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COMPLIANCE

NEW SOURCE REVIEW PERMIT APPLICATION

WATCO TRANSLOADING, LLC
2208 1st Avenue
Nitro, West Virginia 25143

August 2017

520 Third Street, Suite 100
Excelsior, MN 55331
(952) 252-3000
www.uscompliance.com

WATCO TRANSLOADING, LLC
NEW SOURCE REVIEW PERMIT APPLICATION

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APPENDICES

1.0 INTRODUCTION & APPLICATION FORM

The Watco Transloading, LLC facility is an existing rail terminal located at 2208 1st Avenue in Nitro, WV. The facility is proposing a new transloading operation to transfer fly ash from rail cars to pneumatic trailers.

WEST VIRGINIA DEPARTMENT OF ENVIRONMENTAL PROTECTION

DIVISION OF AIR QUALITY

601 57th Street, SE
Charleston, WV 25304
(304) 926-0475
www.dep.wv.gov/daq

APPLICATION FOR NSR PERMIT AND TITLE V PERMIT REVISION (OPTIONAL)

PLEASE CHECK ALL THAT APPLY TO **NSR (45CSR13)** (IF KNOWN):

☒ **CONSTRUCTION** ☐ **MODIFICATION** ☐ **RELOCATION**
☐ **CLASS I ADMINISTRATIVE UPDATE** ☐ **TEMPORARY**
☐ **CLASS II ADMINISTRATIVE UPDATE** ☐ **AFTER-THE-FACT**

PLEASE CHECK TYPE OF **45CSR30 (TITLE V)** REVISION (IF ANY):

☐ **ADMINISTRATIVE AMENDMENT** ☐ **MINOR MODIFICATION**
☐ **SIGNIFICANT MODIFICATION**

IF ANY BOX ABOVE IS CHECKED, INCLUDE TITLE V REVISION INFORMATION AS **ATTACHMENT S** TO THIS APPLICATION

FOR TITLE V FACILITIES ONLY: Please refer to "Title V Revision Guidance" in order to determine your Title V Revision options (Appendix A, "Title V Permit Revision Flowchart") and ability to operate with the changes requested in this Permit Application.

Section I. General

1. Name of applicant *(as registered with the WV Secretary of State's Office):*
Watco Transloading, LLC

2. Federal Employer ID No. ***(FEIN):***
48-1199475

3. Name of facility *(if different from above):*

4. The applicant is the:
☐ **OWNER** ☒ **OPERATOR** ☐ **BOTH**

5A. Applicant's mailing address:
2208 1st Avenue
Nitro, West Virginia 25143

5B. Facility's present physical address:
2208 1st Avenue
Nitro, West Virginia 25143

6. **West Virginia Business Registration.** Is the applicant a resident of the State of West Virginia? ☐ **YES** ☒ **NO**

- If **YES,** provide a copy of the **Certificate of Incorporation/Organization/Limited Partnership** (one page) including any name change amendments or other Business Registration Certificate as **Attachment A.**
- If **NO,** provide a copy of the **Certificate of Authority/Authority of L.L.C./Registration** (one page) including any name change amendments or other Business Certificate as **Attachment A.**

7. If applicant is a subsidiary corporation, please provide the name of parent corporation: Watco Companies, LLC

8. Does the applicant own, lease, have an option to buy or otherwise have control of the *proposed site?* ☒ **YES** ☐ **NO**

- If **YES,** please explain: The applicant leases the proposed site.
- If **NO,** you are not eligible for a permit for this source.

9. Type of plant or facility (stationary source) to be **constructed, modified, relocated, administratively updated** or **temporarily permitted** (e.g., coal preparation plant, primary crusher, etc.): Fly ash transloading operation at railroad switching/terminal

10. North American Industry Classification System **(NAICS)** code for the facility:
488210

11A. DAQ Plant ID No. (for existing facilities only):
–

11B. List all current 45CSR13 and 45CSR30 (Title V) permit numbers associated with this process (for existing facilities only):

All of the required forms and additional information can be found under the Permitting Section of DAQ's website, or requested by phone.

12A.

- For **Modifications, Administrative Updates** or **Temporary permits** at an existing facility, please provide directions to the *present location* of the facility from the nearest state road;
- For **Construction** or **Relocation permits,** please provide directions to the *proposed new site location* from the nearest state road. Include a **MAP** as **Attachment B**.

East off of West Virginia Route 25 (1st avenue) approximately 1.3 miles south of Interstate 64

12.B. New site address (if applicable):	12C. Nearest city or town:	12D. County:
2208 1st Avenue Nitro, West Virginia 25143	Nitro	Kanawha
12.E. UTM Northing (KM): 4253157	12F. UTM Easting (KM): 426465	12G. UTM Zone: 17S

13. Briefly describe the proposed change(s) at the facility:
N/A – New operation that will begin after permit is issued

14A. Provide the date of anticipated installation or change: Upon permit approval – If this is an **After-The-Fact** permit application, provide the date upon which the proposed change did happen: / /	14B. Date of anticipated Start-Up if a permit is granted: Upon permit approval

14C. Provide a **Schedule** of the planned **Installation** of/**Change** to and **Start-Up** of each of the units proposed in this permit application as **Attachment C** (if more than one unit is involved). N/A – the new operation will begin after the permit is issued

15. Provide maximum projected **Operating Schedule** of activity/activities outlined in this application:
Hours Per Day 24 Days Per Week 365 Weeks Per Year 52

16. Is demolition or physical renovation at an existing facility involved? ☐ **YES** ☒ **NO**

17**. Risk Management Plans.** If this facility is subject to 112(r) of the 1990 CAAA, or will become subject due to proposed changes (for applicability help see www.epa.gov/ceppo), submit your **Risk Management Plan (RMP)** to U. S. EPA Region III.

18**. Regulatory Discussion.** List all Federal and State air pollution control regulations that you believe are applicable to the proposed process *(if known).* A list of possible applicable requirements is also included in Attachment S of this application (Title V Permit Revision Information). Discuss applicability and proposed demonstration(s) of compliance *(if known).* Provide this information as **Attachment D.**

Section II. Additional attachments and supporting documents.

19. Include a check payable to WVDEP – Division of Air Quality with the appropriate **application fee** (per 45CSR22 and 45CSR13).

20. Include a **Table of Contents** as the first page of your application package.

21. Provide a **Plot Plan,** e.g. scaled map(s) and/or sketch(es) showing the location of the property on which the stationary source(s) is or is to be located as **Attachment E** (Refer to ***Plot Plan Guidance*****).**
– Indicate the location of the nearest occupied structure (e.g. church, school, business, residence).

22. Provide a **Detailed Process Flow Diagram(s)** showing each proposed or modified emissions unit, emission point and control device as **Attachment F.**

23. Provide a **Process Description** as **Attachment G.**
– Also describe and quantify to the extent possible all changes made to the facility since the last permit review (if applicable).

All of the required forms and additional information can be found under the Permitting Section of DAQ's website, or requested by phone.

24. Provide **Material Safety Data Sheets (MSDS)** for all materials processed, used or produced as **Attachment H.**

– For chemical processes, provide a MSDS for each compound emitted to the air.

25. Fill out the **Emission Units Table** and provide it as **Attachment I.**

26. Fill out the **Emission Points Data Summary Sheet (Table 1 and Table 2)** and provide it as **Attachment J.**

27. Fill out the **Fugitive Emissions Data Summary Sheet** and provide it as **Attachment K.**

28. Check all applicable **Emissions Unit Data Sheets** listed below:

☐ Bulk Liquid Transfer Operations	☒ Haul Road Emissions	☐ Quarry
☐ Chemical Processes	☐ Hot Mix Asphalt Plant	☐ Solid Materials Sizing, Handling and Storage Facilities
☐ Concrete Batch Plant	☐ Incinerator	☐ Storage Tanks
☐ Grey Iron and Steel Foundry	☐ Indirect Heat Exchanger	

☒ General Emission Unit, specify: fly ash transloading

Fill out and provide the **Emissions Unit Data Sheet(s)** as **Attachment L.**

29. Check all applicable **Air Pollution Control Device Sheets** listed below:

☐ Absorption Systems	☒ Baghouse	☐ Flare
☐ Adsorption Systems	☐ Condenser	☐ Mechanical Collector
☐ Afterburner	☐ Electrostatic Precipitator	☐ Wet Collecting System

☐ Other Collectors, specify:

Fill out and provide the **Air Pollution Control Device Sheet(s)** as **Attachment M.**

30. Provide all **Supporting Emissions Calculations** as **Attachment N,** or attach the calculations directly to the forms listed in Items 28 through 31.

