0.000050	0.023	0.011
Conveyor, stockpile	48"	TRX-C1	2014	Yes	7	225	200	200,000	0.00014	0.032	0.014	0.000046	0.010	0.005	0.000013	0.003	0.001
Conveyor, stockpile	32"	TRX-C2	2014	Yes	7	225	200	200,000	0.00014	0.032	0.014	0.000046	0.010	0.005	0.000013	0.003	0.001
Conveyor, transfer	48"	TRX-C3	2014	Yes	7	225	200	200,000	0.00014	0.032	0.014	0.000046	0.010	0.005	0.000013	0.003	0.001
Conveyor, stockpile	32"	TRX-C4	2014	Yes	7	225	200	200,000	0.00014	0.032	0.014	0.000046	0.010	0.005	0.000013	0.003	0.001
							TOTAL EMISSIONS		11.97	6.08		4.31	2.19		0.62	0.32	

Equations used in calculation:

$$[\text{TPM Emissions (ton/yr)}] = [\text{TPM Emissions (lb/ton)}] \times [\text{Annual Production (tons/yr)}] / [2000 \text{ lb/ton}]$$

(1) 60.670 (a)(1) Affected facilities	(6) 60.675(c)(3) Table 3, after 8/31/1983 but before 4/22/2008
---------------------------------------	--

(3) 60.670 (d)(1) Like for Like (equal or smaller size) (7) 60.675(c)(3) Table 3, on or after 4/22/2008

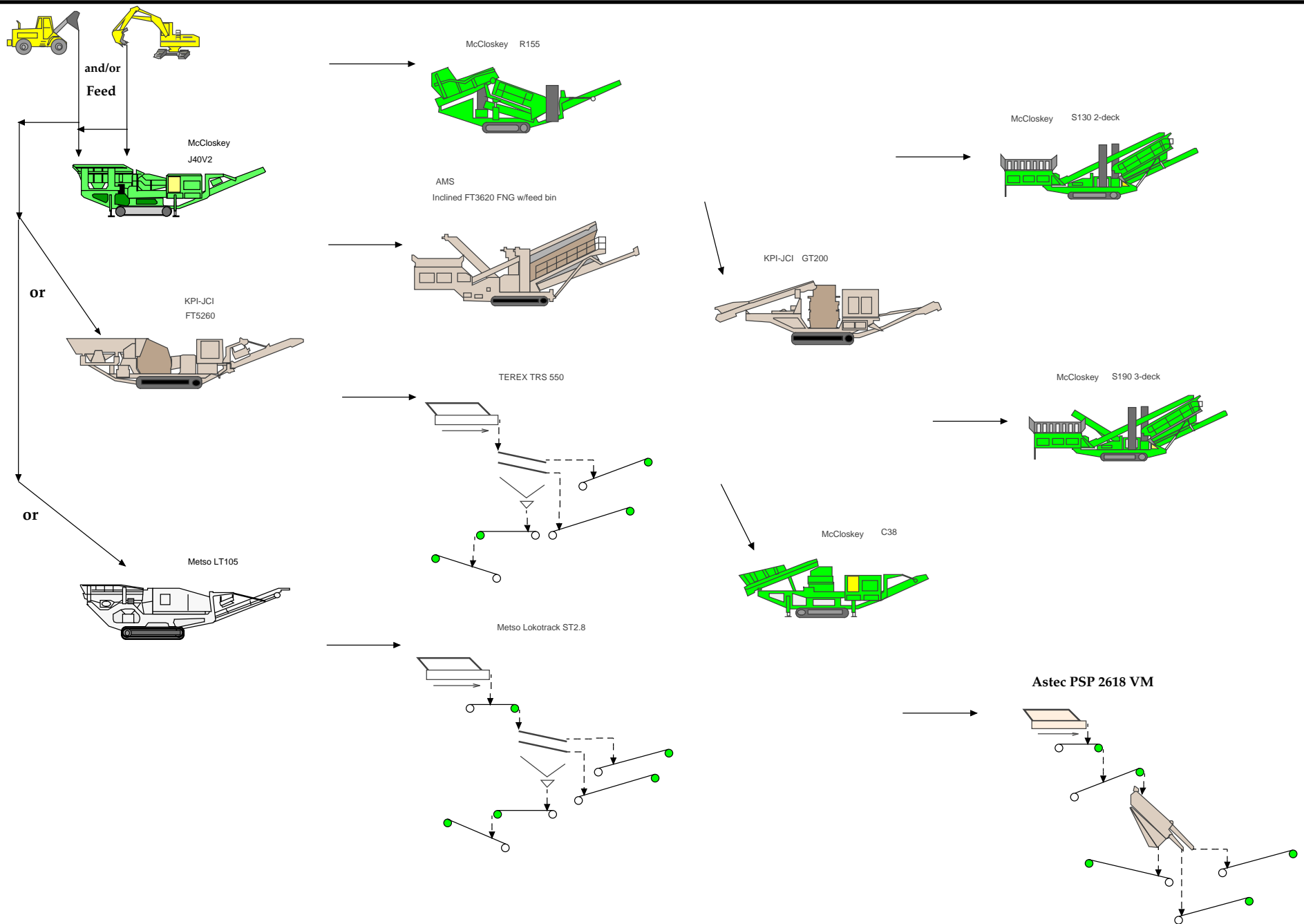
(5) 60.672 (d) Truck dumping in to screen, feed hopper, crusher

$$E = 17.31(P)^{0.16}$$
$$(P) = 450$$
$$E = 46.01$$

46.01 lb/hr
2000 hr/yr
 2000 lbs/ton
46.01 ton/yr

1.97	lb/hr
0,000	ton/yr
50	ton/hr
000	lbs/ton
5.99	ton/yr

Various units of this portable non-metallic processing system may be operated singularly or in conjunction with one another based on product needs.



Calculation results may differ due to variations in operating conditions and application of crushing and screening equipment. This information does not constitute an express or implied warranty, but shows results of calculations based on information provided by customers or equipment manufacturers. Use this information for estimating purposes only.
All calculations performed by AggFlow. <http://www.AggFlow.com>

BWI ETN LLC dba Blue Water Industries
 2200 ETN-TN PortablePlant(s)System
 Walter L. Hillis III
 Plant Stage #1:
 Project #: 162127 Revision #: 800786 Date: January/4/2024



PERMIT AMENDMENT REQUEST



Via Electronic Mail to Air.Pollution.Control@tn.gov

January 4, 2024

Michelle W. Owenby, Director
Division of Air Pollution Control
Tennessee Department of Environment & Conservation
William R. Snodgrass Tennessee Tower
312 Rosa L. Parks Avenue, 15th Floor.
Nashville, TN 37243

**Re: Amendment Request – Permits to Construct / Modify and Operate
BWI ETN LLC dba Blue Water Industries
Mobile Crushing, Screening, & Conveying Non-Metallic Mineral Processing Plant System**

Dear Director:

Please find attached for your review a permit amendment request to include two (2) additional locations to the table listed in Appendix 4: Startup Certification for each permit listed below. Concurrent with this amendment request, BWI is submitting two (2) construction permit applications for the two additional locations. These applications are being submitted to permit the same equipment at two additional sites listed below so the equipment may be moved within the BWI East Tennessee region to supplement market demands as needed. This amendment request is to add these locations to the permit so that initial startup at one facility will be considered startup for all locations and one performance test will be considered compliance for all locations.

Locations to be added as part of amendment request.

Location	ESR No.
BWI Greenback Quarry	53-0074
BWI Grasselli Quarry	45-0059

Permits requested to be amended to include locations listed above.

Location	Permit No.	ESR No.
BWI Watauga Quarry	081319	10-0012-12
BWI Elizabethton Quarry	081320	10-0086-10
BWI Riverbend Quarry	081321	29-0039-14
BWI Coy Stone Plant	081322	45-0069-10
BWI Tri-Cities Airport Quarry	081323	82-0166-17
BWI Unicoi Quarry	081324	86-0040-13
BWI Locust Mount Quarry	081325	90-0123-12

If you have any questions concerning this correspondence, please contact me at (865)-512-7628 or whillis@bluewaterindustries.com.

Sincerely,

Walt Hillis
Environmental Manager



VEE REPORTS



Department of
**Environment &
Conservation**

November 23, 2022

Ms. Alisa Hatmaker
Blue Water Industries
Greenback Quarry
9509 Diggs Gap Road
Heiskell, Tennessee 37754

Reference Number: 53-0074-03

Dear Ms. Hatmaker:

The Tennessee Division of Air Pollution Control has received the sixteen EPA Method 9 visible emission evaluations (VEE) submitted for the mobile crushing and sizing plant located at the Greenback Quarry, 2107 Big Hill Road, Lenoir City, Tennessee. On June 2, 2022 a start-up notification was submitted to the Division for four of the five permitted pieces of equipment. This facility is subject to the Conditions listed in State of Tennessee Operating Permit #080023. These evaluations were conducted on November 2, 2022 by Ms. Hatmaker of Blue Water Industries and were performed to satisfy Condition F1-2 of the current permit. The Division notes that upon start-up of the final piece of permitted equipment (McCloskey S130), another notification will be needed along with VEEs.

The VEE was verified and found acceptable by the Division. The review of the VEE determined that the emission point subject to the New Source Performance Standards for New Stationary Sources (40 CFR Part 60 Subpart OOO) was achieving compliance with the applicable visible emission standard during the time period of the evaluation.

Should you have any questions concerning the evaluation of this report, please contact either Garrett Ammons at (615) 687-7076 or me at (615) 687-7037.

Sincerely,

Bryan Parker

Bryan Parker
Environmental Manager
Compliance Validation Program
Tennessee Division of Air Pollution Control



BLUE WATER

I N D U S T R I E S

**40 CFR Part 60, Subpart OOO, Appendix A, Method 9
Visible Emissions Evaluation Report**

Completed For:

**BWI ETN LLC dba Blue Water Industries
Greenback Quarry
Loudon County, Tennessee
2107 Big Hill Road
Lenoir City, TN 37772**

Non-Metallic Mineral Processing Plant
Emission Source No. 53-0074-03
Permit No. 080023
New Mobile Plant Construction

Evaluations Date:
November 2, 2022

Report Prepared By:

Alisa Hatmaker
Blue Water Industries
9509 Diggs Gap Road
Heiskell, TN 37754

Report Date:
November 4, 2022



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3. Process & Equipment ("Affected Facility") Description	1
4. Summary of Test Results	2
 <u>TABLES</u>	
Table I Summary of VEE Points and Evaluation Results	3
 <u>APPENDICES</u>	
Appendix A Plant Process Flow Diagram & Emission Point Identifications	4
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1. INTRODUCTION

BWI ETN LLC dba Blue Water Industries (BWI) owns and operates the Greenback Quarry with a non-metallic mineral processing plant located at 2107 Big Hill Road, Lenoir City, TN 37772. The processing plant crushes and sizes quarried stone into various sizes of aggregate products for sale. The Greenback Quarry is permitted by the TDEC-APC Division as Emission Source No. 54-0074-03 and Construction/Operating Permit No. 080023 to operate a mobile crushing and screening plant. On March 29, 2021, BWI submitted a construction permit application on February 11, 2022 for a track-mounted mobile plant. The Department approved the request with the issuance of permit no. 080023 on May 20, 2022. A startup notice was submitted on June 2, 2022 for four (4) of the five (5) mobile equipment units permitted as part of the mobile plant.

2. TEST PURPOSE/PROCEDURES

The United States Environmental Protection Agency promulgated standards of performance for new sources of nonmetallic mineral processing plants, which became effective on August 1, 1985. These standards are applicable to any Affected Facility that commenced construction, modification, or reconstruction after August 31, 1983. These standards were revised as published in the Federal Register on June 9, 1997. The standards were revised again as published in the Federal Register on April 28, 2009.

The pieces of equipment evaluated at the Greenback Quarry Mobile Crushing and Screening Plant is defined as “Affected Facilities” in 40 CFR Part 60 Subpart A 60.2 and as listed in Subpart 000 60.670 (a) (1). The mobile crushers, mobile screens, and associated conveyors with each unit are “Affected Facilities” as designated in 40 CFR Part 60 Subpart 000 Paragraph 60.670. Therefore, demonstration of compliance with the visible particulate matter emissions standard is required as stated in 40 CFR Part 60 Subpart 000 Paragraph 60.672 Standard of Particulate Matter. Alisa Hatmaker (BWI) conducted the visible emissions evaluations in order to determine compliance during normal plant production. The visible emissions evaluations were conducted according to the procedures outlined in 40 CFR Part 60 Subpart 000 Paragraph 60.675 Test Methods and Procedures. Observations were conducted for 30-minutes (five 6-minute averages/5 sets of 24 consecutive observations at 15-second intervals) using 40 CFR Part 60, Appendix A-4 Method 9. The reported opacity for the equipment is the average of the five 6-minute averages.

3. PROCESS & EQUIPMENT DESCRIPTIONS

The Greenback Quarry Mobile Crushing and Screening Plant is a Non-Metallic Mineral (Crushed & Broken Limestone SIC 1422- NAICS Code 212312) Track-Mounted Mobile Processing Facility. Stone is blasted from the quarry face, hauled via truck, and dumped in the primary feeder for the primary jaw crusher. After initial crushing, the stone is further screened, crushed, and sized for sale in the construction and related industries. The equipment evaluated at the facility is a part of the stone processing plant.

The affected facilities were constructed after August 31, 1983 and as such are subject to the performance guidelines outlined in 40 CFR Part 60, Subpart 000, published in the 51 FR 31337, August 1, 1985 as amended at 62 FR 31359, June 9, 1997 and 74 FR 19309 April 28, 2009.

