

**WEST VIRGINIA DEPARTMENT OF ENVIRONMENTAL PROTECTION
OFFICE OF AIR QUALITY**

**R13-1336E
PERMIT MODIFICATION**



*Vindex Energy Corp
Bismarck
023-00017
R13-1336G
Dan Roberts*

**VINDEX ENERGY CORPORATION
Dobbin Ridge Preparation Plant**

R13-1336E

UNION/DAVIS DISTRICT

GRANT COUNTY

WEST VIRGINIA

August 2015

PREPARED BY:

**SURVEYOR & ASSOCIATES, INC.
119 EAST HIGH STREET
KINGWOOD, WEST VIRGINIA 26537
PHONE: (304) 329-2325**

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SECTION I – III

GENERAL APPLICANT INFORMATION



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): Vindex Energy Corporation		2. Federal Employer ID No. (FEIN): 55-0753903	
3. Name of facility (if different from above): Dobbin Ridge Preparation Plant		4. The applicant is the: <input checked="" type="checkbox"/> OWNER <input type="checkbox"/> OPERATOR <input type="checkbox"/> BOTH	
5A. Applicant's mailing address: 265-A Glass Drive Mountain Lake Park, Maryland 21550		5B. Facility's present physical address: Adjacent to WV Route 93 Near Bismarck, West Virginia	
6. West Virginia Business Registration. Is the applicant a resident of the State of West Virginia? <input checked="" type="checkbox"/> YES <input type="checkbox"/> 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: Arch Coal, Inc.			
8. Does the applicant own, lease, have an option to buy or otherwise have control of the <i>proposed site</i> ? <input checked="" type="checkbox"/> YES <input type="checkbox"/> NO ⇒ If YES, please explain: Applicant owns the 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.): Modify the plans for the existing preparation plant.		10. North American Industry Classification System (NAICS) code for the facility: 212112	
11A. DAQ Plant ID No. (for existing facilities only): 023 - 00017		11B. List all current 45CSR13 and 45CSR30 (Title V) permit numbers associated with this process (for existing facilities only): R13-1336E	
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**.

The facility is 1.2 miles north of WV State Route 93 near the Grant/Tucker County line.

12.B. New site address (if applicable): Not Applicable	12C. Nearest city or town: Bismarck	12D. County: Grant
12.E. UTM Northing (KM): 4,341.0	12F. UTM Easting (KM): 646.0	12G. UTM Zone: 17

13. Briefly describe the proposed change(s) at the facility:
Add 2 551 ton per hour Powerscreen Chieftan 1700s at the Raw Coal Stockpile area OS1.

14A. Provide the date of anticipated installation or change: 10/01/2015 ⇒ 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: 10/01/2015
--	---

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).

15. Provide maximum projected **Operating Schedule** of activity/activities outlined in this application:
Hours Per Day 24 Days Per Week 7 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:

- | | | |
|--|---|---|
| <input type="checkbox"/> Bulk Liquid Transfer Operations | <input checked="" type="checkbox"/> Haul Road Emissions | <input type="checkbox"/> Quarry |
| <input type="checkbox"/> Chemical Processes | <input type="checkbox"/> Hot Mix Asphalt Plant | <input checked="" type="checkbox"/> Solid Materials Sizing, Handling and Storage Facilities |
| <input type="checkbox"/> Concrete Batch Plant | <input type="checkbox"/> Incinerator | <input type="checkbox"/> Storage Tanks |
| <input type="checkbox"/> Grey Iron and Steel Foundry | <input type="checkbox"/> Indirect Heat Exchanger | |
| <input type="checkbox"/> General Emission Unit, specify | | |

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

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

- | | | |
|--|---|--|
| <input type="checkbox"/> Absorption Systems | <input type="checkbox"/> Baghouse | <input type="checkbox"/> Flare |
| <input type="checkbox"/> Adsorption Systems | <input type="checkbox"/> Condenser | <input type="checkbox"/> Mechanical Collector |
| <input type="checkbox"/> Afterburner | <input type="checkbox"/> Electrostatic Precipitator | <input type="checkbox"/> Wet Collecting System |
| <input type="checkbox"/> 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:

- | | |
|---|---|
| <input checked="" type="checkbox"/> Authority of Corporation or Other Business Entity | <input type="checkbox"/> Authority of Partnership |
| <input type="checkbox"/> Authority of Governmental Agency | <input type="checkbox"/> 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.