31. **Monitoring, Recordkeeping, Reporting and Testing Plans.** Attach proposed monitoring, recordkeeping, reporting and testing plans in order to demonstrate compliance with the proposed emissions limits and operating parameters in this permit application. Provide this information as **Attachment O.**

➢ Please be aware that all permits must be practically enforceable whether or not the applicant chooses to propose such measures. Additionally, the DAQ may not be able to accept all measures proposed by the applicant. If none of these plans are proposed by the applicant, DAQ will develop such plans and include them in the permit.

32. **Public Notice.** At the time that the application is submitted, place a **Class I Legal Advertisement** in a newspaper of general circulation in the area where the source is or will be located (See 45CSR§13-8.3 through 45CSR§13-8.5 and ***Example Legal Advertisement*** for details). Please submit the **Affidavit of Publication** as **Attachment P** immediately upon receipt.

33**. Business Confidentiality Claims.** Does this application include confidential information (per 45CSR31)?

☐ **YES** ☒ **NO**

➢ If **YES,** identify each segment of information on each page that is submitted as confidential and provide justification for each segment claimed confidential, including the criteria under 45CSR§31-4.1, and in accordance with the DAQ's ***"Precautionary Notice – Claims of Confidentiality"*** guidance found in the ***General Instructions*** as **Attachment Q.**

Section III. Certification of Information

34. **Authority/Delegation of Authority.** Only required when someone other than the responsible official signs the application. Check applicable **Authority Form** below:

☐ Authority of Corporation or Other Business Entity	☐ Authority of Partnership
☐ Authority of Governmental Agency	☐ Authority of Limited Partnership

Submit completed and signed **Authority Form** as **Attachment R.**

All of the required forms and additional information can be found under the Permitting Section of DAQ's website, or requested by phone.

35A. **Certification of Information.** To certify this permit application, a Responsible Official (per 45CSR§13-2.22 and 45CSR§30-2.28) or Authorized Representative shall check the appropriate box and sign below.

Certification of Truth, Accuracy, and Completeness

I, the undersigned ☒ **Responsible Official** / ☐ **Authorized Representative,** hereby certify that all information contained in this application and any supporting documents appended hereto, is true, accurate, and complete based on information and belief after reasonable inquiry I further agree to assume responsibility for the construction, modification and/or relocation and operation of the stationary source described herein in accordance with this application and any amendments thereto, as well as the Department of Environmental Protection, Division of Air Quality permit issued in accordance with this application, along with all applicable rules and regulations of the West Virginia Division of Air Quality and W.Va. Code § 22-5-1 et seq. (State Air Pollution Control Act). If the business or agency changes its Responsible Official or Authorized Representative, the Director of the Division of Air Quality will be notified in writing within 30 days of the official change.

Compliance Certification

Except for requirements identified in the Title V Application for which compliance is not achieved, I, the undersigned hereby certify that, based on information and belief formed after reasonable inquiry, all air contaminant sources identified in this application are in compliance with all applicable requirements.

SIGNATURE _____ *(Please use blue ink)* DATE: 8/25/17 *(Please use blue ink)*

35B. Printed name of signee: Carlton Lawrence		35C. Title: Environmental Manager - East
35D. E-mail: carlton.lawrence@watcocompanies.com	36E. Phone: 908.296.9763	36F. FAX:
36A. Printed name of contact person (if different from above): Brian Spiller		36B. Title: Assistant Vice President – Terminal Operations
36C. E-mail: bspiller@watcocompanies.com	36D. Phone: 215-498-8078	36E. FAX:

PLEASE CHECK ALL APPLICABLE ATTACHMENTS INCLUDED WITH THIS PERMIT APPLICATION:

- ☒ **Attachment A: Business Certificate**
- ☒ **Attachment B: Map(s)**
- ☐ **Attachment C: Installation and Start Up Schedule**
- ☒ **Attachment D: Regulatory Discussion**
- ☒ **Attachment E: Plot Plan**
- ☒ **Attachment F: Detailed Process Flow Diagram(s)**
- ☒ **Attachment G: Process Description**
- ☒ **Attachment H: Material Safety Data Sheets (MSDS)**
- ☒ **Attachment I: Emission Units Table**
- ☒ **Attachment J: Emission Points Data Summary Sheet**
- ☒ **Attachment K: Fugitive Emissions Data Summary Sheet**
- ☒ **Attachment L: Emissions Unit Data Sheet(s)**
- ☒ **Attachment M: Air Pollution Control Device Sheet(s)**
- ☒ **Attachment N: Supporting Emissions Calculations**
- ☐ **Attachment O: Monitoring/Recordkeeping/Reporting/Testing Plans**
- ☒ **Attachment P: Public Notice**
- ☐ **Attachment Q: Business Confidential Claims**
- ☐ **Attachment R: Authority Forms**
- ☐ **Attachment S: Title V Permit Revision Information**
- ☒ **Application Fee**

Please mail an original and three (3) copies of the complete permit application with the signature(s) to the DAQ, Permitting Section, at the address listed on the first page of this application. Please DO NOT fax permit applications.

FOR AGENCY USE ONLY – IF THIS IS A TITLE V SOURCE:

- ☐ ***Forward 1 copy of the application to the Title V Permitting Group and:***
- ☐ ***For Title V Administrative Amendments:***
  - ☐ ***NSR permit writer should notify Title V permit writer of draft permit,***
- ☐ ***For Title V Minor Modifications:***
  - ☐ ***Title V permit writer should send appropriate notification to EPA and affected states within 5 days of receipt,***
  - ☐ ***NSR permit writer should notify Title V permit writer of draft permit.***
- ☐ ***For Title V Significant Modifications processed in parallel with NSR Permit revision:***
  - ☐ ***NSR permit writer should notify a Title V permit writer of draft permit,***
  - ☐ ***Public notice should reference both 45CSR13 and Title V permits,***
  - ☐ ***EPA has 45 day review period of a draft permit.***

All of the required forms and additional information can be found under the Permitting Section of DAQ's website, or requested by phone.

APPENDIX A

BUSINESS CERTIFICATE

State of West Virginia

Certificate

I, Mac Warner, Secretary of State of the State of West Virginia, hereby certify that

WATCO TRANSLOADING, L.L.C.

was duly authorized under the laws of this state to transact business in West Virginia as a foreign limited liability company on January 23, 2015.

The company is filed as an at-will company, for an indefinite period.

I further certify that the company has not been revoked or administratively dissolved by the State of West Virginia nor has the West Virginia Secretary of State issued a Certificate of Cancellation or Termination to the company.