Pursuant to 40 CFR Part 60, Subpart 000 §60.675(g) and TDEC-APC requirements, the Division’s Compliance Validation Program was contacted prior to the evaluation of the visible emission evaluations and gave BWI authorization to conduct the evaluations. The visible emissions evaluations were conducted during normal operations on November 2, 2022. The equipment based on product needs and operating scenarios was



operating at approximately 90-95% during testing, which is the normal method of operation for the equipment.

EQUIPMENT EVALUATED

1. McCloskey J40V2 Jaw Crusher & Associated Conveyors
2. McCloskey R155 Scalping Screen & Associated Conveyors
3. KPI-JCI GT200 Cone Crusher & Associated Conveyors
4. AMS FT3620 Screen Unit & Associated Conveyors

4. SUMMARY OF TEST RESULTS

Per 40 CFR Part 60, Subpart 000, 60.672 Standard for particulate matter, Section (b) and Table 3, details the fugitive emission limits for transfer points associated with the equipment that was evaluated. The test was conducted per 60.675 Test Methods and procedures. The emission point(s) results that were obtained are presented in the following table. Five (5) sets of twenty-four (24) consecutive observations at fifteen (15) second intervals to yield six (6) minute averages were performed. The averages of the five 6-minute averages for each point are listed below. All equipment units were demonstrating compliance with this level during testing. Table 1 lists the Emission Point ID, Emission Source Description, Average Opacity of the Five 6-minute Averages, and the Visible Opacity Limit of each emission source per Subpart 000, Table 3.

**TABLE 1: SUMMARY OF VEE POINTS AND EVALUATION RESULTS**

Emission Point ID	Emission Source Description	Visible Opacity Limit ⁽¹⁾	Average Opacity of Five 6-Minute Averages
1	Jaw Crusher JCR1 drop onto Conveyor JC1	12%	1.92%
2	JC1 feed onto R155 Screen Feed Hopper RF1	7%	0.0%
3	Conveyor RC1 transfer onto Screen & Area above Screen RS1	7%	0.0%
4	RS1 feed onto Conveyor RC3	7%	0.0%
5	RS1 feed onto Conveyor RC4	7%	0.0%
6	Conveyor RC2 feed onto Conveyor RC5	7%	0.0%
7	RC4 feed onto GT200 Belt Feeder GTBF1	7%	0.0%
8	GTBF1 feed into Cone Crusher GTCR1	12%	3.83%
9	GTCR1 feed onto Conveyor GTC1	12%	1.17%
10	GTC1 feed onto FT3620 Screen Feed Box AMS F1	7%	0.0%
11	Conveyor AMS C1 feed onto Conveyor AMS C2	7%	0.0%
12	AMS C2 feed onto Screen & Area above Screen AMS S1	7%	0.0%
13	Conveyor AMS C3 feed to Conveyor AMS C4	7%	0.0%
14	AMS S1 feed onto Conveyor AMS C5	7%	0.0%
15	AMS S1 feed onto Conveyor AMS C6	7%	0.0%
16	AMS S1 feed onto Conveyor AMS C7	7%	0.0%

(1) EPA Subpart 40 CFR Part 60, Subpart OOO, Table 3



APPENDIX A

Plant Process Flow Diagram & Emission Point Identifications

Blue Water Industries-Greenback Quarry (ETN Mobile Plant)

VEE Points ID List: 10/21/2022

Emission Source No. 53-0074-03

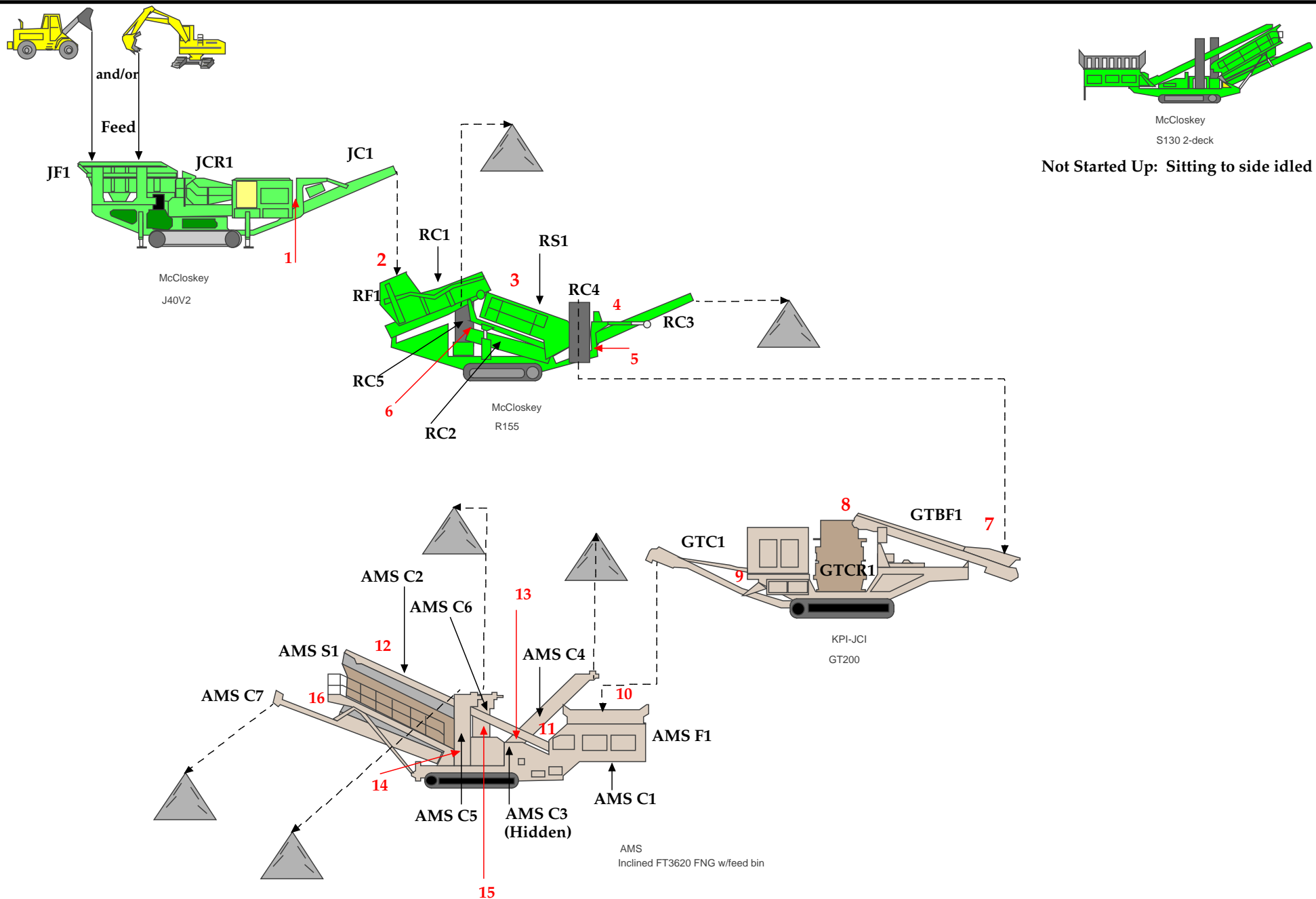
Permit No. 080023 Construct/Modify/Operate

Point ID	Type of Equipment	Flow Diagram ID #	Point Description
McCloskey J40V2 Jaw Crusher			
1	J40 V2 Jaw Crusher	JCR1	Jaw Crusher JCR1 drop onto Conveyor JC1
2	J40 V2 Conveyor	JC1	JC1 feed onto R155 Screen Feed Hopper RF1
McCloskey R155 Scalping Screen			
3	R155 Conveyor/Screen	RC1/RS1	Conveyor RC1 transfer onto Screen & Area above Screen RS1
4	R155 Screen	RS1	RS1 feed onto Conveyor RC3
5	R155 Screen	RS1	RS1 feed onto Conveyor RC4
6	R155 Screen/Conveyor	RS1/RC2	Conveyor RC2 feed onto Conveyor RC5 ⁽¹⁾
7	R155 Conveyor	RC4	RC4 feed onto GT200 Belt Feeder GTBF1
KPI-JCI GT200 Cone Crusher			
8	GT200 Belt Feeder	GTBF1	GTBF1 feed into into Cone Crusher GTCR1
9	GT200 Cone	GTCR1	GTCR1 feed onto Conveyor GTC1
10	GT200 Conveyor	GTC1	GTC1 feed onto FT3620 Screen Feed Box AMS F1
AMS FT3620 Screen Unit			
11	AMTS FT3620 Conveyor	AMS C1	Conveyor AMS C1 feed onto Conveyor AMS C2
12	AMTS FT3620 Conveyor & Screen	AMS C2/AMS S1	AMS C2 feed onto Screen & Area above Screen AMS S1
13	AMTS FT3620 Screen & Conveyor	AMS S1/AMS C3	Conveyor AMS C3 feed to Conveyor AMS C4 ⁽²⁾
14	AMTS FT3620 Screen	AMS S1	AMS S1 feed onto Conveyor AMS C5
15	AMTS FT3620 Screen	AMS S1	AMS S1 feed onto Conveyor AMS C6
16	AMTS FT3620 Screen	AMS S1	AMS S1 feed onto Conveyor AMS C7

Notes:

(1) Screen RS1 drop to RC2 is directly above RC2 drop to RC5 so only one point is being proposed for testing. (Point ID #6)

(2) AMS S1 screen drop to Conveyor AMS C3 is hidden in machine. (Point ID #13)



Calculation results may differ due to variations in operating conditions and application of crushing and screening equipment. This information does not constitute an express or implied warranty, but shows results of calculations based on information provided by customers or equipment manufacturers. Use this information for estimating purposes only.
All calculations performed by AggFlow. <http://www.AggFlow.com>

BWI ETN LLC dba Blue Water Industries

BWI ETN Portable Plant 2-2022

Walter L. Hillis III

Plant Stage #1:

Project #: 125338 Revision #: 671178 Date: October/20/2022



APPENDIX B

Visible Emissions Evaluations (VEE) Forms

VISIBLE EMISSION OBSERVATION FORM (EPA Method 9)(40 CFR 60-Appendix A)

Blue Water Industries

Source Name: BWI ETN LLC dba Blue Water Industries Greenback Quarry				Observation Date: 11/2/22		Start Time: 9:30 AM		Stop Time: 10:00 AM	
Address: 2107 Big Hill Road				Min/Sec		0		15	
City: Lenoir City	County: Loudon	State: TN	Zip: 37772	1		0		5	
Phone: 865-986-5322		Facility ID No: 53-0074-03		2		5		5	
Process Equipment: J40 V2 Jaw Crusher		Operating Mode: 90-95%		3		0		0	
				4		0		0	
Control Equipment: Wet Suppression		Operating Mode: ON 100%		5		0		0	
				6		0		5	
Describe Emission Point: Jaw Crusher JCR1 drop onto Conveyor JC1			Emission Pt. ID: 1	7		5		5	
				8		0		5	
Height Above Ground Level: Start: 30' End: 30'		Height Relative to Observer: Start: 30' End: 30'		9		0		0	
				10		0		0	
Distance from Observer: Start: 100' End: 100'		Direction from Observer: Start: W End: W		11		0		0	
				12		5		5	
Describe Emissions: Start: None End: Rock Dust				13		5		5	
				14		0		0	
Emission Color: Start: Clear End: White				15		0		0	
Plume Type: Continuous []				16		5		5	
Fugitive [X] Intermittent []				17		0		5	
Water Droplets Present: No [X] Yes []				18		5		5	
If Water Droplet Plume: N/A									
Attached [] Detached []				19		0		5	
Point in the Plume at which Opacity was Determined: Start: NA End: NA				20		5		5	
				21		0		0	
Describe Background: Start: Sky End: Sky				22		0		0	
Background Color: Start: Blue End: Blue				23		0		5	
Sky Conditions: Start: Partly Cloudy End: Partly Cloudy				24		5		0	
Wind Speed: Start: Calm End: Calm				25		5		5	
Wind Direction: Start: NA End: NA				26		0		0	
Ambient Temp: Start: 52° End: 52°		Wet Bulb Temp: NA		27		5		5	
		RH, percent: NA		28		0		0	
Sun		Source Layout Sketch:		29		0		0	
Wind				30		0		5	
Stack with Plume									
				Highest single average of the five 6-minute averages: 2.29 Average Opacity of the five 6-minute averages: 1.92 Number of Readings Above: 12 % Were 0 Range of Opacity Readings: Minimum: 0 % Maximum: 5 % Observer's Name: (print) Alisa Hatmaker Observer's Signature: Alisa Hatmaker Date: 11/2/22 Organization: Blue Water Industries Environmental Affairs Department					
Comments: BWI Greenback Quarry - Mobile Plant				Certified By: Singleton Smoke School		Date: 10/11/2022			
Sky overcast to back / Sun hidden				Kodak, TN					





VISIBLE EMISSION OBSERVATION FORM (EPA Method 9)(40 CFR 60-Appendix A)