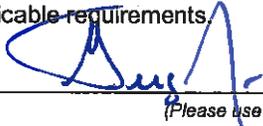
35A. **Certification of Information.** To certify this permit application, a Responsible Official (per 45CSR§13-2.22 and 45CSR§30-2.28) or Authorized Representative shall check the appropriate box and sign below.

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  DATE: 8/7/15
(Please use blue ink) (Please use blue ink)

35B. Printed name of signee: Greg Nair		35C. Title: Manager of Surface Mine Planning
35D. E-mail: GNair@archcoal.com	36E. Phone: 304-594-4240	36F. FAX: 304-594-3708
36A. Printed name of contact person (if different from above):		36B. Title:
36C. E-mail:	36D. Phone:	36E. FAX:

PLEASE CHECK ALL APPLICABLE ATTACHMENTS INCLUDED WITH THIS PERMIT APPLICATION:

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

ATTACHMENT A

BUSINESS CERTIFICATE

WEST VIRGINIA
STATE TAX DEPARTMENT
**BUSINESS REGISTRATION
CERTIFICATE**

ISSUED TO:
VINDEK ENERGY CORPORATION
265 GLASS DR A
MT LAKE PARK, MD 21550-8903

BUSINESS REGISTRATION ACCOUNT NUMBER: 1044-0436

This certificate is issued on: 07/12/2010

*This certificate is issued by
the West Virginia State Tax Commissioner
in accordance with Chapter 11, Article 12, of the West Virginia Code*

*The person or organization identified on this certificate is registered
to conduct business in the State of West Virginia at the location above.*

This certificate is not transferrable and must be displayed at the location for which issued.
This certificate shall be permanent until cessation of the business for which the certificate of registration
was granted or until it is suspended, revoked or cancelled by the Tax Commissioner.

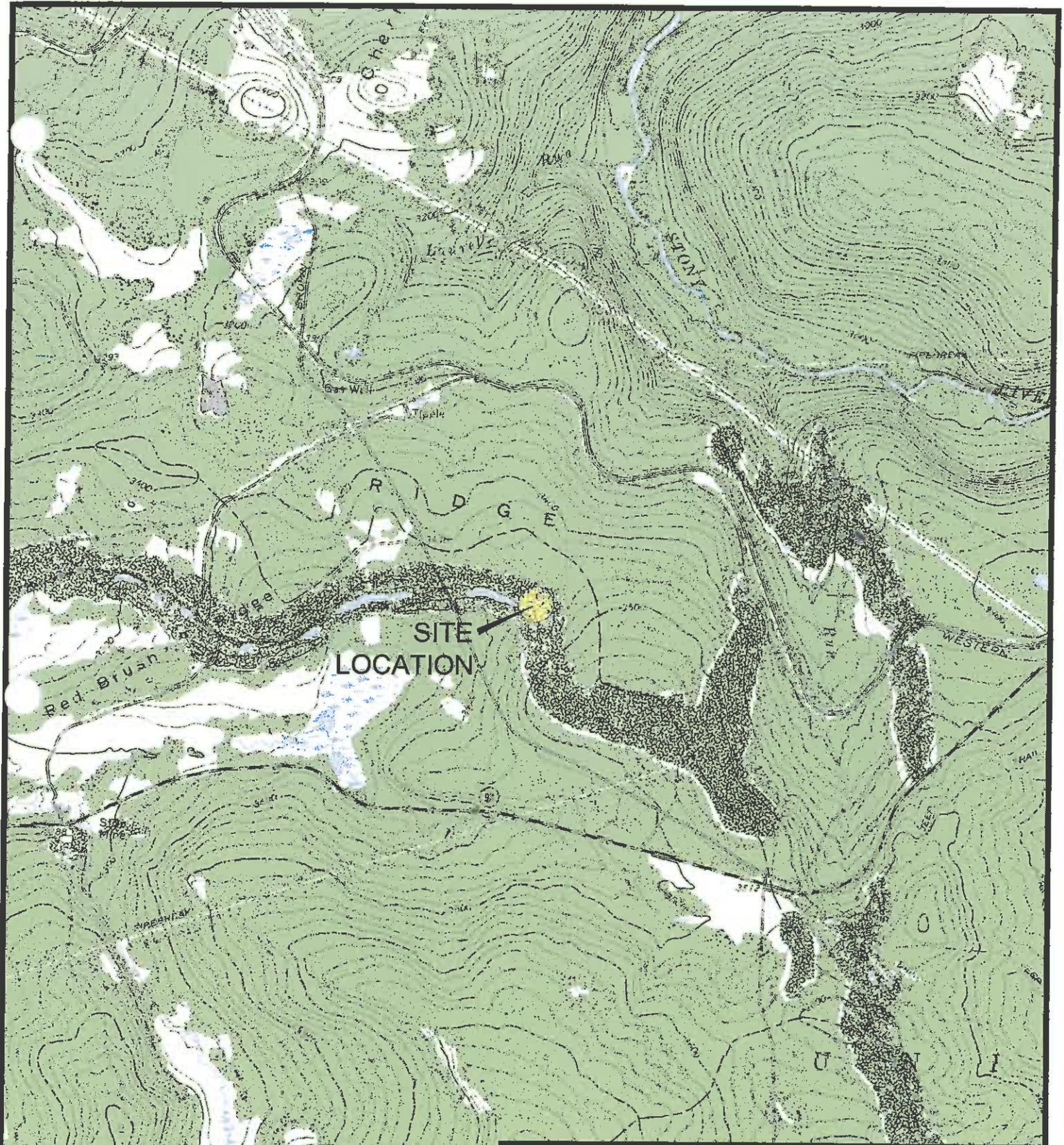
Change in name or change of location shall be considered a cessation of the business and a new
certificate shall be required.