Accordingly, I hereby issue this Certificate of Authorization

CERTIFICATE OF AUTHORIZATION

Validation ID:2WV8S_PRBRJ

Given under my hand and the Great Seal of the State of West Virginia on this day of

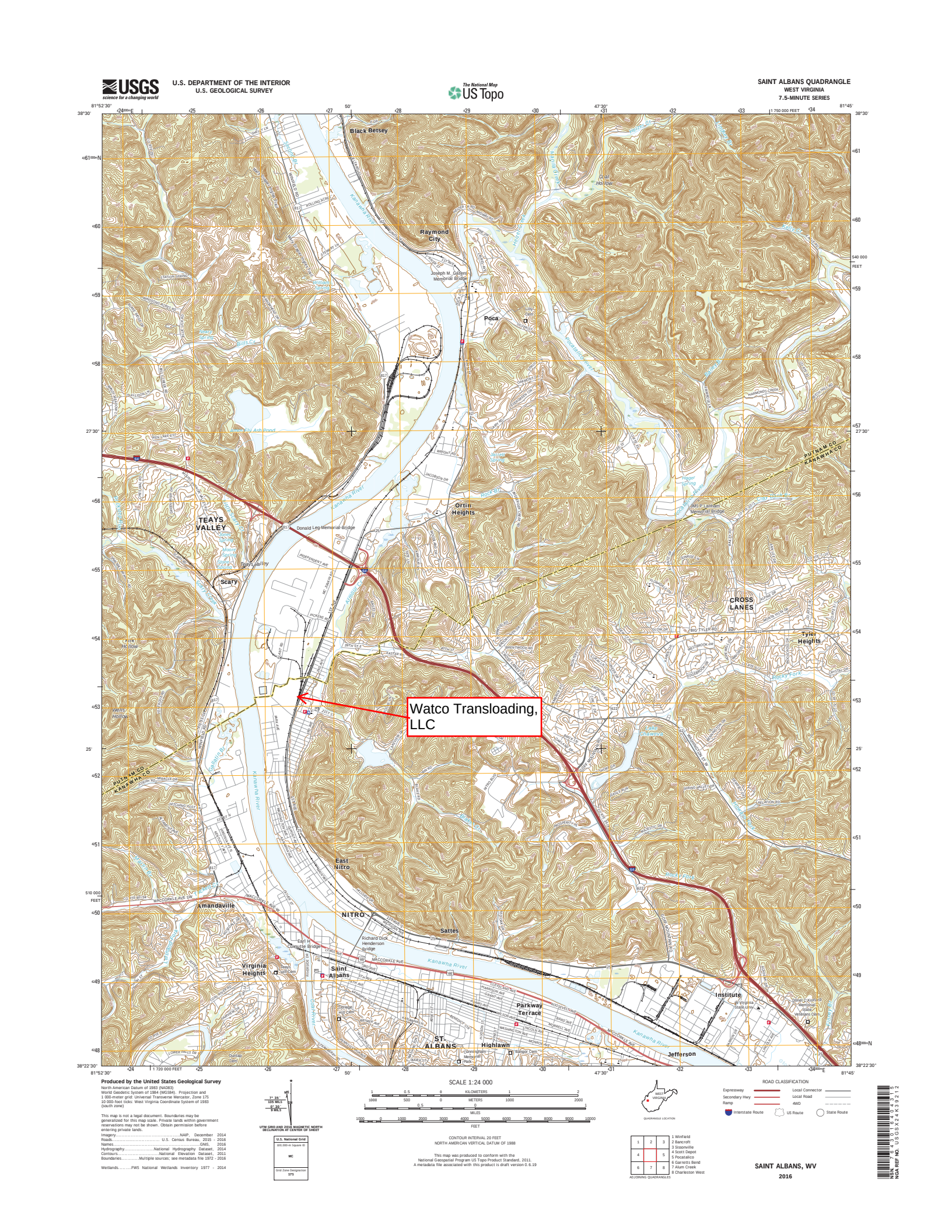
August 23, 2017

Mac Warner

Secretary of State

APPENDIX B

MAPS


USGS
science for a changing world
U.S. DEPARTMENT OF THE INTERIOR
U.S. GEOLOGICAL SURVEY
The National Map
US Topo
SAINT ALBANS QUADRANGLE
WEST VIRGINIA
7.5-MINUTE SERIES
Watco Transloading, LLC
Black Betsey
Raymond City
Joseph M. Gallens Memorial Bridge
Poca
Ortin Heights
TEAYS VALLEY
Donald Lee Memorial Bridge
Teays Valley
Scary
Milo J. Latham Memorial Bridge
CROSS LANES
Tyler Heights
East Nitro
NITRO
Amandaville
Sattes
Richard Dick Henderson Bridge
Earl Ray Tomblin Bridge
Virginia Heights
Saint Albans
Parkway Terrace
Institute
ST. ALBANS
Highlawn
Jefferson
Kanawha River
Produced by the United States Geological Survey
SCALE 1:24 000
CONTOUR INTERVAL 20 FEET
NORTH AMERICAN VERTICAL DATUM OF 1988
ROAD CLASSIFICATION
Expressway
Secondary Hwy
Ramp
Local Connector
Local Road
4WD
Interstate Route
US Route
State Route
SAINT ALBANS, WV
2016

APPENDIX D

REGULATORY DISCUSSION

REGULATORY APPLICABILITY

The facility is subject to state and federal regulations:

State Rules

45 CSR 7 – To Prevent and Control Particulate Matter Air Pollution from Manufacturing Processes and Associated Operations.

The facility is not a manufacturing process and therefore is not subject to 45 CSR 7.

45 CSR 17 – To Prevent and Control Particulate Matter Air Pollution from Materials Handling, Preparation, Storage and Other Source of Fugitive Particulate Matter.

45 CSR 17 prohibits fugitive particulate matter from being discharged beyond the boundary lines of the facility or which causes or contributes to statutory air pollution. The facility will comply with this rule through the use of a pneumatic transfer system and baghouse.

45 CSR 22 – Air Quality Management Fee Program

The facility must obtain a permit pursuant to 45 CSR 13 and pay the required application fee.

45 CSR 13 – Permits for Construction, Modification, Relocation and Operation of Stationary Sources of Air Pollutants, Notification Requirements, Administrative Updates, Temporary Permits, General Permits, and Procedures for Evaluation

The facility is required to obtain a permit.

Federal Rules

No New Source Performance Standards or National Emission Standards for Hazardous Air Pollutants are applicable to operations at the facility.

APPENDIX E

PLOT PLAN

Watco Transloading, LLC

UTM Northing (KM): 4253157 UTM Easting (KM): 426465 UTM Zone: 17S

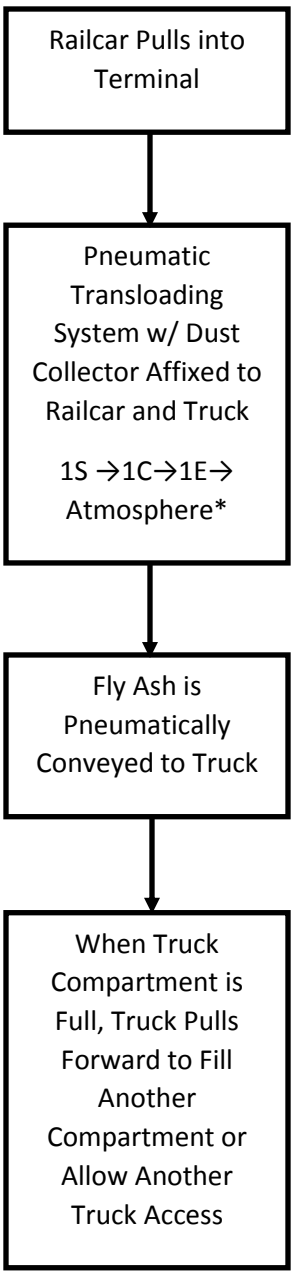
Elevation: 594 feet

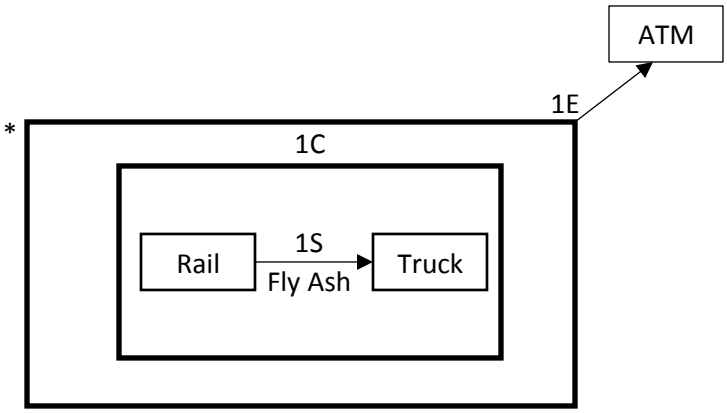
N

APPENDIX F

PROCESS FLOW DIAGRAM

Watco Industries
Nitro, WV
Fly Ash Transloading Process Flow Diagram





- 1S - Fly ash transloading operation
- 1C – Dust collector
- 1E – Emission point from dust system

APPENDIX G

PROCESS DESCRIPTION

PROCESS DESCRIPTION

Watco Transloading, LLC operates a rail terminal at 2208 1st Avenue Nitro, WV in Kanawha County. The facility proposes to begin loading and unloading of fly ash at this location. The following paragraph provides a narrative of the facility's operations.