Blue Water Industries

Source Name: BWI ETN LLC dba Blue Water Industries Greenback Quarry				Observation Date: 11/2/22		Start Time: 9:30 AM		Stop Time: 10:00 AM	
Address: 2107 Big Hill Road				Min/Sec		0		15	
City: Lenoir City	County: Loudon	State: TN	Zip: 37772	1		0		0	
Phone: 865-986-5322		Facility ID No: 53-0074-03		2		0		0	
Process Equipment: J40 V2 Conveyor		Operating Mode: 90-95%		3		0		0	
Control Equipment: Wet Suppression		Operating Mode: 100%		4		0		0	
Describe Emission Point: JC1 feed onto R155 Screen Feed Hopper RF1		Emission Pt. ID: 2		5		0		0	
Height Above Ground Level:		Height Relative to Observer:		6		0		0	
Start: 30' End: 30'		Start: 30' End: 30'		7		0		0	
Distance from Observer:		Direction from Observer:		8		0		0	
Start: 100' End: 100'		Start: W End: W		9		0		0	
Describe Emissions:				10		0		0	
Start: None End: None				11		0		0	
Emission Color: Clear End: Clear				12		0		0	
Plume Type: Continuous []				13		0		0	
Fugitive [X] Intermittent []				14		0		0	
Water Droplets Present: No [X] Yes []				15		0		0	
If Water Droplet Plume: N/A				16		0		0	
Attached [] Detached []				17		0		0	
Point in the Plume at which Opacity was Determined:				18		0		0	
Start: NA End: NA				19		0		0	
Describe Background:				20		0		0	
Start: Sky End: Sky				21		0		0	
Background Color: Blue End: Blue				22		0		0	
Sky Conditions: Partly Cloudy End: Partly Cloudy				23		0		0	
Wind Speed: Calm End: Calm				24		0		0	
Wind Direction: NA End: NA				25		0		0	
Ambient Temp: 52° End: 52°				26		0		0	
Wet Bulb Temp: NA				27		0		0	
RH, percent: NA				28		0		0	
Sun: ☉				29		0		0	
Wind: ➔				30		0		0	
Stack with Plume: ☐				Highest single average of the five 6-minute averages: 0					
Source Layout Sketch:				Average Opacity of the five 6-minute averages: 0					
North Arrow: ➔				Number of Readings Above: 7 % Were 0					
				Range of Opacity Readings:					
				Minimum: 0 % Maximum: 0 %					
				Observer's Name: (print) Alisa Hatmaker					
				Observer's Signature: Alisa Hatmaker		Date: 11/2/22			
				Organization: Blue Water Industries					
				Environmental Affairs Department					
Comments: BWI Greenback Quarry - Mobile Plant				Certified By: Singleton Smoke School		Date: 10/11/2022			
Sky overcast to back / Sun hidden				Kodak, TN					

VISIBLE EMISSION OBSERVATION FORM (EPA Method 9)(40 CFR 60-Appendix A)

Blue Water Industries

Source Name: BWI ETN LLC dba Blue Water Industries Greenback Quarry				Observation Date: 11/2/22		Start Time: 9:30 AM		Stop Time: 10:00 AM							
Address: 2107 Big Hill Road				Min/Sec		0		15		30		45		Comments	
City: Lenoir City	County: Loudon	State: TN	Zip: 37772	1											
Phone: 865-986-5322				Facility ID No: 53-0074-03				2							
Process Equipment: R155 Conveyor/Screen				Operating Mode: 90-95%				3							
								4							
Control Equipment: Wet Suppression				Operating Mode: 100%				5							1st 6-Minute Avg.
								6							
Describe Emission Point: Conveyor RC1 transfer onto Screen & Area above Screen RS1				Emission Pt. ID: 3				7							
								8							
Height Above Ground Level: Start: 30' End: 30'				Height Relative to Observer: Start: 30' End: 30'				9							
								10							
Distance from Observer: Start: 100' End: 100'				Direction from Observer: Start: W End: W				11							2nd 6-Minute Avg.
								12							
Describe Emissions: Start: None End: None								13							
								14							
Emission Color: Start: Clear End: Clear				Plume Type: Continuous []				15							
				Fugitive [X] Intermittent []				16							
Water Droplets Present: No [X] Yes []				If Water Droplet Plume: N/A				17							3rd 6-Minute Avg.
				Attached [] Detached []				18							
Point in the Plume at which Opacity was Determined: Start: NA End: NA								19							
								20							
Describe Background: Start: Sky End: Sky								21							
								22							
Background Color: Start: Blue End: Blue				Sky Conditions: Start: Partly Cloudy End: Partly Cloudy				23							4th 6-Minute Avg.
								24							
Wind Speed: Start: Calm End: Calm				Wind Direction: Start: NA End: NA				25							
								26							
Ambient Temp: Start: 52° End: 52°				Wet Bulb Temp: NA		RH, percent: NA		27							
								28							
Sun 	Source Layout Sketch:			North Arrow 				29						5th 6-Minute Avg.	
Wind 								30							
Stack with Plume 								Highest single average of the five 6-minute averages: 0							
								Average Opacity of the five 6-minute averages: 0							
								Number of Readings Above: 7 % Were 0							
								Range of Opacity Readings: Minimum: 0 % Maximum: 0 %							
								Observer's Name: (print) Alisa Hatmaker							
								Observer's Signature: Alisa Hatmaker		Date: 11/2/22					
								Organization: Blue Water Industries							
								Environmental Affairs Department							
Comments: BWI Greenback Quarry - Mobile Plant				Certified By: Singleton Smoke School				Date: 10/11/2022							
Sky overcast to back/sun hidden				Kodak, TN											

VISIBLE EMISSION OBSERVATION FORM (EPA Method 9)(40 CFR 60-Appendix A)

Blue Water Industries

Source Name: BWI ETN LLC dba Blue Water Industries Greenback Quarry				Observation Date: 11/2/22		Start Time: 11:32 AM		Stop Time: 12:02 PM	
Address: 2107 Big Hill Road				Min/Sec		0		15	
City: Lenoir City	County: Loudon	State: TN	Zip: 37772	1		0		0	
Phone: 865-986-5322		Facility ID No: 53-0074-03		2		0		0	
Process Equipment: R155 Screen		Operating Mode: 90-95%		3		0		0	
				4		0		0	
Control Equipment: Wet Suppression		Operating Mode: 100%		5		0		0	
				6		0		0	
Describe Emission Point: RS1 feed onto Conveyor RC3			Emission Pt. ID: 4	7		0		0	
				8		0		0	
Height Above Ground Level: Start: 6' End: 6'		Height Relative to Observer: Start: 6' End: 6'		9		0		0	
				10		0		0	
Distance from Observer: Start: 60' End: 60'		Direction from Observer: Start: SE End: SE		11		0		0	
				12		0		0	
Describe Emissions: Start: None End: None				13		0		0	
				14		0		0	
Emission Color: Start: Clear End: Clear		Plume Type: Continuous []		15		0		0	
		Fugitive [X] Intermittent []		16		0		0	
Water Droplets Present: No [X] Yes []		If Water Droplet Plume: N/A		17		0		0	
		Attached [] Detached []		18		0		0	
Point in the Plume at which Opacity was Determined: Start: NA End: NA				19		0		0	
				20		0		0	
Describe Background: Start: Equipment End: Equipment				21		0		0	
				22		0		0	
Background Color: Start: Green End: Green		Sky Conditions: Start: Overcast End: Overcast		23		0		0	
				24		0		0	
Wind Speed: Start: Calm End: Calm		Wind Direction: Start: NA End: NA		25		0		0	
				26		0		0	
Ambient Temp: Start: 55° End: 57°		Wet Bulb Temp: NA		27		0		0	
		RH, percent: NA		28		0		0	
Sun Source Layout Sketch: North Arrow				29		0		0	
				30		0		0	
				Highest single average of the five 6-minute averages: 0					
				Average Opacity of the five 6-minute averages: 0					
				Number of Readings Above: 7 % Were 0					
				Range of Opacity Readings: Minimum: % Maximum: %					
Comments: BWI Greenback Quarry - Mobile Plant Sun hidden				Observer's Name: (print) Alisa Hatmaker		Observer's Signature: Alisa Hatmaker			
				Date: 11/2/22		Organization: Blue Water Industries Environmental Affairs Department			
				Certified By: Singleton Smoke School		Date: 10/11/2022			
				Kodak, TN					



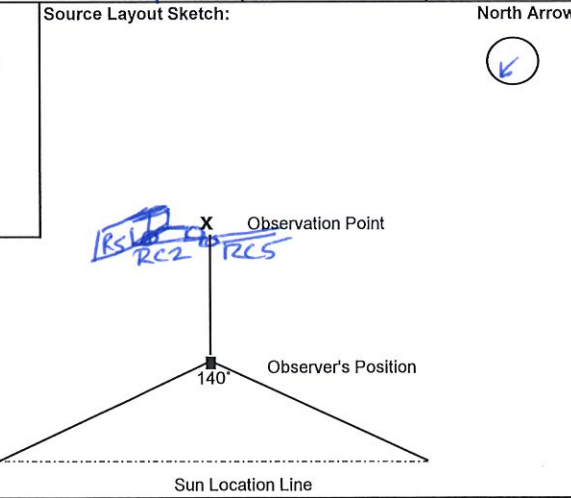

VISIBLE EMISSION OBSERVATION FORM (EPA Method 9)(40 CFR 60-Appendix A)

Blue Water Industries

Source Name: BWI ETN LLC dba Blue Water Industries Greenback Quarry				Observation Date: 11/2/22		Start Time: 10:10 Am		Stop Time: 10:40 Am							
Address: 2107 Big Hill Road				Min/Sec		0		15		30		45		Comments	
City: Lenoir City	County: Loudon	State: TN	Zip: 37772	1											
Phone: 865-986-5322				Facility ID No: 53-0074-03				2							
Process Equipment: R155 Screen				Operating Mode: 90-95%				3							
								4							
Control Equipment: Wet Suppression				Operating Mode: 100%				5							1st 6-Minute Avg.
								6							
Describe Emission Point: RS1 feed onto Conveyor RC4				Emission Pt. ID: 5				7							
								8							
Height Above Ground Level:				Height Relative to Observer:				9							
Start: 20' End: 20'				Start: 20' End: 20'				10							
Distance from Observer:				Direction from Observer:				11							2nd 6-Minute Avg.
Start: 100' End: 100'				Start: NW End: NW				12							
Describe Emissions:								13							
Start: None End: None								14							
Emission Color:				Plume Type: Continuous []				15							
Start: Clear End: Clear				Fugitive [X] Intermittent []				16							
Water Droplets Present:				If Water Droplet Plume: N/A				17							3rd 6-Minute Avg.
No [X] Yes []				Attached [] Detached []				18							
Point in the Plume at which Opacity was Determined:								19							
Start: NA End: NA								20							
Describe Background:								21							
Start: Equipment End: Equipment								22							
Background Color:				Sky Conditions:				23							4th 6-Minute Avg.
Start: Green End: Green				Start: Partly Cloudy End: Partly Cloudy				24							
Wind Speed:				Wind Direction:				25							
Start: Calm End: Calm				Start: NA End: NA				26							
Ambient Temp:				Wet Bulb Temp:		RH, percent		27							
Start: 52° End: 54°				NA		NA		28							
Sun				Source Layout Sketch:				29							5th 6-Minute Avg.
Wind				North Arrow				30							
Stack with Plume								Highest single average of the five 6-minute averages: 0							
								Average Opacity of the five 6-minute averages: 0							
								Number of Readings Above: 7 % Were 0							
								Range of Opacity Readings:							
								Minimum: 0 % Maximum: 0 %							
								Observer's Name: (print)							
								Alisa Hatmaker							
								Observer's Signature: Alisa Hatmaker				Date: 11/2/22			
								Organization: Blue Water Industries							
								Environmental Affairs Department							
Comments:								Certified By:				Date:			
BWI Greenback Quarry - Mobile Plant								Singleton Smoke School				10/11/2022			
Sky overcast to back / Sun hidden								Kodak, TN							

VISIBLE EMISSION OBSERVATION FORM (EPA Method 9)(40 CFR 60-Appendix A)

Blue Water Industries

Source Name: BWI ETN LLC dba Blue Water Industries Greenback Quarry				Observation Date: 11/2/22		Start Time: 11:32 AM		Stop Time: 12:02 PM		Comments
Address: 2107 Big Hill Road				Min/Sec	0	15	30	45		
City: Lenoir City	County: Loudon	State: TN	Zip: 37772	1	0	0	0	0		
Phone: 865-986-5322		Facility ID No: 53-0074-03		2	0	0	0	0		
Process Equipment: R155 Screen/Conveyor		Operating Mode: 90-95%		3	0	0	0	0		
				4	0	0	0	0		
Control Equipment: Wet Suppression		Operating Mode: 100%		5	0	0	0	0	1st 6-Minute Avg.	
				6	0	0	0	0	0	
Describe Emission Point: Conveyor RC2 feed onto Conveyor RC5			Emission Pt. ID: 6	7	0	0	0	0		
				8	0	0	0	0		
Height Above Ground Level:		Height Relative to Observer:		9	0	0	0	0		
Start: 5' End: 5'		Start: 5' End: 5'		10	0	0	0	0		
Distance from Observer:		Direction from Observer:		11	0	0	0	0	2nd 6-Minute Avg.	
Start: 60' End: 60'		Start: SE End: SE		12	0	0	0	0	0	
Describe Emissions:				13	0	0	0	0		
Start: None End: None				14	0	0	0	0		
Emission Color:		Plume Type: Continuous []		15	0	0	0	0		
Start: Clear End: Clear		Fugitive [X] Intermittent []		16	0	0	0	0		
Water Droplets Present:		If Water Droplet Plume: N/A		17	0	0	0	0	3rd 6-Minute Avg.	
No [X] Yes []		Attached [] Detached []		18	0	0	0	0	0	
Point in the Plume at which Opacity was Determined:				19	0	0	0	0		
Start: NA End: NA				20	0	0	0	0		
Describe Background:				21	0	0	0	0		
Start: Equipment End: Equipment				22	0	0	0	0		
Background Color:		Sky Conditions:		23	0	0	0	0	4th 6-Minute Avg.	
Start: Green End: Green		Start: Overcast End: Overcast		24	0	0	0	0	0	
Wind Speed:		Wind Direction:		25	0	0	0	0		
Start: Calm End: Calm		Start: NA End: NA		26	0	0	0	0		
Ambient Temp:		Wet Bulb Temp:	RH, percent	27	0	0	0	0		
Start: 55° End: 57°		NA	NA	28	0	0	0	0		
Sun 	Source Layout Sketch:			29	0	0	0	0	5th 6-Minute Avg.	
Wind 				30	0	0	0	0		
Stack with Plume 				Highest single average of the five 6-minute averages: 0 Average Opacity of the five 6-minute averages: 0 Number of Readings Above: 7 % Were 0 Range of Opacity Readings: Minimum: 0 % Maximum: 0 % Observer's Name: (print) Alisa Hatmaker Observer's Signature: <i>Alisa Hatmaker</i> Date: 11/2/22 Organization: Blue Water Industries Environmental Affairs Department						
Comments:				Certified By: Singleton Smoke School Date: 10/11/2022						
BWI Greenback Quarry - Mobile Plant				Kodak, TN						
Sun hidden										