TRAVELING/STREET VENDORS; Must carry a copy of this certificate in every vehicle operated by them.
CONTRACTORS, DRILLING OPERATORS, TIMBER/LOGGING OPERATIONS; Must have a copy of
this certificate displayed at every job site within West Virginia.

PK 000 X.S
L172739836

ATTACHMENT B

AREA MAP



AREA MAP - ATTACHMENT B

**VINDEX ENERGY CORPORATION
DOBBIN RIDGE PREPARATION PLANT**

SCALE: 1"=2000'	CREATED: JULY, 2015	REVISED: JULY, 2015
MFN: 15.528	CREATED BY: PC	REVISED BY: PC

Prepared By:
Surveyor And Associates, Inc.
Kingwood, West Virginia

UNION/DAVIS DISTRICTS
GRANT COUNTY
WEST VIRGINIA
U.S.G.S. QUADRANGLE:

MAP DATUM:
USGS 7.5 MINUTE QUADRANGLE
PHOTO REVISED 1977
MOUNT STORM LAKE, WV

ATTACHMENT C

INSTALLATION AND START UP SCHEDULE

ATTACHMENT C
INSTALLATION AND START UP SCHEDULE

The two Chieftain 1700 power screens will be placed on site as soon as the permit allows for this to happen. This permit modification is to add the new transfer points that will be added by bringing these two power screens onto the permit area. We anticipate these two units being able to operate within one week after the permit approval due to the fact that these are portable units.

ATTACHMENT D

REGULATORY DISCUSSION

ATTACHMENT D
REGULATORY DISCUSSION

There is no change in the regulations to which the facility is subject as a result of adding the two Chieftain 1700 powerscreens.

ATTACHMENT E

PLOT PLAN

This document was too large to scan. If interested in viewing please contact: depfoia@wv.gov or
West Virginia Department of Environmental Protection Public Information Office

FOIA Request

601 57th St. S.E.

Charleston, WV 25304.

The fax number is 304-926-0447.

Thank you.



west virginia department of environmental protection

ATTACHMENT F

PROCESS FLOW DIAGRAM

This document was too large to scan. If interested in viewing please contact: depfoia@wv.gov or

West Virginia Department of Environmental Protection Public Information Office

FOIA Request

601 57th St. S.E.

Charleston, WV 25304.

The fax number is 304-926-0447.