The facility will receive the fly ash by railcar. A Rail, Barge, Truck, Services Inc. Model DC2000x transloading platform will be placed next to the rail car. Hosing from the platform will be connected via piping connections to the rail car and a truck trailer. Fly ash will be pneumatically conveyed from the rail car to the trailer. The transloading platform is equipped with a Donaldson Torit CPC-6 dust collector which will control particulate matter emissions from the transfer process. Watco Transloading LLC anticipates transloading 20,000 tons per year of fly ash per year at this facility. A throughput of 100,000 tons per year has been used in supporting calculations to allow for operational flexibility.

APPENDIX H

SAFETY DATA SHEET

SAFETY DATA SHEET
COAL ASH

Section 1 - Identification

Product Name: **Coal Ash**

Other Identifiers: **Fly Ash, Cenospheres, Bottom Ash, and Boiler Slag**

Product Use: Primarily used as an additive for cement, concrete and asphalt. Also used for soil stabilization.

Manufacturer: American Electric Power System coal-fired steam electric generating plants.

Contact Information:
American Electric Power Service Corporation
1 Riverside Plaza
Columbus, Ohio 43215
(614) 716-2040 (M-F 8:00am – 4:00pm Eastern) – Information
(800) 424-9300 (CHEMTREC 24-Hours) – Emergency

Section 2 – Hazard Identification

DANGER

- **Causes Skin and Eye Irritation**
- **Causes damage to lungs through prolonged or repeated exposure by inhalation**
- **May cause cancer by inhalation**
- **May cause respiratory irritation**

- **Wash exposed skin thoroughly after handling**
- **Do not breathe dust**
- **Do not eat, drink or smoke when using this product**
- **Wear protective gloves, clothing, eye protection, and respiratory protection as required**
- **Obtain special instructions before use**
- **Do not handle until all safety precautions have been read and understood**
- **Use outdoors or in a well ventilated area**

Hazard Classification (1=Most Hazardous, 4=Least Hazardous)

Skin Corrosion/Irritation: Category 2
Eye Damage/Irritation: Category 2B
Specific Target Organ Toxicity (Single Exposure): Category 3
Carcinogenicity: Category 1A
Specific Target Organ Toxicity (Repeated Exposure): Category 1

Section 3 – Composition/Information on Ingredients

Component	CAS Number	Approx. Percentage (By Weight)
Coal Ash/Fly Ash	68131-74-8	100
Total Silica Compounds Reported as SiO_2	7631-86-9	25 – 65
Crystalline Silica	14808-60-7	< 0.1 – 5

Coal ash contains carbon, silicates and various metallic oxides including Aluminum (7.9 – 17.5% as Al_2O_3), Iron (1.4 – 29.4% as Fe_2O_3), Titanium (0.6 – 1.5% as TiO_2), Calcium (0.2 – 18.6% as CaO), Magnesium (0.3 – 3.6% as MgO), Sodium (0.07 – 1.5% as Na_2O), Potassium (0.2 – 3.3% as K_2O), Sulfur (<0.04 – 6.8% as SO_3) and Phosphorous (<0.04 – 0.9% as P_2O_5). These components are generally fused together in a glassy matrix.

Coal ash may also contain other trace metals including arsenic (As).

Section 4 – First Aid Measures

If in Eyes: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing. If eye irritation persists, get medical advice/attention.

If on Skin: Wash with plenty of soap and water. If skin irritation occurs, get medical advice/attention. Take off contaminated clothing and wash it before reuse.

If Inhaled: Get medical advice/attention if you have been exposed or are concerned or if you feel unwell. For accidental release exposures, remove victim to fresh air and keep at rest in a position comfortable for breathing.

If Swallowed: Ingestion is unlikely. If in mouth, rinse with water.

If Exposed or Concerned: Get medical advice/attention.

Section 5 – Firefighting Measures

Coal ash is nonflammable and non-explosive. Extinguishing media, specific hazards, and special protective actions are not applicable to this material.

Section 6 – Accidental Release Measures

Personal Precautions, Protective Equipment and Emergency Procedures	Avoid inhalation and contact with skin and eyes. Use proper protective equipment where necessary (see Section 8).
Environmental Precautions	Do not allow material to be washed down storm drains or into bodies of water. Material may be disposed of as an inert solid in an appropriate solid waste landfill. See applicable Federal, State, and Local Regulations.
Methods and Materials for Containment and Cleanup	Wetting with water will reduce airborne dust.

Section 7 – Handling and Storage

Precautions for Safe Handling	Avoid skin and eye contact with coal ash. Use appropriate engineering and dust suppression controls to avoid airborne exposures. Do not use compressed air or dry sweeping to clean up dust. Use HEPA vacuums or wet methods to avoid creating airborne dust. Use appropriate protective equipment to avoid eye, skin and respiratory exposure. Promptly remove and properly launder or dispose of any protective equipment that has become contaminated with coal ash.
Conditions for Safe Storage, including any incompatibilities	Bulk coal ash may pose an engulfment hazard. Take proper precautions when entering bins, bunkers, silos, trucks, etc. Keep coal ash dry until used. Static build-up and discharge is possible when coal ash is moved through plastic or non-conductive piping or equipment. Proper grounding of all equipment is required to prevent injury to employees or damage to equipment. There are no temperature or pressure limitations on the storage of coal ash.

Section 8 – Exposure Controls/Personal Protection

OSHA PERMISSIBLE EXPOSURE LIMITS (PEL) AND ACGIH THRESHOLD LIMIT VALUES (TLV)		
Component	**OSHA PEL (mg/m3)**	**ACGIH TLV (mg/m3)**
Coal Ash/Fly Ash	N/A	N/A
Amorphous Silica	$\frac{80}{\%SiO_2 + 2}$	See Nuisance Dust
Crystalline Silica	$\frac{10}{\%SiO_2 + 2}$ – Respirable	0.025 – Resp.
Nuisance Dust (if amorphous silica content is $\leq$ 5.33%)	5 – Respirable 15 – Total	3 – Respirable 10 – Inhalable

General: Industrial hygiene assessments of worker exposure in specific ash handling operations are needed to determine the need for engineering controls of airborne dust levels, respiratory protection equipment, and other measures. Under certain conditions, such as handling in confined areas without adequate ventilation, trace metal oxides (including arsenic, iron, and vanadium) may exceed the OSHA Permissible Exposure Limits and require personal protective equipment.

Engineering Controls: Use local exhaust or general dilution ventilation to maintain exposures below exposure limits. Do not use compressed air or dry sweeping to clean up dust. Use HEPA vacuums or wet methods to control dust.

Personal Protective Equipment

Respiratory Protection: If airborne dust exposure approaches the TLV or PEL, use NIOSH-approved particulate respirators.

Eye Protection: Wear dust-proof goggles in areas where dust is generated. Contact lenses should not be worn when working with coal ash.

Skin Protection:	Wear gloves, boots or boot covers and clothing that are impervious to water to prevent skin contact. Take off contaminated clothing and wash it before reuse. If ash comes in contact with skin, remove contaminated clothing and wash affected area with soap and water.