VISIBLE EMISSION OBSERVATION FORM (EPA Method 9)(40 CFR 60-Appendix A)

Blue Water Industries

Source Name: BWI ETN LLC dba Blue Water Industries Greenback Quarry				Observation Date: 11/2/22		Start Time: 10:10 AM		Stop Time: 10:40 AM		Comments
Address: 2107 Big Hill Road				Min/Sec	0	15	30	45		
City: Lenoir City	County: Loudon	State: TN	Zip: 37772	1	0	0	0	0		
Phone: 865-986-5322		Facility ID No: 53-0074-03		2	0	0	0	0		
Process Equipment: R155 Conveyor		Operating Mode: 90-95%		3	0	0	0	0		
				4	0	0	0	0		
Control Equipment: Wet Suppression		Operating Mode: 100%		5	0	0	0	0	1st 6-Minute Avg.	
				6	0	0	0	0		
Describe Emission Point: RC4 feed onto GT200 Belt Feeder GTBF1			Emission Pt. ID: 7	7	0	0	0	0		
				8	0	0	0	0		
Height Above Ground Level:		Height Relative to Observer:		9	0	0	0	0		
Start: 20' End: 20'		Start: 20' End: 20'		10	0	0	0	0		
Distance from Observer:		Direction from Observer:		11	0	0	0	0	2nd 6-Minute Avg.	
Start: 90' End: 90'		Start: NW End: NW		12	0	0	0	0		
Describe Emissions:				13	0	0	0	0		
Start: None End: None				14	0	0	0	0		
Emission Color:		Plume Type: Continuous []		15	0	0	0	0		
Start: Clear End: Clear		Fugitive [X] Intermittent []		16	0	0	0	0		
Water Droplets Present:		If Water Droplet Plume: N/A		17	0	0	0	0	3rd 6-Minute Avg.	
No [X] Yes []		Attached [] Detached []		18	0	0	0	0		
Point in the Plume at which Opacity was Determined:				19	0	0	0	0		
Start: NA End: NA				20	0	0	0	0		
Describe Background:				21	0	0	0	0		
Start: Sky End: Sky				22	0	0	0	0		
Background Color:		Sky Conditions:		23	0	0	0	0	4th 6-Minute Avg.	
Start: Blue End: Blue		Start: Partly Cloudy End: Partly Cloudy		24	0	0	0	0		
Wind Speed:		Wind Direction:		25	0	0	0	0		
Start: Calm End: Calm		Start: NA End: NA		26	0	0	0	0		
Ambient Temp:		Wet Bulb Temp:		27	0	0	0	0		
Start: 52° End: 54°		NA		28	0	0	0	0		
RH, percent:		NA		29	0	0	0	0	5th 6-Minute Avg.	
				30	0	0	0	0		
<div style="display: flex; align-items: center;"> <div style="margin-right: 20px;"> <p>Sun </p> <p>Wind </p> <p>Stack with Plume </p> </div> <div> <p>Source Layout Sketch:</p> </div> <div style="margin-left: 20px;"> <p>North Arrow </p> </div> </div>				<p>Highest single average of the five 6-minute averages: 0</p> <p>Average Opacity of the five 6-minute averages: 0</p> <p>Number of Readings Above: 7 % Were 0</p> <p>Range of Opacity Readings:</p> <p>Minimum: 0 % Maximum: 0 %</p> <p>Observer's Name: (print)</p> <p style="text-align: center;">Alisa Hatmaker</p> <p>Observer's Signature: <i>Alisa Hatmaker</i> Date: 11/2/22</p> <p>Organization: Blue Water Industries Environmental Affairs Department</p>						
<p>Comments:</p> <p>BWI Greenback Quarry - Mobile Plant</p> <p style="font-size: 1.2em;">Sky overcast to back / Sun hidden</p>				<p>Certified By:</p> <p>Singleton Smoke School</p> <p>Kodak, TN</p>		<p>Date:</p> <p>10/11/2022</p>				

VISIBLE EMISSION OBSERVATION FORM (EPA Method 9)(40 CFR 60-Appendix A)

Blue Water Industries

Source Name: BWI ETN LLC dba Blue Water Industries Greenback Quarry				Observation Date: 11/2/22		Start Time: 1:45 PM		Stop Time: 2:15 PM							
Address: 2107 Big Hill Road				Min/Sec		0		15		30		45		Comments	
City: Lenoir City	County: Loudon	State: TN	Zip: 37772	1	5	5	5	5	5						
Phone: 865-986-5322		Facility ID No: 53-0074-03		2	10	5	5	5	5						
Process Equipment: GT200 Belt Feeder		Operating Mode: 90-95%		3	0	0	0	0	5						
				4	5	5	10	5	5						
Control Equipment: Wet Suppression		Operating Mode: 100%		5	0	0	0	0	0	1st 6-Minute Avg.					
				6	5	5	5	5	5	3.94					
Describe Emission Point: GTBF1 feed into Cone Crusher GTCR1			Emission Pt. ID: 8	7	0	0	0	0	5						
Height Above Ground Level:			Height Relative to Observer:	8	5	0	5	0	0						
Start: 15' End: 15'			Start: 15' End: 15'	9	5	0	0	0	0						
Distance from Observer:			Direction from Observer:	10	0	5	0	0	5						
Start: 65' End: 65'			Start: SW End: SW	11	10	10	5	5	5	2nd 6-Minute Avg.					
				12	5	0	0	0	0	2.92					
Describe Emissions:				13	5	0	0	0	0						
Start: Rock Dust End: Rock Dust				14	0	0	0	0	0						
Emission Color: White End: White				15	0	5	5	5	5						
Plume Type: Continuous []				16	10	5	5	5	5						
Fugitive [X] Intermittent []				17	5	5	10	10	10	3rd 6-Minute Avg.					
Water Droplets Present: No [X] Yes [] Attached [] Detached []				18	10	5	5	5	5	4.17					
Point in the Plume at which Opacity was Determined:				19	0	0	0	0	0						
Start: NA End: NA				20	0	5	0	0	0						
Describe Background:				21	5	5	5	5	5						
Start: Equipment End: Equipment				22	5	5	10	10	10						
Background Color: Green End: Green				23	5	5	5	0	0	4th 6-Minute Avg.					
Sky Conditions: Overcast End: Overcast				24	0	5	5	5	5	3.54					
Wind Speed: Calm End: Calm				25	10	5	5	10	10						
Wind Direction: NA End: NA				26	5	5	5	5	5						
Ambient Temp: 63° End: 63°		Wet Bulb Temp: NA		RH, percent: NA		27	0	0	0	0					
						28	0	5	5	5					
Sun		Source Layout Sketch:		North Arrow		29	5	5	5	5	5th 6-Minute Avg.				
Wind						30	10	5	5	5	4.58				
Stack with Plume						Highest single average of the five 6-minute averages: 4.58									
						Average Opacity of the five 6-minute averages: 3.83									
						Number of Readings Above: 12 % Were 0									
						Range of Opacity Readings: Minimum: 0 % Maximum: 10 %									
						Observer's Name: (print) Alisa Hatmaker									
						Observer's Signature: Alisa Hatmaker			Date: 11/2/22						
						Organization: Blue Water Industries Environmental Affairs Department									
Comments: BWI Greenback Quarry - Mobile Plant Sun hidden				Certified By: Singleton Smoke School Kodak, TN			Date: 10/11/2022								




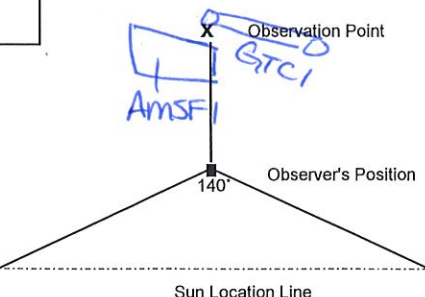
VISIBLE EMISSION OBSERVATION FORM (EPA Method 9)(40 CFR 60-Appendix A)

Blue Water Industries

Source Name: BWI ETN LLC dba Blue Water Industries Greenback Quarry				Observation Date: 11/2/22		Start Time: 1:45 PM		Stop Time: 2:15 PM							
Address: 2107 Big Hill Road				Min/Sec		0		15		30		45		Comments	
City: Lenoir City	County: Loudon	State: TN	Zip: 37772	1	0	5	5	5	5						
Phone: 865-986-5322		Facility ID No: 53-0074-03		2	0	0	0	0	0						
Process Equipment: GT200 Cone		Operating Mode: 90-95%		3	0	0	0	0	0						
				4	0	0	5	5	5						
Control Equipment: Wet Suppression		Operating Mode: 100%		5	5	5	0	0	0	1st 6-Minute Avg.					
				6	0	0	0	0	0	1.46					
Describe Emission Point: GTCR1 feed onto Conveyor GTC1			Emission Pt. ID: 9	7	0	0	0	0	0						
				8	0	5	0	0	0						
Height Above Ground Level:		Height Relative to Observer:		9	0	0	0	5	5						
Start: 7' End: 7'		Start: 7' End: 7'		10	0	0	0	0	0						
Distance from Observer:		Direction from Observer:		11	0	5	0	0	0	2nd 6-Minute Avg.					
Start: 60' End: 60'		Start: SW End: SW		12	0	0	0	0	0	0.63					
Describe Emissions:				13	0	0	0	0	0						
Start: None End: None				14	0	0	0	0	0						
Emission Color: Clear		Plume Type: Continuous []		15	0	0	0	0	0						
Start: Clear End: Clear		Fugitive [X] Intermittent []		16	0	0	0	0	0						
Water Droplets Present:		If Water Droplet Plume: N/A		17	0	5	5	5	5	3rd 6-Minute Avg.					
No [X] Yes []		Attached [] Detached []		18	5	0	5	0	0	1.04					
Point in the Plume at which Opacity was Determined:				19	5	5	0	0	0						
Start: NA End: NA				20	0	0	0	0	0						
Describe Background:				21	0	0	0	0	0						
Start: Equipment End: Equipment				22	0	5	5	5	5						
Background Color: Tan		Sky Conditions: Overcast		23	0	0	0	0	0	4th 6-Minute Avg.					
Start: Tan End: Tan		Start: Overcast End: Overcast		24	0	0	0	0	0	1.04					
Wind Speed: Calm		Wind Direction: NA		25	0	0	0	0	0						
Start: Calm End: Calm		Start: NA End: NA		26	5	5	5	0	0						
Ambient Temp: 63°		Wet Bulb Temp: NA		27	0	0	0	0	0						
Start: 63° End: 63°		RH, percent: NA		28	0	5	5	0	0						
Sun		Source Layout Sketch:		29	5	5	5	0	0	5th 6-Minute Avg.					
Wind				30	0	0	0	0	0	1.67					
Stack with Plume				Highest single average of the five 6-minute averages: 1.67											
				Average Opacity of the five 6-minute averages: 1.17											
				Number of Readings Above: 12 % Were 0											
				Range of Opacity Readings: Minimum: 0 % Maximum: 5 %											
				Observer's Name: (print) Alisa Hatmaker											
				Observer's Signature: Alisa Hatmaker				Date: 11/2/22							
				Organization: Blue Water Industries Environmental Affairs Department											
Comments: BWI Greenback Quarry - Mobile Plant Sun hidden				Certified By: Singleton Smoke School Kodak, TN				Date: 10/11/2022							

VISIBLE EMISSION OBSERVATION FORM (EPA Method 9)(40 CFR 60-Appendix A)