Thank you.



west virginia department of environmental protection

ATTACHMENT G

PROCESS DESCRIPTION

ATTACHMENT G

PROCESS DESCRIPTION

Vindex Energy Corporation proposes to place two 551 ton per hour portable Chieftan 1700 Powerscreens at the Raw Coal Stockpile area (OS-1). The two screens will process up to 1,000,000 tons per year. Raw Coal from stockpile area OS-1 will be placed into the screens with a loader and each screen will have three sizes of material to process through them. Each screen will produce 3 open stockpiles, with the +1 ½ " material going from OS-9 and OS-12 to the refuse pile, the ½ " to 1 ½ " material will go from OS-8 and OS-11 back to the cleaning plant at transfer point TP4. The – ½ " material will go straight to the clean coal stockpile for blending.

ATTACHMENT I

EMISSION UNIT TABLE

ATTACHMENT 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 ³)
		ID No.	Source	ID No.	Device Type	Short Term ²	Max (hr/yr)		lb/hr	ton/yr	lb/hr	ton/yr			
Transfer Points TP39 - TP50	NA	TP39 through TP50	Transfer Points	Varies	Varies	NA	NA	PM	11.08	4.52	10.15	3.69	Solid	EE	NA
									5.24	2.14	4.80	1.74			
Open Stockpiles	NA	OS7 through OS12	Open Stockpiles	Varies	Varies	NA	NA	PM	0.14	0.62	0.14	0.62	Solid	EE	NA
									0.07	0.29	0.07	0.29			
Vehicular Activity	NA	VA	VA	C	NA	NA	NA	PM	137.36	202.98	20.60	30.45	Solid	EE	NA
									40.54	59.91	6.08	8.99			
Screens	NA	SC3 SC4	SC3 SC4	Varies	NA	NA	NA	PM	110.20	100.0	55.10	50.00	Solid	EE	NA
									51.79	47.00	25.90	23.50			

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 (i.e., 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, CS₂, VOCs, H₂S, Inorganics, Lead, Organics, O₃, NO, NO₂, SO₂, SO₃, all applicable Greenhouse Gases (including CO₂ and methane), etc. DO NOT LIST H₂, H₂O, N₂, O₂, 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 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? <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No <input checked="" type="checkbox"/> If YES, then complete the HAUL ROAD EMISSIONS UNIT DATA SHEET.
2.) Will there be Storage Piles? <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No <input checked="" type="checkbox"/> If YES, complete Table 1 of the NONMETALLIC MINERALS PROCESSING EMISSIONS UNIT DATA SHEET.
3.) Will there be Liquid Loading/Unloading Operations? <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No <input type="checkbox"/> If YES, complete the BULK LIQUID TRANSFER OPERATIONS EMISSIONS UNIT DATA SHEET.
4.) Will there be emissions of air pollutants from Wastewater Treatment Evaporation? <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No <input type="checkbox"/> 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.)? <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No <input type="checkbox"/> 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? <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No <input type="checkbox"/> If YES, complete the GENERAL EMISSIONS UNIT DATA SHEET.
7.) Will there be any other activities that generate fugitive emissions? <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No <input type="checkbox"/> 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/hr	ton/yr	lb/hr	ton/yr	
Haul Road/Road Dust Emissions Paved Haul Roads	Not Applicable					
Unpaved Haul Roads	TSP PM10	137.36 40.54	202.98 59.91	20.60 6.08	30.45 8.99	EE
Storage Pile Emissions	TSP PM10	0.14 0.07	0.62 0.29	0.14 0.07	0.62 0.29	EE
Loading/Unloading Operations	Not Applicable					
Wastewater Treatment Evaporation & Operations	Not Applicable					
Equipment Leaks	Not Applicable	Does not apply		Does not apply		
General Clean-up VOC Emissions	Not Applicable					
Other	Not Applicable					

¹ List all regulated air pollutants. Speciate VOCs, including all HAPs. Follow chemical name with Chemical Abstracts Service (CAS) number. LIST Acids, CO, CS₂, VOCs, H₂S, Inorganics, Lead, Organics, O₃, NO, NO₂, SO₂, SO₃, all applicable Greenhouse Gases (including CO₂ and methane), etc. DO NOT LIST H₂, H₂O, N₂, O₂, 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).