Section 9 – Physical and Chemical Properties

Appearance:

A. Fly Ash/Cenospheres
Fly ash consists principally of minute, separate glass spheres together with some crystalline matter and varying amounts of unburned carbon. It ranges in color from light tan or light gray to almost black depending on the proportions of carbon and iron. The glass spheres vary in size from approximately 0.001 mm (medium silt) to 0.4 mm (fine sand), or 1 to 400 microns.

B. Bottom Ash
Bottom ash is a granular material with about the same upper and lower particle size limits as fine concrete aggregate (concrete sand). The basic particle shape of bottom ash is angular. It ranges in color from a medium brown or medium gray to almost black.

C. Boiler Slag
Boiler slag is also granular and angular with almost the same particle size limits as bottom ash. It is a uniform shiny black color and resembles crushed coal or black glass.

Odor:	None	**Vapor Pressure:**	N/A
Odor Threshold:	N/A	**Vapor Density:**	N/A
pH:	N/A	**Relative Density:**	2 - 3
Melting Point:	N/A	**Solubility:**	Slightly to moderately soluble
Boiling Point:	N/A	**Partition Coefficient:**	N/A
Flash Point:	N/A	**Auto-Ignition Temp:**	N/A
Evaporation Rate:	N/A	**Decomposition Temp:**	N/A
Flammability:	Non-flammable	**Viscosity**	None
UEL/LEL:	N/A		

Section 10 – Stability and Reactivity

Reactivity:	See “Incompatible Materials” below.
Stability:	Chemical is stable.
Possibility of Hazardous Reactions:	This product will not undergo hazardous polymerization. See “Incompatible Materials” below.
Conditions to Avoid:	See Section 7 for information on engulfment hazards and static discharge.
Incompatible Materials:	Coal ash reacts with water to produce calcium hydroxide, which may be irritating to the eyes, skin and respiratory tract. Coal ash may react with acids, strong oxidizers, ammonium salts or aluminum metal to produce hazardous gases.

Hazardous Decomposition:	None

Section 11 – Toxicological Information

Acute Toxicity:	Single, short-term exposures to coal ash are not considered to be acutely toxic. Inhaling large amounts of coal ash may cause irritation of the nose, throat and respiratory tract.
Skin Corrosion/Irritation:	Skin contact with coal ash, especially when skin is wet, may cause irritation and discomfort.
Serious Eye Damage/ Irritation:	Eye contact with coal ash (powder or airborne) may cause irritation or inflammation. These effects may be immediate or delayed.
Respiratory/Skin Sensitization:	Not known to occur.
Germ Cell Mutagenicity:	Not known to occur.
Carcinogenicity:	Coal ash itself is not listed as a carcinogen; however, trace components of the ash are listed as suspected or known carcinogens. Crystalline silica is listed by IARC and NTP as a known carcinogen. Long-term, elevated exposure to crystalline silica by inhalation could lead to lung cancer. Inorganic arsenic, an OSHA known carcinogen, is also present in trace concentrations in coal ash. When ash is handled in confined areas without adequate ventilation, the OSHA PEL for arsenic may be exceeded.
Reproductive Toxicity:	Not known to occur.
Specific Target Organ Toxicity – Single Dose:	No target organ effects other than irritation expected from a single dose or short-term exposures.
Specific Target Organ Toxicity – Repeated Exposure:	Repeated, prolonged exposure to crystalline silica by inhalation may lead to the development of Silicosis, a lung disease characterized by scarring of the lungs.
Aspiration Hazard:	Not known to occur.

Section 12 – Ecological Information

Ecological information is not available for this product.

Section 13 – Disposal Considerations

Material may be disposed of as an inert solid in an appropriate solid waste landfill. See applicable federal, state, and local regulations.

Section 14 – Transport Information

This product is not classified as a transportation hazard.

Section 15 – Regulatory Information

Applicable OSHA standards include:

29 CFR 1910.94 – Ventilation
29 CFR 1910.134 – Respiratory Protection
29 CFR 1910.1000 – Air Contaminants
29 CFR 1910.1000 Table Z-3 – Mineral Dusts
29 CFR 1910.1018 – Inorganic Arsenic
29 CFR 1910.1200 – Hazard Communication

Applicable EPA standards include:

40 CFR Part 372 – EPCRA SARA Title III (311/312 - Acute and Chronic health hazard only)
40 CFR Part 372 – EPCRA SARA Section 313
40 CFR Parts 239-282 – RCRA

Other federal, state and local regulations may apply.

Section 16 – Other Information

NFPA Rating
Health: 2 Flammability: 0 Reactivity: 0

Revision Tracking

Revision Number	Date	Changes Made
0	11/19/2004	Pre-GHS version.
1	5/21/2015	Changes made to comply with OSHA's revised Hazcom Standard and GHS.
2	6/08/2015	Added "Specific Target Organ Toxicity (Single Exposure): Category 3" due to the possibility for respiratory irritation. Added appropriate hazard and precautionary statements to match this classification. Also added the Tier II hazard classifications to the regulatory section.
3	2/5/2016	Section 3 – changed the "silica" listing from amorphous silica to total silica (silicon dioxide) to accurately reflect reporting from our lab. Also changed the CAS#. Corrected the percentage range for total silica to reflect reporting from our lab. Added the oxide forms for all of the elements in section 3 since this is how the laboratory reports the elemental analysis. Minor wording changes in section 5. Added tables to sections 6 and 7 with appropriate headings based on GHS requirements. Reorganized the information but made no major changes. Minor revisions/clarifications to the exposure limits in section 8.

Abbreviations

ACGIH	American Conference of Governmental Industrial Hygienists
CAS	Chemical Abstract Service
EPRCA	Emergency Planning and Community Right-to-Know Act
HEPA	High-Efficiency Particulate Air
IARC	International Agency for Research on Cancer

LEL	Lower Explosive Limit
mg/m3	Milligrams per cubic meter
N/A	Not Available
NIOSH	National Institute for Occupational Safety and Health
NTP	National Toxicology Program
OSHA	Occupational Safety and Health Administration
PEL	Permissible Exposure Limit
RCRA	Resource Conservation and Recovery Act
Resp.	Respirable particulates
SARA	Superfund Amendments and Reauthorization Act
TLV	Threshold Limit Value
UEL	Upper Explosive Limit

APPENDIX I

EMISSION UNITS TABLE

Attachment I

Emission Units Table

(includes all emission units and air pollution control devices that will be part of this permit application review, regardless of permitting status)

Emission Unit ID[1]	Emission Point ID[2]	Emission Unit Description	Year Installed/ Modified	Design Capacity	Type[3] and Date of Change	Control Device[4]
1S	1E	Fly ash transloading operation (pneumatic transloader)	Upon Permit Approval	2100 - 4100 cfm	New	1C - RBT DC2000x Dust Collector Platform with Donaldson Torit CPC-6 dust collector

[1] For Emission Units (or Sources) use the following numbering system:1S, 2S, 3S,... or other appropriate designation.
[2] For Emission Points use the following numbering system:1E, 2E, 3E, ... or other appropriate designation.
[3] New, modification, removal
[4] For Control Devices use the following numbering system: 1C, 2C, 3C,... or other appropriate designation.