Blue Water Industries

Source Name: BWI ETN LLC dba Blue Water Industries Greenback Quarry				Observation Date: 11/2/22		Start Time: 1:10 PM		Stop Time: 1:40 PM		
Address: 2107 Big Hill Road										
City: Lenoir City	County: Loudon	State: TN	Zip: 37772	Min/Sec	0	15	30	45	Comments	
Phone: 865-986-5322				Facility ID No: 53-0074-03						
Process Equipment: GT200 Conveyor				Operating Mode: 90-95%						
Control Equipment: Wet Suppression				Operating Mode: 100%						
Describe Emission Point: GTC1 feed onto FT3620 Screen Feed Box AMS F1				Emission Pt. ID: 10						
Height Above Ground Level: Start: 15' End: 15'				Height Relative to Observer: Start: 15' End: 15'						
Distance from Observer: Start: 60' End: 60'				Direction from Observer: Start: S End: S						
Describe Emissions: Start: None End: None										
Emission Color: Start: Clear End: Clear				Plume Type: Continuous []						
Water Droplets Present: No [X] Yes []				If Water Droplet Plume: N/A						
Point in the Plume at which Opacity was Determined: Start: NA End: NA										
Describe Background: Start: Overburden End: Overburden										
Background Color: Start: Brown End: Brown				Sky Conditions: Start: Overcast End: Overcast						
Wind Speed: Start: Calm End: Calm				Wind Direction: Start: NA End: NA						
Ambient Temp: Start: 63° End: 63°				Wet Bulb Temp: NA		RH, percent: NA				
Sun 				Wind 						
Stack with Plume 										
Source Layout Sketch: 										
Comments: BWI Greenback Quarry - Mobile Plant Sun hidden										

1	0	15	30	45	Comments
2	0	0	0	0	
3	0	0	0	0	
4	0	0	0	0	
5	0	0	0	0	1st 6-Minute Avg.
6	0	0	0	0	0
7	0	0	0	0	
8	0	0	0	0	
9	0	0	0	0	
10	0	0	0	0	
11	0	0	0	0	2nd 6-Minute Avg.
12	0	0	0	0	0
13	0	0	0	0	
14	0	0	0	0	
15	0	0	0	0	
16	0	0	0	0	
17	0	0	0	0	3rd 6-Minute Avg.
18	0	0	0	0	0
19	0	0	0	0	
20	0	0	0	0	
21	0	0	0	0	
22	0	0	0	0	
23	0	0	0	0	4th 6-Minute Avg.
24	0	0	0	0	0
25	0	0	0	0	
26	0	0	0	0	
27	0	0	0	0	
28	0	0	0	0	
29	0	0	0	0	5th 6-Minute Avg.
30	0	0	0	0	0

Highest single average of the five 6-minute averages: 0

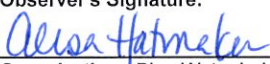
Average Opacity of the five 6-minute averages: 0

Number of Readings Above: 7 % Were 0

Range of Opacity Readings:

Minimum: 0 % Maximum: 0 %

Observer's Name: (print) Alisa Hatmaker

Observer's Signature:  Date: 11/2/22

Organization: Blue Water Industries
Environmental Affairs Department

Certified By: Singleton Smoke School
Kodak, TN

Date: 10/11/2022

VISIBLE EMISSION OBSERVATION FORM (EPA Method 9)(40 CFR 60-Appendix A)

Blue Water Industries

Source Name: BWI ETN LLC dba Blue Water Industries Greenback Quarry				Observation Date: 11/2/22		Start Time: 1:10 PM		Stop Time: 1:40 PM							
Address: 2107 Big Hill Road				Min/Sec		0		15		30		45		Comments	
City: Lenoir City	County: Loudon	State: TN	Zip: 37772	1	0	0	0	0	0						
Phone: 865-986-5322		Facility ID No: 53-0074-03		2	0	0	0	0	0						
Process Equipment: AMTS FT3620 Conveyor		Operating Mode: 90-95%		3	0	0	0	0	0						
				4	0	0	0	0	0						
Control Equipment: Wet Suppression		Operating Mode: 100%		5	0	0	0	0	0	1st 6-Minute Avg.					
				6	0	0	0	0	0	0					
Describe Emission Point: Conveyor AMS C1 feed onto Conveyor AMS C2			Emission Pt. ID: 11	7	0	0	0	0	0						
				8	0	0	0	0	0						
Height Above Ground Level:		Height Relative to Observer:		9	0	0	0	0	0						
Start: 7' End: 7'		Start: 7' End: 7'		10	0	0	0	0	0						
Distance from Observer:		Direction from Observer:		11	0	0	0	0	0	2nd 6-Minute Avg.					
Start: 40' End: 60'		Start: S End: S		12	0	0	0	0	0	0					
Describe Emissions:				13	0	0	0	0	0						
Start: None End: None				14	0	0	0	0	0						
Emission Color: Clear		Plume Type: Continuous []		15	0	0	0	0	0						
Start: Clear End: Clear		Fugitive [X] Intermittent []		16	0	0	0	0	0						
Water Droplets Present:		If Water Droplet Plume: N/A		17	0	0	0	0	0	3rd 6-Minute Avg.					
No [X] Yes []		Attached [] Detached []		18	0	0	0	0	0	0					
Point in the Plume at which Opacity was Determined:				19	0	0	0	0	0						
Start: NA End: NA				20	0	0	0	0	0						
Describe Background:				21	0	0	0	0	0						
Start: Overburden End: Overburden				22	0	0	0	0	0						
Background Color: Brown		Sky Conditions: Overcast		23	0	0	0	0	0	4th 6-Minute Avg.					
Start: Brown End: Brown		Start: Overcast End: Overcast		24	0	0	0	0	0	0					
Wind Speed: Calm		Wind Direction: NA		25	0	0	0	0	0						
Start: Calm End: Calm		Start: NA End: NA		26	0	0	0	0	0						
Ambient Temp: 63°		Wet Bulb Temp: NA		27	0	0	0	0	0						
Start: 63° End: 63°		RH, percent: NA		28	0	0	0	0	0						
Sun		Source Layout Sketch:		29	0	0	0	0	0	5th 6-Minute Avg.					
Wind				30	0	0	0	0	0	0					
Stack with Plume				Highest single average of the five 6-minute averages: 0											
				Average Opacity of the five 6-minute averages: 0											
				Number of Readings Above: 7 % Were 0											
				Range of Opacity Readings:											
				Minimum: 0 % Maximum: 0 %											
				Observer's Name: (print) Alisa Hatmaker											
				Observer's Signature: Alisa Hatmaker				Date: 11/2/22							
				Organization: Blue Water Industries Environmental Affairs Department											
Comments: BWI Greenback Quarry - Mobile Plant Sun hidden				Certified By: Singleton Smoke School Kodak, TN				Date: 10/11/2022							

VISIBLE EMISSION OBSERVATION FORM (EPA Method 9)(40 CFR 60-Appendix A)

Blue Water Industries

Source Name: BWI ETN LLC dba Blue Water Industries Greenback Quarry				Observation Date: 11/2/22		Start Time: 2:25 PM		Stop Time: 2:55 PM							
Address: 2107 Big Hill Road				Min/Sec		0		15		30		45		Comments	
City: Lenoir City	County: Loudon	State: TN	Zip: 37772	1											
Phone: 865-986-5322				Facility ID No: 53-0074-03				2							
Process Equipment: AMTS FT3620 Conveyor & Screen				Operating Mode: 90-95%				3							
								4							
Control Equipment: Wet Suppression				Operating Mode: 100%				5							1st 6-Minute Avg.
								6							
Describe Emission Point: AMS C2 feed onto Screen & Area above Screen AMS S1				Emission Pt. ID: 12				7							
								8							
Height Above Ground Level: Start: 25' End: 25'				Height Relative to Observer: Start: 25' End: 25'				9							
								10							
Distance from Observer: Start: 40' End: 40'				Direction from Observer: Start: NE End: NE				11							2nd 6-Minute Avg.
								12							
Describe Emissions: Start: None End: None								13							
								14							
Emission Color: Start: Clear End: Clear				Plume Type: Continuous []				15							
				Fugitive [X] Intermittent []				16							
Water Droplets Present: No [X] Yes []				If Water Droplet Plume: N/A				17							3rd 6-Minute Avg.
				Attached [] Detached []				18							
Point in the Plume at which Opacity was Determined: Start: NA End: NA								19							
								20							
Describe Background: Start: Treeline End: Treeline								21							
								22							
Background Color: Start: Yellow End: Yellow				Sky Conditions: Start: Overcast End: Overcast				23							4th 6-Minute Avg.
								24							
Wind Speed: Start: Calm End: Calm				Wind Direction: Start: NA End: NA				25							
								26							
Ambient Temp: Start: 63° End: 64°				Wet Bulb Temp: NA		RH, percent: NA		27							
								28							
Sun Wind				Source Layout Sketch:				29							5th 6-Minute Avg.
								30							
								Highest single average of the five 6-minute averages: 0							
								Average Opacity of the five 6-minute averages: 0							
								Number of Readings Above: 7 % Were 0							
								Range of Opacity Readings: Minimum: 0 % Maximum: 0 %							
								Observer's Name: (print) Alisa Hatmaker							
								Observer's Signature: Alisa Hatmaker					Date: 11/2/22		
								Organization: Blue Water Industries							
								Environmental Affairs Department							
Comments: BWI Greenback Quarry - Mobile Plant				Certified By: Singleton Smoke School				Date: 10/11/2022							
Sun hidden				Kodak, TN											

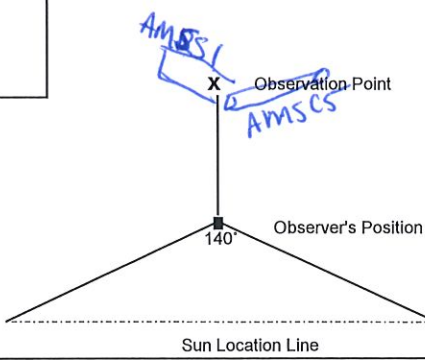




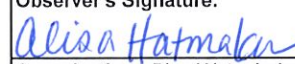
VISIBLE EMISSION OBSERVATION FORM (EPA Method 9)(40 CFR 60-Appendix A)

Blue Water Industries

Source Name: BWI ETN LLC dba Blue Water Industries Greenback Quarry				Observation Date: 11/2/22		Start Time: 2:25PM		Stop Time: 2:55PM	
Address: 2107 Big Hill Road				Min/Sec		0		15	
City: Lenoir City	County: Loudon	State: TN	Zip: 37772	1		0		0	
Phone: 865-986-5322		Facility ID No: 53-0074-03		2		0		0	
Process Equipment: AMTS FT3620 Screen & Conveyor		Operating Mode: 90-95%		3		0		0	
				4		0		0	
Control Equipment: Wet Suppression		Operating Mode: 100%		5		0		0	
				6		0		0	
Describe Emission Point: Conveyor AMS C3 feed to Conveyor AMS C4			Emission Pt. ID: 13	7		0		0	
				8		0		0	
Height Above Ground Level: Start: 6' End: 6'		Height Relative to Observer: Start: 6' End: 6'		9		0		0	
				10		0		0	
Distance from Observer: Start: 30' End: 30'		Direction from Observer: Start: NE End: NE		11		0		0	
				12		0		0	
Describe Emissions: Start: None End: None				13		0		0	
				14		0		0	
Emission Color: Start: Clear End: Clear		Plume Type: Continuous []		15		0		0	
		Fugitive [X] Intermittent []		16		0		0	
Water Droplets Present: No [X] Yes []		If Water Droplet Plume: N/A		17		0		0	
		Attached [] Detached []		18		0		0	
Point in the Plume at which Opacity was Determined: Start: NA End: NA				19		0		0	
				20		0		0	
Describe Background: Start: Equipment End: Equipment				21		0		0	
				22		0		0	
Background Color: Start: Black/Tan End: Black/Tan		Sky Conditions: Start: Overcast End: Overcast		23		0		0	
				24		0		0	
Wind Speed: Start: Calm End: Calm		Wind Direction: Start: NA End: NA		25		0		0	
				26		0		0	
Ambient Temp: Start: 63° End: 64°		Wet Bulb Temp: NA		27		0		0	
		RH, percent: NA		28		0		0	
Sun Source Layout Sketch: North Arrow				29		0		0	
				30		0		0	
				Highest single average of the five 6-minute averages: 0					
				Average Opacity of the five 6-minute averages: 0					
				Number of Readings Above: 7 % Were 0					
				Range of Opacity Readings: Minimum: 0 % Maximum: 0 %					
Observer's Name: (print) Alisa Hatmaker				Observer's Signature: Alisa Hatmaker		Date: 11/2/22			
Organization: Blue Water Industries				Certified By: Singleton Smoke School		Date: 10/11/2022			
Comments: BWI Greenback Quarry - Mobile Plant				Kodak, TN					

VISIBLE EMISSION OBSERVATION FORM (EPA Method 9)(40 CFR 60-Appendix A)