APPENDIX J

EMISSION POINTS DATA SUMMARY SHEET

Attachment J
EMISSION POINTS DATA SUMMARY SHEET

Table 1: Emissions Data															
Emission Point ID No. *(Must match Emission Units Table & Plot Plan)*	Emission Point Type[1]	Emission Unit Vented Through This Point *(Must match Emission Units Table & Plot Plan)*		Air Pollution Control Device *(Must match Emission Units Table & Plot Plan)*		Vent Time for Emission Unit *(chemical processes only)*		All Regulated Pollutants - Chemical Name/CAS[3] *(Speciate VOCs & HAPS)*	Maximum Potential Uncontrolled Emissions [4]		Maximum Potential Controlled Emissions [5]		Emission Form or Phase *(At exit conditions, Solid, Liquid or Gas/Vapor)*	Est. Method Used [6]	Emission Concentration [7] (ppmv or mg/m^4)
		ID No.	Source	ID No.	Device Type	Short Term[2]	Max (hr/yr)		lb/hr	ton/yr	lb/hr	ton/yr			
1E	Horizontal Stack	1S	Fly ash Tranloading	1C	Donaldson Torit CPC-6 Dust Collector	N/A	N/A	PM PM10 PM2.5	157 55 55	688 241 241	0.45 0.25 0.25	1.95 1.07 1.07	Solid Solid Solid	EE EE EE	

The EMISSION POINTS DATA SUMMARY SHEET provides a summation of emissions by emission unit. Note that uncaptured process emission unit emissions are not typically considered to be fugitive and must be accounted for on the appropriate EMISSIONS UNIT DATA SHEET and on the EMISSION POINTS DATA SUMMARY SHEET. Please note that total emissions from the source are equal to all vented emissions, all fugitive emissions, plus all other emissions (e.g. uncaptured emissions). Please complete the FUGITIVE EMISSIONS DATA SUMMARY SHEET for fugitive emission activities.

1 Please add descriptors such as upward vertical stack, downward vertical stack, horizontal stack, relief vent, rain cap, etc.

2 Indicate by "C" if venting is continuous. Otherwise, specify the average short-term venting rate with units, for intermittent venting (ie., 15 min/hr). Indicate as many rates as needed to clarify frequency of venting (e.g., 5 min/day, 2 days/wk).

3 List all regulated air pollutants. Speciate VOCs, including all HAPs. Follow chemical name with Chemical Abstracts Service (CAS) number. **LIST** Acids, CO, CS_2, VOCs, H_2S, Inorganics, Lead, Organics, O_3, NO, NO_2, SO_2, SO_3, all applicable Greenhouse Gases (including CO_2 and methane), etc. **DO NOT LIST** H_2, H_2O, N_2, O_2, and Noble Gases.

4 Give maximum potential emission rate with no control equipment operating. If emissions occur for less than 1 hr, then record emissions per batch in minutes (e.g. 5 lb VOC/20 minute batch).

5 Give maximum potential emission rate with proposed control equipment operating. If emissions occur for less than 1 hr, then record emissions per batch in minutes (e.g. 5 lb VOC/20 minute batch).

6 Indicate method used to determine emission rate as follows: MB = material balance; ST = stack test (give date of test); EE = engineering estimate; O = other (specify).

7 Provide for all pollutant emissions. Typically, the units of parts per million by volume (ppmv) are used. If the emission is a mineral acid (sulfuric, nitric, hydrochloric or phosphoric) use units of milligram per dry cubic meter (mg/m^3) at standard conditions (68 °F and 29.92 inches Hg) (see 45CSR7). If the pollutant is SO_2, use units of ppmv (See 45CSR10).

Attachment J
EMISSION POINTS DATA SUMMARY SHEET

Table 2: Release Parameter Data								
Emission Point ID No. *(Must match Emission Units Table)*	Inner Diameter (ft.)	Exit Gas			Emission Point Elevation (ft)		UTM Coordinates (km)	
		Temp. (°F)	Volumetric Flow [1] (acfm) *at operating conditions*	Velocity (fps)	Ground Level *(Height above mean sea level)*	Stack Height [2] *(Release height of emissions above ground level)*	Northing	Easting
1E	0.83' x 1.67'	Ambient	2100 to 4100 cfm		0/NA	10'-8"	4253157	426465

[1] Give at operating conditions. Include inerts.
[2] Release height of emissions above ground level.

APPENDIX K

FUGITIVE EMISSIONS DATA SUMMARY SHEET

Attachment K

FUGITIVE EMISSIONS DATA SUMMARY SHEET

The FUGITIVE EMISSIONS SUMMARY SHEET provides a summation of fugitive emissions. Fugitive emissions are those emissions which could not reasonably pass through a stack, chimney, vent or other functionally equivalent opening. Note that uncaptured process emissions are not typically considered to be fugitive, and must be accounted for on the appropriate EMISSIONS UNIT DATA SHEET and on the EMISSION POINTS DATA SUMMARY SHEET.

Please note that total emissions from the source are equal to all vented emissions, all fugitive emissions, plus all other emissions (e.g. uncaptured emissions).

APPLICATION FORMS CHECKLIST - FUGITIVE EMISSIONS
1.) Will there be haul road activities? ☒ Yes ☐ No ☐ If YES, then complete the HAUL ROAD EMISSIONS UNIT DATA SHEET.
2.) Will there be Storage Piles? ☐ Yes ☒ No ☐ If YES, complete Table 1 of the NONMETALLIC MINERALS PROCESSING EMISSIONS UNIT DATA SHEET.
3.) Will there be Liquid Loading/Unloading Operations? ☐ Yes ☒ No ☐ If YES, complete the BULK LIQUID TRANSFER OPERATIONS EMISSIONS UNIT DATA SHEET.
4.) Will there be emissions of air pollutants from Wastewater Treatment Evaporation? ☐ Yes ☒ No ☐ If YES, complete the GENERAL EMISSIONS UNIT DATA SHEET.
5.) Will there be Equipment Leaks (e.g. leaks from pumps, compressors, in-line process valves, pressure relief devices, open-ended valves, sampling connections, flanges, agitators, cooling towers, etc.)? ☐ Yes ☒ No ☐ If YES, complete the LEAK SOURCE DATA SHEET section of the CHEMICAL PROCESSES EMISSIONS UNIT DATA SHEET.
6.) Will there be General Clean-up VOC Operations? ☐ Yes ☒ No ☐ If YES, complete the GENERAL EMISSIONS UNIT DATA SHEET.
7.) Will there be any other activities that generate fugitive emissions? ☐ Yes ☒ No ☐ If YES, complete the GENERAL EMISSIONS UNIT DATA SHEET or the most appropriate form.
If you answered "NO" to all of the items above, it is not necessary to complete the following table, "Fugitive Emissions Summary."

FUGITIVE EMISSIONS SUMMARY	All Regulated Pollutants - Chemical Name/CAS [1]	Maximum Potential Uncontrolled Emissions [2]		Maximum Potential Controlled Emissions [3]		Est. Method Used [4]
		lb/VMT	ton/yr	lb/hr	ton/yr	
Haul Road/Road Dust Emissions Paved Haul Roads						
Unpaved Haul Roads	PM PM10 PM2.5	4.95 1.15 0.11	2.32 0.54 0.05	N/A	N/A	EE
Storage Pile Emissions						
Loading/Unloading Operations						
Wastewater Treatment Evaporation & Operations						
Equipment Leaks						
General Clean-up VOC Emissions						
Other						

[1] List all regulated air pollutants. Speciate VOCs, including all HAPs. Follow chemical name with Chemical Abstracts Service (CAS) number. LIST Acids, CO, CS_2, VOCs, H_2S, Inorganics, Lead, Organics, O_3, NO, NO_2, SO_2, SO_3, all applicable Greenhouse Gases (including CO_2 and methane), etc. DO NOT LIST H_2, H_2O, N_2, O_2, and Noble Gases.

[2] Give rate with no control equipment operating. If emissions occur for less than 1 hr, then record emissions per batch in minutes (e.g. 5 lb VOC/20 minute batch).

[3] Give rate with proposed control equipment operating. If emissions occur for less than 1 hr, then record emissions per batch in minutes (e.g. 5 lb VOC/20 minute batch).

[4] Indicate method used to determine emission rate as follows: MB = material balance; ST = stack test (give date of test); EE = engineering estimate; O = other (specify).

APPENDIX L

EMISSION UNIT DATA SHEETS

Attachment L
EMISSIONS UNIT DATA SHEET
GENERAL

To be used for affected sources other than asphalt plants, foundries, incinerators, indirect heat exchangers, and quarries.

Identification Number (as assigned on *Equipment List Form*): 1S

1. Name or type and model of proposed affected source: Fly ash transloading operation using pnuematic transloader
2. On a separate sheet(s), furnish a sketch(es) of this affected source. If a modification is to be made to this source, clearly indicated the change(s). Provide a narrative description of all features of the affected source which may affect the production of air pollutants.
3. Name(s) and maximum amount of proposed process material(s) charged per hour: 100, 000 tons per year at up to 50 tons/hr
4. Name(s) and maximum amount of proposed material(s) produced per hour: N/A
5. Give chemical reactions, if applicable, that will be involved in the generation of air pollutants: N/A

* The identification number which appears here must correspond to the air pollution control device identification number appearing on the *List Form*.

6. Combustion Data (if applicable):

(a) Type and amount in appropriate units of fuel(s) to be burned:

(b) Chemical analysis of proposed fuel(s), excluding coal, including maximum percent sulfur and ash:

(c) Theoretical combustion air requirement (ACF/unit of fuel):

@ °F and psia.

(d) Percent excess air:

(e) Type and BTU/hr of burners and all other firing equipment planned to be used:

(f) If coal is proposed as a source of fuel, identify supplier and seams and give sizing of the coal as it will be fired:

(g) Proposed maximum design heat input: $\times 10^6$ BTU/hr.

7. Projected operating schedule:

Hours/Day	5	Days/Week	TBD	Weeks/Year	TBD

8. Projected amount of pollutants that would be emitted from this affected source if no control devices were used:

@ Ambient °F and Atmospheric psia

a.	NO_X		lb/hr		grains/ACF
b.	SO_2		lb/hr		grains/ACF
c.	CO		lb/hr		grains/ACF
d.	PM_{10}	55	lb/hr	0.3	grains/ACF
e.	Hydrocarbons		lb/hr		grains/ACF
f.	VOCs		lb/hr		grains/ACF
g.	Pb		lb/hr		grains/ACF
h.	Specify other(s)				
	PM2.5	55	lb/hr	0.3	grains/ACF
			lb/hr		grains/ACF
			lb/hr		grains/ACF
			lb/hr		grains/ACF

NOTE: (1) An Air Pollution Control Device Sheet must be completed for any air pollution device(s) used to control emissions from this affected source.

(2) Complete the Emission Points Data Sheet.

9. Proposed Monitoring, Recordkeeping, Reporting, and Testing
Please propose monitoring, recordkeeping, and reporting in order to demonstrate compliance with the proposed operating parameters. Please propose testing in order to demonstrate compliance with the proposed emissions limits.

MONITORING	RECORDKEEPING
Periodic visual observation of baghouse exhaust	Monthly throughput records
REPORTING	**TESTING**
As required	None

MONITORING. PLEASE LIST AND DESCRIBE THE PROCESS PARAMETERS AND RANGES THAT ARE PROPOSED TO BE MONITORED IN ORDER TO DEMONSTRATE COMPLIANCE WITH THE OPERATION OF THIS PROCESS EQUIPMENT OPERATION/AIR POLLUTION CONTROL DEVICE.

RECORDKEEPING. PLEASE DESCRIBE THE PROPOSED RECORDKEEPING THAT WILL ACCOMPANY THE MONITORING.

REPORTING. PLEASE DESCRIBE THE PROPOSED FREQUENCY OF REPORTING OF THE RECORDKEEPING.

TESTING. PLEASE DESCRIBE ANY PROPOSED EMISSIONS TESTING FOR THIS PROCESS EQUIPMENT/AIR POLLUTION CONTROL DEVICE.

10. Describe all operating ranges and maintenance procedures required by Manufacturer to maintain warranty
TBD upon installation

Attachment L
FUGITIVE EMISSIONS FROM UNPAVED HAULROADS

UNPAVED HAULROADS (including all equipment traffic involved in process, haul trucks, endloaders, etc.)

		PM	PM-10
k =	Particle size multiplier	0.80	0.36
s =	Silt content of road surface material (%)		
p =	Number of days per year with precipitation >0.01 in.		

Item Number	Description	Number of Wheels	Mean Vehicle Weight (tons)	Mean Vehicle Speed (mph)	Miles per Trip	Maximum Trips per Hour	Maximum Trips per Year	Control Device ID Number	Control Efficiency (%)
1									
2									
3									
4									
5									
6									
7									
8									

See Fugitive Emission Calculations on Next Page

Source: *AP-42 Fifth Edition – 13.2.2 Unpaved Roads*

$E = k \times 5.9 \times (s \div 12) \times (S \div 30) \times (W \div 3)^{0.7} \times (w \div 4)^{0.5} \times ((365 - p) \div 365) =$ lb/Vehicle Mile Traveled (VMT)

Where:

		PM	PM-10
k =	Particle size multiplier	0.80	0.36
s =	Silt content of road surface material (%)		
S =	Mean vehicle speed (mph)		
W =	Mean vehicle weight (tons)		
w =	Mean number of wheels per vehicle		
p =	Number of days per year with precipitation >0.01 in.		

For lb/hr: [lb ÷ VMT] × [VMT ÷ trip] × [Trips ÷ Hour] = lb/hr

For TPY: [lb ÷ VMT] × [VMT ÷ trip] × [Trips ÷ Hour] × [Ton ÷ 2000 lb] = Tons/year

SUMMARY OF UNPAVED HAULROAD EMISSIONS

Item No.	PM				PM-10			
	Uncontrolled		Controlled		Uncontrolled		Controlled	
	lb/hr	TPY	lb/hr	TPY	lb/hr	TPY	lb/hr	TPY
1								
2								
3								
4								
5								
6								
7								
8								
TOTALS								

Watco Transloading, LLC
PTE Calculation For Truck Traffic On Haul Roads

Paved roads {AP-42 Chapter 13.2.1 (1/11)}

Equation (2): $$E = k \times (sL)^{0.91} \times (W)^{1.02} \times \left(1 - \frac{P}{4 \times 365}\right)$$

	k
PM	0.011
PM_{10}	0.0022
$PM_{2.5}$	0.0005

Unpaved roads {AP-42 Chapter 13.2.2 (11/06)}

Equation (1a): (Modified) $$E = k \times \left(\frac{sC}{12}\right)^{a} \times \left(\frac{W}{3}\right)^{b} \times \left(\frac{365 - P}{365}\right) \times \left(\frac{S}{30}\right)^{d} \times (1 - CE)$$

	k	*a*	*b*	*d*
PM	4.9	0.7	0.45	0.3
PM_{10}	1.5	0.9	0.45	0.5
$PM_{2.5}$	0.15	0.9	0.45	0.5

Haul Road / Traffic Parameters

Activity / Road Description	Road Type / Silt Value		Roundtrip Length (feet)		Truck Weight (tons)			Ave. Speed (mph)	Unrestricted Maximum Throughput (units/yr)	Ave. Truck Capacity (units/truck)		Annual VMT
			empty	full	empty	full	Ave.					
Flyash Transloading	U	6.00	1,238	1,238	17	67	42.0	15	100,000	50	ton	938

Emission Calculations

	Emission Factors (lb/VMT)			Potential Emissions (tons/yr)		
	PM	PM_{10}	$PM_{2.5}$	PM	PM_{10}	$PM_{2.5}$
Flyash Transloading	4.95	1.15	0.11	2.32	0.54	0.05

Description of Constants/Variables

E : haul road emissions (lb/VMT)

k, d : dimensionless constants from Draft AP-Chapter 13.IV (paved)

k, a, b, c, d : dimensionless constants from AP-42 Tables 13.2.1-1 & 13.2.2-2 (unpaved)

sL : silt loading (g/m^2) of paved road surface

sC : silt content (%) of unpaved road surface

W : average vehicle weight (tons)

P : days/yr with at least 0.01" of precipitatio

P = 140 default = 90

S : mean vehicle speed on road (mph) default = 30, minimum =15

CE : unpaved road, dust control efficiency

CE = 0 % default = 0%

VMT: vehicle miles traveled

APPENDIX M

AIR POLLUTION CONTROL DEVICE SHEETS

Attachment M
Air Pollution Control Device Sheet
(BAGHOUSE)

Control Device ID No. (must match Emission Units Table):

Equipment Information and Filter Characteristics

1. Manufacturer: Donaldson Torit PowerCore CPC-6 Dust Collector

2. Total number of compartments: 1

3. Number of compartment online for normal operation: 1

4. Provide diagram(s) of unit describing capture system with duct arrangement and size of duct, air volume, capacity, horsepower of movers. If applicable, state hood face velocity and hood collection efficiency.