Blue Water Industries

Source Name: BWI ETN LLC dba Blue Water Industries Greenback Quarry				Observation Date: 11/2/22		Start Time: 10:50 Am		Stop Time: 11:20 Am		Comments
Address: 2107 Big Hill Road				Min/Sec	0	15	30	45		
City: Lenoir City	County: Loudon	State: TN	Zip: 37772	1	0	0	0	0		
Phone: 865-986-5322		Facility ID No: 53-0074-03		2	0	0	0	0		
Process Equipment: AMTS FT3620 Screen		Operating Mode: 90-95% Co		3	0	0	0	0		
				4	0	0	0	0		
Control Equipment: Wet Suppression		Operating Mode: 100 %		5	0	0	0	0	1st 6-Minute Avg.	
				6	0	0	0	0		
Describe Emission Point: AMS S1 feed onto Conveyor AMS C5			Emission Pt. ID: 14	7	0	0	0	0		
				8	0	0	0	0		
Height Above Ground Level: Start: 6' End: 6'		Height Relative to Observer: Start: 6' End: 6'		9	0	0	0	0		
				10	0	0	0	0		
Distance from Observer: Start: 60' End: 60'		Direction from Observer: Start: SW End: SW		11	0	0	0	0	2nd 6-Minute Avg.	
				12	0	0	0	0		
Describe Emissions: Start: None End: Clear None				13	0	0	0	0		
				14	0	0	0	0		
Emission Color: Start: Clear End: Clear		Plume Type: Continuous []		15	0	0	0	0		
		Fugitive [X] Intermittent []		16	0	0	0	0		
Water Droplets Present: No [X] Yes []		If Water Droplet Plume: N/A		17	0	0	0	0	3rd 6-Minute Avg.	
Attached [] Detached []				18	0	0	0	0		
Point in the Plume at which Opacity was Determined: Start: NA End: NA				19	0	0	0	0		
				20	0	0	0	0		
Describe Background: Start: Equipment End: Equipment				21	0	0	0	0		
				22	0	0	0	0		
Background Color: Start: Black/Tan End: Black/Tan		Sky Conditions: Start: Partly Cloudy/Overcast End: Overcast		23	0	0	0	0	4th 6-Minute Avg.	
				24	0	0	0	0		
Wind Speed: Start: Calm End: Calm		Wind Direction: Start: NA End: NA		25	0	0	0	0		
				26	0	0	0	0		
Ambient Temp: Start: 54° End: 55°		Wet Bulb Temp: NA RH, percent: NA		27	0	0	0	0		
				28	0	0	0	0		
Source Layout Sketch: 				29	0	0	0	0	5th 6-Minute Avg.	
				30	0	0	0	0		
<div style="display: flex; justify-content: space-between;"> <div> <p>Sun </p> <p>Wind </p> <p>Stack with Plume </p> </div> <div> <p>North Arrow </p> </div> </div>				Highest single average of the five 6-minute averages: 0						
				Average Opacity of the five 6-minute averages: 0						
				Number of Readings Above: 7 % Were 0						
				Range of Opacity Readings: Minimum: 0 % Maximum: 0 %						
				Observer's Name: (print) Alisa Hatmaker						
Observer's Signature: 				Date: 11/2/22						
Organization: Blue Water Industries				Environmental Affairs Department						
Certified By: Singleton Smoke School				Date: 10/11/2022						
Kodak, TN										

Comments:

BWI Greenback Quarry - Mobile Plant

Sun Hidden

VISIBLE EMISSION OBSERVATION FORM (EPA Method 9)(40 CFR 60-Appendix A)

Blue Water Industries

Source Name: BWI ETN LLC dba Blue Water Industries Greenback Quarry				Observation Date: 11/2/22		Start Time: 2:25PM		Stop Time: 2:55PM	
Address: 2107 Big Hill Road									
City: Lenoir City	County: Loudon	State: TN	Zip: 37772	Min/Sec: 1	0	15	30	45	Comments
Phone: 865-986-5322				Facility ID No: 53-0074-03					
Process Equipment: AMTS FT3620 Screen				Operating Mode: 90-95%					
Control Equipment: Wet Suppression				Operating Mode: 100%					
Describe Emission Point: AMS S1 feed onto Conveyor AMS C6				Emission Pt. ID: 15					
Height Above Ground Level: Start: 6' End: 6'				Height Relative to Observer: Start: 6' End: 6'					
Distance from Observer: Start: 30' End: 30'				Direction from Observer: Start: NE End: NE					
Describe Emissions: Start: None End: None				Emission Color: Clear End: Clear					
Plume Type: Continuous []				Fugitive [X] Intermittent []					
Water Droplets Present: No [X] Yes []				If Water Droplet Plume: N/A					
Attached [] Detached []									
Point in the Plume at which Opacity was Determined: Start: NA End: NA									
Describe Background: Start: Equipment End: Equipment				Background Color: Black End: Black					
Sky Conditions: Start: Overcast End: Overcast									
Wind Speed: Start: Calm End: Calm				Wind Direction: Start: NA End: NA					
Ambient Temp: Start: 63° End: 64°				Wet Bulb Temp: NA		RH, percent: NA			
Sun				Wind		Stack with Plume			
Source Layout Sketch:				North Arrow					
Comments:				Sun hidden					
BWI Greenback Quarry - Mobile Plant				Certified By: Singleton Smoke School		Date: 10/11/2022			
				Kodak, TN					

VISIBLE EMISSION OBSERVATION FORM (EPA Method 9)(40 CFR 60-Appendix A)

Blue Water Industries

Source Name: BWI ETN LLC dba Blue Water Industries Greenback Quarry				Observation Date: 11/2/22		Start Time: 10:50 Am		Stop Time: 11:20 Am							
Address: 2107 Big Hill Road				Min/Sec		0		15		30		45		Comments	
City: Lenoir City	County: Loudon	State: TN	Zip: 37772	1											
Phone: 865-986-5322				Facility ID No: 53-0074-03				2							
Process Equipment: AMTS FT3620 Screen				Operating Mode: 90-95%				3							
								4							
Control Equipment: Wet Suppression				Operating Mode: 100%				5							1st 6-Minute Avg.
								6							
Describe Emission Point: AMS S1 feed onto Conveyor AMS C7				Emission Pt. ID: 16				7							
Height Above Ground Level:				Height Relative to Observer:				8							
Start: 12' End: 12'				Start: 12' End: 12'				9							
Distance from Observer:				Direction from Observer:				10							
Start: 50' End: 50'				Start: S End: S				11							2nd 6-Minute Avg.
								12							
Describe Emissions:								13							
Start: None End: None								14							
Emission Color: Clear End: Clear				Plume Type: Continuous []				15							
				Fugitive [X] Intermittent []				16							
Water Droplets Present:				If Water Droplet Plume: N/A				17							3rd 6-Minute Avg.
No [X] Yes [] Attached [] Detached []								18							
Point in the Plume at which Opacity was Determined:								19							
Start: NA End: NA								20							
Describe Background:								21							
Start: Equipment End: Equipment								22							
Background Color: Black/Tan End: Black/Tan				Sky Conditions: Partly Cloudy/ Overcast				23							4th 6-Minute Avg.
								24							
Wind Speed: Calm End: Calm				Wind Direction: NA End: NA				25							
								26							
Ambient Temp: 54° End: 55°				Wet Bulb Temp: NA		RH, percent: NA		27							
								28							
Sun Source Layout Sketch: North Arrow								29							5th 6-Minute Avg.
Wind								30							
Stack with Plume								Highest single average of the five 6-minute averages: 0							
								Average Opacity of the five 6-minute averages: 0							
								Number of Readings Above: 7 % Were 0							
								Range of Opacity Readings: Minimum: 0 % Maximum: 0 %							
								Observer's Name: (print) Alisa Hatmaker							
								Observer's Signature: Alisa Hatmaker				Date: 11/2/22			
								Organization: Blue Water Industries Environmental Affairs Department							
Comments:								Certified By:				Date:			
BWI Greenback Quarry - Mobile Plant								Singleton Smoke School				10/11/2022			
Sun hidden								Kodak, TN							

**APPENDIX C****Visible Emissions Evaluations Certification & Card****VISIBLE EMISSIONS CERTIFICATION**

The Visible Emission Evaluations were completed by Alisa Hatmaker of the BWV - Environmental Affairs Department on November 2, 2022.

A copy of the Visible Emissions training certification card from the Singleton Smoke School course on October 11, 2022, located at Kodak, Tennessee is attached.

Alisa Hatmaker *Alisa Hatmaker*

THIS CERTIFICATE IS TO ACKNOWLEDGE THAT

Alisa Hatmaker

SUCCESSFULLY PARTICIPATED IN VISIBLE EMISSIONS
TRAINING ON THE DATE BELOW, AND IS QUALIFIED TO
EVALUATE VISIBLE EMISSIONS FOR A PERIOD OF 6
MONTHS FROM THE DATE OF CERTIFICATION.

10/11/22	Kodak, TN	
DATE	LOCATION	Bradley Singleton INSTRUCTOR

SERVICES@SINGLETONSMOKE.COM | 615-572-2075



STATE OF TENNESSEE
DEPARTMENT OF ENVIRONMENT AND CONSERVATION
9th Floor - L&C Annex
401 Church Street
Nashville, Tennessee 37243-1531

January 16, 2008

Mr. L. Duff Boyd, Principal
Riverbend Construction Materials
Rutledge Quarry
605 Cherokee Explosives Drive
Rutledge, TN 37861

Reference Number: 29-0039-01-S4

Dear Mr. Boyd:

This letter will acknowledge receipt of the eight one hour visible emissions evaluations submitted on the additional rock crushing equipment identified in construction permit #960817P. This letter will also acknowledge receipt of the five additional one hour visible emission evaluations submitted for the primary crusher, conveyors 1 and 2, feeder 1 and feeder belt 1 that was identified in construction permit #957049P. This equipment was not installed during the initial compliance demonstration. The evaluations were conducted on December 19, 2008.

Each of the visible emissions evaluations have been verified and have been found to be acceptable by the Division. The review of these visible emission evaluations determined that each of the thirteen emission points subject to the New Source Performance Standards for New Stationary Sources was achieving compliance with the applicable visible emission standard during the time period of the evaluations. This data will be forwarded to the Permitting Program for operating permit issuance.

If you have any questions concerning this matter, please contact Mr. Alvin E. Pratt at (615) 532-0554.

Sincerely,

Alvin E. Pratt
Compliance Validation Program
Division of Tennessee Air Pollution Control

cc: Knoxville EAC



December 20, 2007

Mr. Duff Boyd
Riverbend Construction Materials, L.L.C.
600 Cherokee Explosives Drive
Rutledge, TN 37861

Subject: Visible Emissions Test Report
Riverbend Construction Materials
Rutledge, Grainger County, TN

Dear Mr. Boyd:

Enclosed please find a copy of the Visible Emissions Report for your files. As we discussed, also included are the test results for the equipment added in 2005. If you have any questions or comments, please contact me at (770) 225-2121.

Sincerely,

Roger Franklin
Project Manager

Enclosure

TEST REPORT TRANSMISSION SUMMARY

Submit separate summary sheet for each pollutant test report

Submit to: Dewitt Logdon / Alvin Pratt
Tennessee Dept. of Environmental Control
Air Pollution Control Div.
401 Church Street, 9th Floor
L & C Annex
Nashville, TN 37243

Facility Name: Riverbend Construction Materials

and Location Rutledge, Grainger County, TN

Facility Contact: Duff Boyd

(865) 828-8005

Report Tracking Log Air Protection Branch Only		
No.		
Date:	Initial	
		Report received by APB
		Response Letter Sent SMP
		Calculation Review Complete
		Report Review Complete
		SSCP Associate Notified

Emission Point (only one) Feeder FD1

Pollutant (only one) Dust Date Test Performed: 12/19/2007

Applicable Rule (s), Regulation (s) or Permit Condition (s):
(Indicate Permit # and Condition #s)

957049P

Maximum Expected Operating Capacity: 500 TPH

Operating Capacity During Test: 450 TPH

Computed Allowable Emission Rate(s) or Limitation(s): 10%
(Determined for each applicable rule, regulation or permit condition using same units)

Reported Emission to Atmosphere: 0.00%
(In same units as rule, regulation or permit conditions)

The test report should include a compilation of all CEMS data, control device parameters and process operating data related to the test.

Emissions Test Field Data Included To Be Completed by Source Monitoring Program	Yes	No	N/A
Fuel analysis			
Description of process			
Description of control device			
Control device operational parameters			
Properly documented process data			
Other:			
Assigned -SSCP			
Assigned - SMP			