5. Baghouse Configuration: (check one)
☐ Open Pressure ☒ Closed Pressure ☐ Closed Suction
☐ Electrostatically Enhanced Fabric
☐ Other, Specify

6. Filter Fabric Bag Material:
☒ Others, specify: Donaldson Torit "Powercore" Filter packs made of a proprietary nanofiber material.

7. Bag Dimension: Six Filter Packs, each with at
Diameter 7 in.
Length 1.83 ft.

8. Total cloth area: 268 ft^2

9. Number of bags: 6 filter packs

10. Operating air to cloth ratio: ~15.3 ft/min

11. Baghouse Operation: ☒ Continuous ☐ Automatic ☐ Intermittent

12. Method used to clean bags:
☐ Mechanical Shaker ☐ Sonic Cleaning ☐ Reverse Air Jet
☐ Pneumatic Shaker ☐ Reverse Air Flow ☐ Other:
☐ Bag Collapse ☒ Pulse Jet
☐ Manual Cleaning ☐ Reverse Jet

13. Cleaning initiated by:
☐ Timer ☐ Frequency if timer actuated
☒ Expected pressure drop range 0.1-6 in. of water ☐ Other

14. Operation Hours: Max. per day: 24
Max. per yr: 365

15. Collection efficiency: Rating: >99 %
Guaranteed minimum: >99 %

Gas Stream Characteristics

16. Gas flow rate into the collector: 2,100 – 4,100 ACFM at Ambient °F and Atmospheric PSIA
ACFM: Design: Atmospheric PSIA Maximum: Atmospheric PSIA Average Expected: Atmospheric PSIA

17. Water Vapor Content of Effluent Stream: lb. Water/lb. Dry Air

18. Gas Stream Temperature: Ambient °F

19. Fan Requirements: hp
OR 2100 ft^3/min

20. Stabilized static pressure loss across baghouse. Pressure Drop: High 0.1 in. H_2O
Low 6.0 in. H_2O

21. Particulate Loading: Inlet: 0.3 grain/scf Outlet: 0.002 grain/scf

22. Type of Pollutant(s) to be collected (if particulate give specific type):
PM, PM10, PM2.5

23. Is there any SO_3 in the emission stream? ☒ No ☐ Yes SO_3 content: ppmv

24. Emission rate of pollutant (specify) into and out of collector at maximum design operating conditions:

	IN		OUT	
Pollutant	**lb/hr**	**grains/acf**	**lb/hr**	**grains/acf**
PM 10	55	0.3	0.25	0.002
PM 2.5	55	0.3	0.25	0.002

25. Complete the table:

	Particle Size Distribution at Inlet to Collector	**Fraction Efficiency of Collector**
Particulate Size Range (microns)	**Weight % for Size Range**	**Weight % for Size Range**
<1	25%	>99% down to .2 microns
<10	65%	>99%
<100	100%	>99%

26. How is filter monitored for indications of deterioration (e.g., broken bags)?
- ☐ Continuous Opacity
- ☒ Pressure Drop
- ☐ Alarms-Audible to Process Operator
- ☐ Visual opacity readings, Frequency:
- ☐ Other, specify:

27. Describe any recording device and frequency of log entries:
Period visual observation of baghouse exhaust

28. Describe any filter seeding being performed:
N/A

29. Describe any air pollution control device inlet and outlet gas conditioning processes (e.g., gas cooling, gas reheating, gas humidification):
N/A

30. Describe the collection material disposal system:
N/A

31. Have you included ***Baghouse Control Device*** in the Emissions Points Data Summary Sheet? Yes

32. **Proposed Monitoring, Recordkeeping, Reporting, and Testing**
Please propose monitoring, recordkeeping, and reporting in order to demonstrate compliance with the proposed operating parameters. Please propose testing in order to demonstrate compliance with the proposed emissions limits.

MONITORING:	RECORDKEEPING:
Periodic visual monitoring of baghouse exhaust	Monthly throughput tracking
REPORTING:	TESTING:
As required	None

MONITORING:	Please list and describe the process parameters and ranges that are proposed to be monitored in order to demonstrate compliance with the operation of this process equipment or air control device.
RECORDKEEPING:	Please describe the proposed recordkeeping that will accompany the monitoring.
REPORTING:	Please describe any proposed emissions testing for this process equipment on air pollution control device.
TESTING:	Please describe any proposed emissions testing for this process equipment on air pollution control device.

33. Manufacturer's Guaranteed Capture Efficiency for each air pollutant.

100%

34. Manufacturer's Guaranteed Control Efficiency for each air pollutant.

>99%

35. Describe all operating ranges and maintenance procedures required by Manufacturer to maintain warranty.

To be determined upon installation

APPENDIX N

SUPPORTING EMISSION CALCULATIONS

Watco Industries
Nitro, WV
Fly Ash Emissions Calculations

Fly Ash Loading/Unloading Emission Factors	3.14	lbs PM/ton Fly ash
	1.1	lbs PM10/ton Fly ash
	1.1	lbs PM2.5/ton Fly ash

Emission Factor for PM & PM10 are from AP-42 Table 11.12-2 "Cement supplement unloading to elevated storage silo"; PM2.5 emission factor is assumed to be the same as PM10.

Potential Emissions

Maximum Potential Fly Ash Throughput (hourly)	50	tons/hr
Uncontrolled Fly Ash Loading/Unloading Emissions (hourly)	157	lbs PM/hr
	55	lbs PM_{10}/hr
	55	lbs $PM_{2.5}$/hr
Uncontrolled Fly Ash Loading/Unloading Emissions (annually)	688	tons PM/year
	241	tons PM_{10}/year
	241	tons $PM_{2.5}$/year

Controlled Maximum Potential

Fly Ash Loading/Unloading Controlled Emission Factors	0.0089	lbs PM/ton Fly ash
	0.0049	lbs PM10/ton Fly ash
	0.0049	lbs PM2.5/ton Fly ash

Emission Factor for PM & PM10 are from AP-42 Table 11.12-2 "Cement supplement unloading to elevated storage silo"; PM2.5 emission factor is assumed to be the same as PM10.

Controlled Maximum Fly Ash Loading/Unloading Emissions (hourly)	0.45	lbs PM/hr
	0.25	lbs PM_{10}/hr
	0.25	lbs $PM_{2.5}$/hr
Controlled Maximum Fly Ash Loading/Unloading Emissions (annually)	1.95	tons PM/year
	1.07	tons PM_{10}/year
	1.07	tons $PM_{2.5}$/year

Actual Annual Emissions

Actual Fly Ash Throughput (annually)	100,000	tons/year
Actual Fly Ash Loading/Unloading Emissions (annually)	**0.445000**	tons PM
	0.245000	tons PM_{10}
	0.245000	tons $PM_{2.5}$
Actual Fly Ash Loading/Unloading Emissions (hourly)	**0.101598**	lbs PM/hr
	0.055936	lbs PM_{10}/hr
	0.055936	lbs $PM_{2.5}$/hr
Haul Road Emissions (annually)	**2.320000**	tons PM
	0.540000	tons PM_{10}
	0.050000	tons $PM_{2.5}$
Total Annual Emissions	**2.765000**	tons PM
	0.785000	tons PM_{10}
	0.295000	tons $PM_{2.5}$

APPENDIX P

PUBLIC NOTICE