SOURCE NAME				OBSERVATION DATE				START TIME				STOP TIME			
RIVERBEND CONSTRUCTION MATERIALS				12/19/2007				4:30 PM				5:30 PM			
ADDRESS				SEC	0	15	30	45	SEC	0	15	30	45		
605 CHEROKEE EXPLOSIVE ROAD				MIN					MIN						
CITY	STATE	ZIP		1	0	0	0	0	31	0	0	0	0		
RUTLEDGE	TN	37861		2	0	0	0	0	32	0	0	0	0		
PHONE	SOURCE ID NUMBER			3	0	0	0	0	33	0	0	0	0		
865/828-8005	FD1			4	0	0	0	0	34	0	0	0	0		
PROCESS EQUIPMENT		OPERATING MODE		5	0	0	0	0	35	0	0	0	0		
FEEDER		CONTINUOUS		6	0	0	0	0	36	0	0	0	0		
CONTROL EQUIPMENT		OPERATING MODE		7	0	0	0	0	37	0	0	0	0		
NONE				8	0	0	0	0	38	0	0	0	0		
DESCRIBE EMISSION POINT				9	0	0	0	0	39	0	0	0	0		
FEEDER FD1 TO CRUSHER CR1				10	0	0	0	0	40	0	0	0	0		
HEIGHT ABOVE GROUND LEVEL		HEIGHT RELATIVE TO OBSERVER		11	0	0	0	0	41	0	0	0	0		
10'		5'		12	0	0	0	0	42	0	0	0	0		
DISTANCE FROM OBSERVER		DIRECTION FROM OBSERVER		13	0	0	0	0	43	0	0	0	0		
40'		ESE		14	0	0	0	0	44	0	0	0	0		
DESCRIBE EMISSIONS				15	0	0	0	0	45	0	0	0	0		
ROCK DUST				16	0	0	0	0	46	0	0	0	0		
EMISSION COLOR		PLUME TYPE		17	0	0	0	0	47	0	0	0	0		
GREY		CONTINUOUS <input type="checkbox"/>		18	0	0	0	0	48	0	0	0	0		
		FUGITIVE <input checked="" type="checkbox"/> INTERMITTENT <input type="checkbox"/>		19	0	0	0	0	49	0	0	0	0		
WATER DROPLETS PRESENT		IF WATER DROPLET PLUME		20	0	0	0	0	50	0	0	0	0		
NO <input checked="" type="checkbox"/> YES <input type="checkbox"/>		ATTACHED <input type="checkbox"/> DETACHED <input type="checkbox"/>		21	0	0	0	0	51	0	0	0	0		
POINT IN THE PLUME AT WHICH OPACITY WAS DETERMINED				22	0	0	0	0	52	0	0	0	0		
TRANSFER				23	0	0	0	0	53	0	0	0	0		
DESCRIBE BACKGROUND				24	0	0	0	0	54	0	0	0	0		
SKY				25	0	0	0	0	55	0	0	0	0		
BACKGROUND COLOR		SKY CONDITIONS		26	0	0	0	0	56	0	0	0	0		
LT. BLUE		PTLY CLDY		27	0	0	0	0	57	0	0	0	0		
WIND SPEED		WIND DIRECTION		28	0	0	0	0	58	0	0	0	0		
0-5 MPH		SW		29	0	0	0	0	59	0	0	0	0		
AMBIENT TEMP.		WET BULB TEMP.		30	0	0	0	0	60	0	0	0	0		
52 DEGREES		RH PERCENT													
SOURCE LAYOUT SKETCH				AVERAGE OPACITY FOR HIGHEST PERIOD											
<p>EMISSION POINT X</p> <p>OBSERVER'S POSITION</p> <p>140 DEGREES</p> <p>SUN LOCATION</p> <p>DRAW NORTH ARROW</p>				NUMBER OF READINGS ABOVE											
				0.00%											
				10% WERE 0											
				RANGE OF OPACITY READINGS											
				0% MINIMUM											
				0% MAXIMUM											
OBSERVERS NAME				ROGER FRANKLIN											
COMMENTS				OBSERVERS SIGNATURE						DATE					
										12/19/07					
				ORGANIZATION											
				HIGHLAND ENGINEERING, INC.											
I HAVE RECEIVED A COPY OF THESE OPACITY OBSERVATION				CERTIFIED BY						DATE					
SIGNATURE															
TITLE				VERIFIED BY						DATE					

TEST REPORT TRANSMISSION SUMMARY

Submit separate summary sheet for each pollutant test report

Submit to: Dewitt Logdon / Alvin Pratt
 Tennessee Dept. of Environmental Control
 Air Pollution Control Div.
 401 Church Street, 9th Floor
 L & C Annex
 Nashville, TN 37243

Facility Name: Riverbend Construction Materials

and Location Rutledge, Grainger County, TN

Facility Contact: Duff Boyd
(865) 828-8005

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No.		
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Emission Point (only one) Crusher CR1

Pollutant (only one) Dust Date Test Performed: 12/19/2007

Applicable Rule (s), Regulation (s) or Permit Condition (s):
 (Indicate Permit # and Condition #s)

957049P

Maximum Expected Operating Capacity: 500 TPH

Operating Capacity During Test: 450 TPH

Computed Allowable Emission Rate(s) or Limitation(s): 15%
 (Determined for each applicable rule, regulation or permit condition using same units)

Reported Emission to Atmosphere: 0.00%
 (In same units as rule, regulation or permit conditions)

The test report should include a compilation of all CEMS data, control device parameters and process operating data related to the test.

Emissions Test Field Data Included To Be Completed by Source Monitoring Program	Yes	No	N/A
Fuel analysis			
Description of process			
Description of control device			
Control device operational parameters			
Properly documented process data			
Other:			
Assigned -SSCP			
Assigned - SMP			

VISIBLE EMISSION OBSERVATION FORM

SOURCE NAME RIVERBEND CONSTRUCTION MATERIALS				OBSERVATION DATE 12/19/2007				START TIME 4:30 PM				STOP TIME 5:30 PM																																																																																																																																																																																																																																																																																																																									
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ADDRESS

CITY

STATE

ZIP

PHONE

SOURCE ID NUMBER

PROCESS EQUIPMENT

OPERATING MODE

CRUSHER

CONTINUOUS

CONTROL EQUIPMENT

OPERATING MODE

NONE

DESCRIBE EMISSION POINT

CRUSHER CR1 TO CONVEYOR C2

HEIGHT ABOVE GROUND LEVEL

HEIGHT RELATIVE TO OBSERVER

DISTANCE FROM OBSERVER

DIRECTION FROM OBSERVER

DESCRIBE EMISSIONS

ROCK DUST

EMISSION COLOR

PLUME TYPE

CONTINUOUS ☐

GREY

FUGITIVE ☒ INTERMITTENT ☐

WATER DROPLETS PRESENT

IF WATER DROPLET PLUME

NO ☒ YES ☐ ATTACHED ☐ DETACHED ☐

POINT IN THE PLUME AT WHICH OPACITY WAS DETERMINED

TRANSFER

DESCRIBE BACKGROUND

SKY

BACKGROUND COLOR

SKY CONDITIONS

LT. BLUE

PTLY CLDY

WIND SPEED

WIND DIRECTION

0-5 MPH

SW

AMBIENT TEMP.

WET BULB TEMP.

RH PERCENT

52 DEGREES

SOURCE LAYOUT SKETCH

DRAW NORTH ARROW

EMISSION POINT X

OBSERVER'S POSITION

SUN LOCATION

140 DEGREES

COMMENTS

TEST REPORT TRANSMISSION SUMMARY

Submit separate summary sheet for each pollutant test report

Submit to: Dewitt Logdon / Alvin Pratt
 Tennessee Dept. of Environmental Control
 Air Pollution Control Div.
 401 Church Street, 9th Floor
 L & C Annex
 Nashville, TN 37243

Facility Name: Riverbend Construction Materials

and Location Rutledge, Grainger County, TN

Facility Contact: Duff Boyd

(865) 828-8005

Report Tracking Log Air Protection Branch Only		
No.		
Date:	Initial	
		Report received by APB
		Response Letter Sent SMP
		Calculation Review Complete
		Report Review Complete
		SSCP Associate Notified

Emission Point (only one) Conveyor C2

Pollutant (only one) Dust Date Test Performed: 12/19/2007

Applicable Rule (s), Regulation (s) or Permit Condition (s):
 (Indicate Permit # and Condition #s)

957049P

Maximum Expected Operating Capacity: 500 TPH

Operating Capacity During Test: 450 TPH

Computed Allowable Emission Rate(s) or Limitation(s): 10%
 (Determined for each applicable rule, regulation or permit condition using same units)

Reported Emission to Atmosphere: 0.00%
 (In same units as rule, regulation or permit conditions)

The test report should include a compilation of all CEMS data, control device parameters and process operating data related to the test.

Emissions Test Field Data Included To Be Completed by Source Monitoring Program	Yes	No	N/A
Fuel analysis			
Description of process			
Description of control device			
Control device operational parameters			
Properly documented process data			
Other:			
Assigned -SSCP			
Assigned - SMP			

SOURCE NAME				OBSERVATION DATE				START TIME				STOP TIME			
RIVERBEND CONSTRUCTION MATERIALS				12/19/2007				4:30 PM				5:30 PM			
ADDRESS				SEC	0	15	30	45	SEC	0	15	30	45		
605 CHEROKEE EXPLOSIVE ROAD				MIN					MIN						
CITY		STATE		ZIP		1	0	0	0	0	31	0	0	0	
RUTLEDGE		TN		37861		2	0	0	0	0	32	0	0	0	
PHONE		SOURCE ID NUMBER		3	0	0	0	0	0	33	0	0	0	0	
865/828-8005		C2		4	0	0	0	0	0	34	0	0	0	0	
PROCESS EQUIPMENT		OPERATING MODE		5	0	0	0	0	0	35	0	0	0	0	
CONVEYOR		CONTINUOUS		6	0	0	0	0	0	36	0	0	0	0	
CONTROL EQUIPMENT		OPERATING MODE		7	0	0	0	0	0	37	0	0	0	0	
NONE				8	0	0	0	0	0	38	0	0	0	0	
DESCRIBE EMISSION POINT				9	0	0	0	0	0	39	0	0	0	0	
CONVEYOR C2 TO FEEDR FD2				10	0	0	0	0	0	40	0	0	0	0	
HEIGHT ABOVE GROUND LEVEL		HEIGHT RELATIVE TO OBSERVER		11	0	0	0	0	0	41	0	0	0	0	
12'		7'		12	0	0	0	0	0	42	0	0	0	0	
DISTANCE FROM OBSERVER		DIRECTION FROM OBSERVER		13	0	0	0	0	0	43	0	0	0	0	
70'		ESE		14	0	0	0	0	0	44	0	0	0	0	
DESCRIBE EMISSIONS				15	0	0	0	0	0	45	0	0	0	0	
ROCK DUST				16	0	0	0	0	0	46	0	0	0	0	
EMISSION COLOR		PLUME TYPE		17	0	0	0	0	0	47	0	0	0	0	
GREY		CONTINUOUS <input type="checkbox"/>		18	0	0	0	0	0	48	0	0	0	0	
		FUGITIVE <input checked="" type="checkbox"/> INTERMITTENT <input type="checkbox"/>		19	0	0	0	0	0	49	0	0	0	0	
WATER DROPLETS PRESENT		IF WATER DROPLET PLUME		20	0	0	0	0	0	50	0	0	0	0	
NO <input checked="" type="checkbox"/> YES <input type="checkbox"/>		ATTACHED <input type="checkbox"/> DETACHED <input type="checkbox"/>		21	0	0	0	0	0	51	0	0	0	0	
POINT IN THE PLUME AT WHICH OPACITY WAS DETERMINED				22	0	0	0	0	0	52	0	0	0	0	
TRANSFER				23	0	0	0	0	0	53	0	0	0	0	
DESCRIBE BACKGROUND				24	0	0	0	0	0	54	0	0	0	0	
SKY				25	0	0	0	0	0	55	0	0	0	0	
BACKGROUND COLOR		SKY CONDITIONS		26	0	0	0	0	0	56	0	0	0	0	
LT. BLUE		PTLY CLDY		27	0	0	0	0	0	57	0	0	0	0	
WIND SPEED		WIND DIRECTION		28	0	0	0	0	0	58	0	0	0	0	
0-5 MPH		SW		29	0	0	0	0	0	59	0	0	0	0	
AMBIENT TEMP.		WET BULB TEMP.		30	0	0	0	0	0	60	0	0	0	0	
52 DEGREES		RH PERCENT													
SOURCE LAYOUT SKETCH				AVERAGE OPACITY FOR HIGHEST PERIOD											
DRAW NORTH ARROW				0.00%											
				NUMBER OF READINGS ABOVE											
				10% WERE 0											
				RANGE OF OPACITY READINGS											
				0% MINIMUM											
				0% MAXIMUM											
				OBSERVERS NAME											
				ROGER FRANKLIN											
				OBSERVERS SIGNATURE						DATE					
										12/19/07					
				ORGANIZATION											
				HIGHLAND ENGINEERING, INC.											
I HAVE RECEIVED A COPY OF THESE OPACITY OBSERVATION				CERTIFIED BY						DATE					
SIGNATURE															
TITLE		DATE		VERIFIED BY						DATE					

TEST REPORT TRANSMISSION SUMMARY

Submit separate summary sheet for each pollutant test report

Submit to: Dewitt Logdon / Alvin Pratt
 Tennessee Dept. of Environmental Control
 Air Pollution Control Div.
 401 Church Street, 9th Floor
 L & C Annex
 Nashville, TN 37243

Facility Name: Riverbend Construction Materials

and Location Rutledge, Grainger County, TN

Facility Contact: Duff Boyd

(865) 828-8005

Report Tracking Log Air Protection Branch Only		
No.		
Date:	Initial	
		Report received by APB
		Response Letter Sent SMP
		Calculation Review Complete
		Report Review Complete
		SSCP Associate Notified

Emission Point (only one) Conveyor C1

Pollutant (only one) Dust Date Test Performed: 12/19/2007

Applicable Rule (s), Regulation (s) or Permit Condition (s):
 (Indicate Permit # and Condition #s)

957049P

Maximum Expected Operating Capacity: 250 TPH

Operating Capacity During Test: 225 TPH

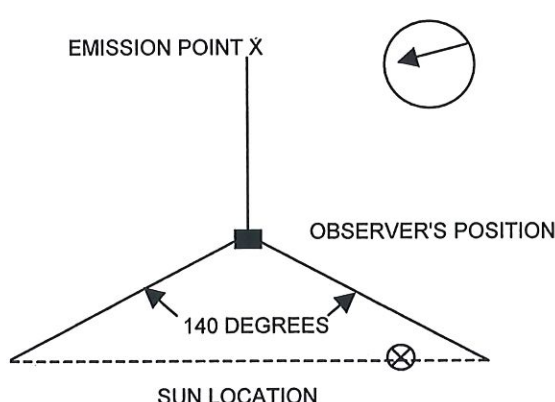

Computed Allowable Emission Rate(s) or Limitation(s): 10%
 (Determined for each applicable rule, regulation or permit condition using same units)

Reported Emission to Atmosphere: 0.00%
 (In same units as rule, regulation or permit conditions)

The test report should include a compilation of all CEMS data, control device parameters and process operating data related to the test.

Emissions Test Field Data Included To Be Completed by Source Monitoring Program	Yes	No	N/A
Fuel analysis			
Description of process			
Description of control device			
Control device operational parameters			
Properly documented process data			
Other:			
Assigned -SSCP			
Assigned - SMP			

VISIBLE EMISSION OBSERVATION FORM

SOURCE NAME RIVERBEND CONSTRUCTION MATERIALS				OBSERVATION DATE 12/19/2007				START TIME 4:30 PM				STOP TIME 5:30 PM			
ADDRESS 605 CHEROKEE EXPLOSIVE ROAD				SEC MIN 0 15 30 45				SEC MIN 0 15 30 45							
CITY RUTLEDGE		STATE TN		ZIP 37861		1		0		0		0		0	
PHONE 865/828-8005		SOURCE ID NUMBER C1		3		0		0		0		0		0	
PROCESS EQUIPMENT CONVEYOR			OPERATING MODE CONTINUOUS			4		0		0		0		0	
CONTROL EQUIPMENT NONE			OPERATING MODE			5		0		0		0		0	
DESCRIBE EMISSION POINT FEEDER BELT FB1 TO CONVEYOR C1				7		0		0		0		0		0	
HEIGHT ABOVE GROUND LEVEL 5'		HEIGHT RELATIVE TO OBSERVER 0'		8		0		0		0		0		0	
DISTANCE FROM OBSERVER 40'		DIRECTION FROM OBSERVER ESE		9		0		0		0		0		0	
DESCRIBE EMISSIONS ROCK DUST				10		0		0		0		0		0	
EMISSION COLOR GREY		PLUME TYPE CONTINUOUS <input type="checkbox"/>		11		0		0		0		0		0	
		FUGITIVE <input checked="" type="checkbox"/> INTERMITTENT <input type="checkbox"/>		12		0		0		0		0		0	
WATER DROPLETS PRESENT <input checked="" type="checkbox"/>		IF WATER DROPLET PLUME		13		0		0		0		0		0	
NO <input checked="" type="checkbox"/> YES <input type="checkbox"/>		ATTACHED <input type="checkbox"/> DETACHED <input type="checkbox"/>		14		0		0		0		0		0	
POINT IN THE PLUME AT WHICH OPACITY WAS DETERMINED TRANSFER				15		0		0		0		0		0	
DESCRIBE BACKGROUND EQUIPMENT				16		0		0		0		0		0	
BACKGROUND COLOR YELLOW		SKY CONDITIONS PTLY CLDY		17		0		0		0		0		0	
WIND SPEED 0-5 MPH		WIND DIRECTION SW		18		0		0		0		0		0	
AMBIENT TEMP. 52 DEGREES		WET BULB TEMP.		19		0		0		0		0		0	
		RH PERCENT		20		0		0		0		0		0	
SOURCE LAYOUT SKETCH 				21		0		0		0		0		0	
				22		0		0		0		0		0	
				23		0		0		0		0		0	
				24		0		0		0		0		0	
				25		0		0		0		0		0	
				26		0		0		0		0		0	
				27		0		0		0		0		0	
				28		0		0		0		0		0	
				29		0		0		0		0		0	
				30		0		0		0		0		0	
				AVERAGE OPACITY FOR HIGHEST PERIOD 0.00%				NUMBER OF READINGS ABOVE 10% WERE 0							
				RANGE OF OPACITY READINGS 0% MINIMUM 0% MAXIMUM											
				OBSERVERS NAME ROGER FRANKLIN											
COMMENTS Tested same point as conveyor FB1.				OBSERVERS SIGNATURE 				DATE 12/19/07							
				ORGANIZATION HIGHLAND ENGINEERING, INC.											
I HAVE RECEIVED A COPY OF THESE OPACITY OBSERVATION				CERTIFIED BY				DATE							
SIGNATURE		DATE		VERIFIED BY				DATE							
TITLE															

TEST REPORT TRANSMISSION SUMMARY

Submit separate summary sheet for each pollutant test report

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Report Tracking Log Air Protection Branch Only		
No.		
Date:	Initial	
		Report received by APB
		Response Letter Sent SMP
		Calculation Review Complete
		Report Review Complete
		SSCP Associate Notified

Emission Point (only one) Feeder Belt FB1

Pollutant (only one) Dust Date Test Performed: 12/19/2007

Applicable Rule (s), Regulation (s) or Permit Condition (s):
 (Indicate Permit # and Condition #s)

957049P

Maximum Expected Operating Capacity: 250 TPH

Operating Capacity During Test: 225 TPH

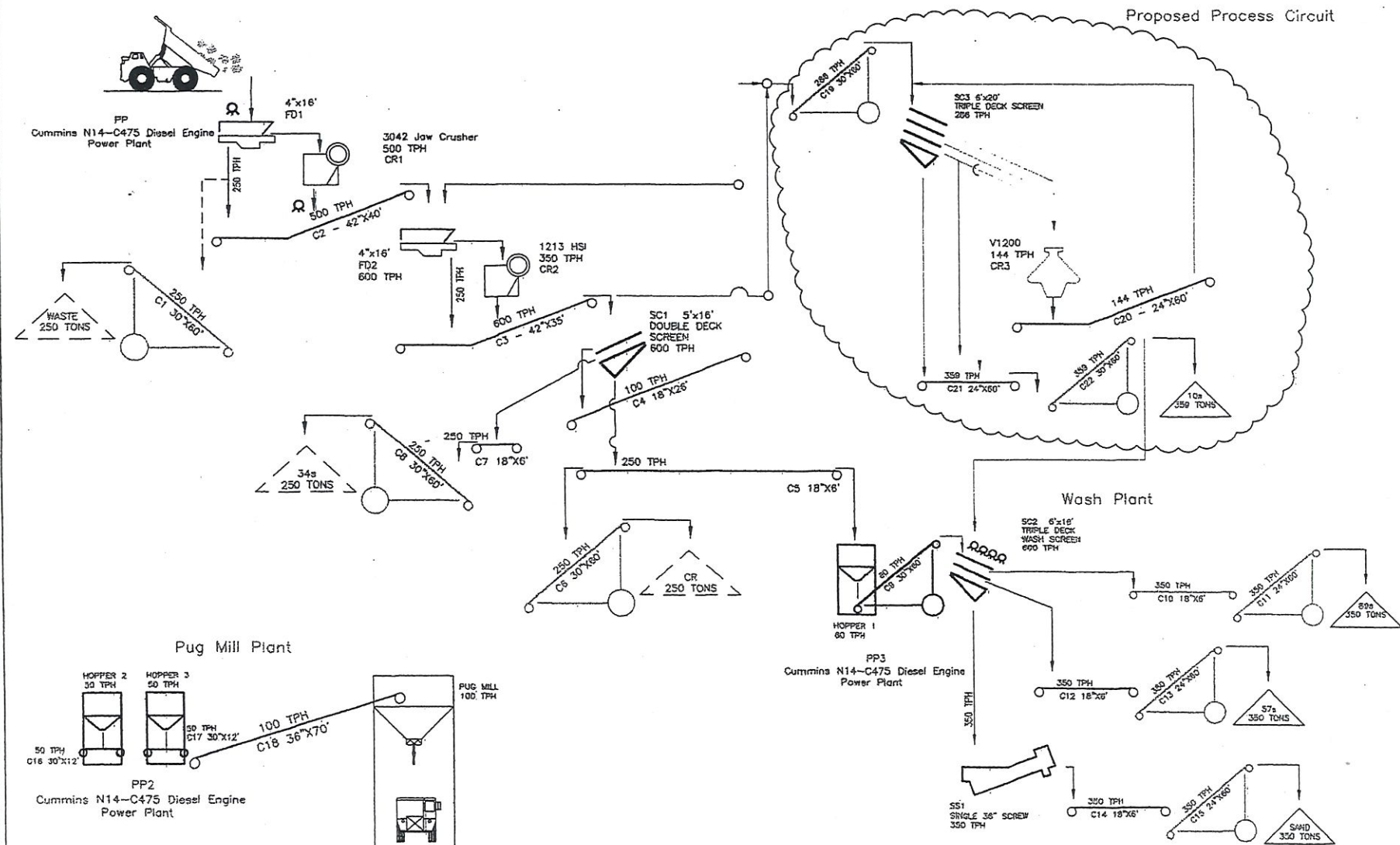
Computed Allowable Emission Rate(s) or Limitation(s): 10%
 (Determined for each applicable rule, regulation or permit condition using same units)

Reported Emission to Atmosphere: 0.00%
 (In same units as rule, regulation or permit conditions)

The test report should include a compilation of all CEMS data, control device parameters and process operating data related to the test.

Emissions Test Field Data Included To Be Completed by Source Monitoring Program	Yes	No	N/A
Fuel analysis			
Description of process			
Description of control device			
Control device operational parameters			
Properly documented process data			
Other:			
Assigned -SSCP			
Assigned - SMP			

SOURCE NAME				OBSERVATION DATE				START TIME				STOP TIME			
RIVERBEND CONSTRUCTION MATERIALS				12/19/2007				4:30 PM				5:30 PM			
ADDRESS				SEC	0	15	30	45	SEC	0	15	30	45		
605 CHEROKEE EXPLOSIVE ROAD				MIN					MIN						
CITY	STATE	ZIP		1	0	0	0	0	31	0	0	0	0		
RUTLEDGE	TN	37861		2	0	0	0	0	32	0	0	0	0		
PHONE	SOURCE ID NUMBER			3	0	0	0	0	33	0	0	0	0		
865/828-8005	FB1			4	0	0	0	0	34	0	0	0	0		
PROCESS EQUIPMENT			OPERATING MODE	5	0	0	0	0	35	0	0	0	0		
FEEDER BELT			CONTINUOUS	6	0	0	0	0	36	0	0	0	0		
CONTROL EQUIPMENT			OPERATING MODE	7	0	0	0	0	37	0	0	0	0		
NONE				8	0	0	0	0	38	0	0	0	0		
DESCRIBE EMISSION POINT				9	0	0	0	0	39	0	0	0	0		
FEEDER BELT FB1 TO CONVEYOR C1				10	0	0	0	0	40	0	0	0	0		
HEIGHT ABOVE GROUND LEVEL		HEIGHT RELATIVE TO OBSERVER		11	0	0	0	0	41	0	0	0	0		
5'		0'		12	0	0	0	0	42	0	0	0	0		
DISTANCE FROM OBSERVER		DIRECTION FROM OBSERVER		13	0	0	0	0	43	0	0	0	0		
40'		ESE		14	0	0	0	0	44	0	0	0	0		
DESCRIBE EMISSIONS				15	0	0	0	0	45	0	0	0	0		
ROCK DUST				16	0	0	0	0	46	0	0	0	0		
EMISSION COLOR		PLUME TYPE		17	0	0	0	0	47	0	0	0	0		
GREY		CONTINUOUS <input type="checkbox"/>		18	0	0	0	0	48	0	0	0	0		
		FUGITIVE <input checked="" type="checkbox"/> INTERMITTENT <input type="checkbox"/>		19	0	0	0	0	49	0	0	0	0		
WATER DROPLETS PRESENT		IF WATER DROPLET PLUME		20	0	0	0	0	50	0	0	0	0		
NO <input checked="" type="checkbox"/> YES <input type="checkbox"/>		ATTACHED <input type="checkbox"/> DETACHED <input type="checkbox"/>		21	0	0	0	0	51	0	0	0	0		
POINT IN THE PLUME AT WHICH OPACITY WAS DETERMINED				22	0	0	0	0	52	0	0	0	0		
TRANSFER				23	0	0	0	0	53	0	0	0	0		
DESCRIBE BACKGROUND				24	0	0	0	0	54	0	0	0	0		
EQUIPMENT				25	0	0	0	0	55	0	0	0	0		
BACKGROUND COLOR		SKY CONDITIONS		26	0	0	0	0	56	0	0	0	0		
YELLOW		PTLY CLDY		27	0	0	0	0	57	0	0	0	0		
WIND SPEED		WIND DIRECTION		28	0	0	0	0	58	0	0	0	0		
0-5 MPH		SW		29	0	0	0	0	59	0	0	0	0		
AMBIENT TEMP.		WET BULB TEMP.		30	0	0	0	0	60	0	0	0	0		
52 DEGREES		RH PERCENT													
SOURCE LAYOUT SKETCH				AVERAGE OPACITY FOR HIGHEST PERIOD											
DRAW NORTH ARROW				0.00%											
				NUMBER OF READINGS ABOVE											
				10% WERE 0											
				RANGE OF OPACITY READINGS											
				0% MINIMUM											
				0% MAXIMUM											
OBSERVERS NAME				ROGER FRANKLIN											
COMMENTS				OBSERVERS SIGNATURE						DATE					
Tested same point as conveyor C1.										12/19/07					
				ORGANIZATION											
				HIGHLAND ENGINEERING, INC.											
I HAVE RECEIVED A COPY OF THESE OPACITY OBSERVATION				CERTIFIED BY						DATE					
SIGNATURE															
TITLE				VERIFIED BY						DATE					



Proposed Process Flow Diagram
Grainger County Quarry
Johnson City, Tennessee

No.	Revision	Date
#1	Added Power Plant Data	05.04.04
#2	Added 2nd Power Plant Data and Pug Mill Plant	08.30.04
#3	Added 3rd Power Plant Data	02.28.05
#4	Added Triple Deck Process Circuit	02.26.07
#5		
#6		
#7		
#8		

Acad File:	
Design By:	TJR
Drawn By:	TJR
Checked By:	TJR
Date:	05.04.04
Scale:	NIS



GREYSTONE ENGINEERING SERVICES, LLC
321 PROSPECTOR WAY
BALL GROUND, GEORGIA 30107
404.569.5948 (p) 404-745-8907 (f)
CIVIL & ENVIRONMENTAL ENGINEERING