ATTACHMENT L

EMISSIONS UNIT DATA SHEET(S)

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 (%)	9	9
p =	Number of days per year with precipitation >0.01 in.	170	170

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	Endloader For Coal Transfer	4	32	5	0.1	60	200000	HR-CS	85
2	18 Wheel Truck	18	52	15	0.2	20	50000	HR-CS	85
3									
4									
5									
6									
7									
8									

Source: AP-42 Fifth Edition – 13.2.2 Unpaved Roads

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

Where:

		PM	PM-10
k =	Particle size multiplier	0.80	0.36
s =	Silt content of road surface material (%)	9	9
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.	170	170

For lb/hr: $[\text{lb} \div \text{VMT}] \times [\text{VMT} \div \text{trip}] \times [\text{Trips} \div \text{Hour}] = \text{lb/hr}$

For TPY: $[\text{lb} \div \text{VMT}] \times [\text{VMT} \div \text{trip}] \times [\text{Trips} \div \text{Hour}] \times [\text{Ton} \div 2000 \text{ lb}] = \text{Tons/year}$

SUMMARY OF UNPAVED HAULROAD EMISSIONS

Item No.	PM				PM-10			
	Uncontrolled lb/hr	Controlled TPY						
1	75.08	125.14	11.26	18.77	22.16	36.94	3.32	5.54
2	62.28	77.84	9.34	11.68	18.38	22.97	2.76	3.45
3								
4								
5								
6								
7								
8								
TOTALS	137.36	202.98	20.60	30.45	40.54	59.91	6.08	8.99

Affected Source Sheet

Source Specific Emissions Data: Solid Materials Sizing, Handling and Storage Facilities

Required Information Regarding Dust Control Equipment Measures

1. If water or chemical sprays are to be used on conveyors, transfer points, stockpiles, etc... for dust control, the location of all spray bars or spray systems should be shown on the plot plans and/or line drawings. The following information should be provided for each spray system:
 - a. Design water flow through spray bar
 - b. Type and amount of chemicals used and the mix ratio of chemical to water used at the sprays.
 - c. Methods employed to winterize sprays (e.g. keep sprays from freezing and becoming inoperable during cold weather)

2. A detailed written description should be submitted of dust control measures/programs that will be employed on haul roads and in areas of vehicle activity around material stockpiled. The haulways and areas to be treated should be shown by shading or similar description on the plant plan. The following points should be specifically addressed:
 - a. Equipment (e.g. water trucks, fixed spray bars, wheel and truck underbody washers, etc...) that will be used in this dust control program.
 - b. Frequency of application of water and chemical to roads and stockpile areas during dry periods.
 - c. Amount of chemical suppressants to be used, if applicable, in pounds or gallons per square yard of surface to be treated.
 - d. Type of haulroad or haulway surface(s) that will be maintained (e.g. coarse gravel, reddog, etc...)
 - e. Approximate maximum length of haulroads (miles or feet).
 - f. Maximum daily truck traffic on haulroads (number of trucks).

3. If full or partial enclosures are to be used to minimize dust entrainment, a drawing of each such enclosure should be submitted (for example at truck dump bins, breakers, conveyor transfer points).

4. If particulate control devices such as baghouses or scrubbers are to be used, complete an appropriate Air Pollution Control Device Sheet and furnish a drawing showing details of enclosures and ductwork associated with these control systems.

AFFECTED SOURCE SHEET

Source Specific Emissions Data: Solid Materials Sizing, Handling, and Storage Facilities

Plot Plan(s) and Line Drawing(s)

- a. Finish the plot plan(s) of the plant area which contains sufficient detail to show the scaled layout of the equipment involved in each materials handling system (e.g. conveyors, transfer points, crushers, screens, bins, stockpiles, truck dump bins, etc...). Show equipment or buildings described in other sections of this application on the plot plan as appropriate. The guidelines for Plot Plans should be followed to the extent possible.
- b. Furnish the line drawing(s) or schematic(s) showing each component or facet of each materials handling system (e.g. conveyors, transfer points, stockpiles, crushers, screens, bins etc...). Show process equipment described in other sections of this application as needed for clarity.
- c. On the line drawing(s) or schematic(s) furnished in accordance with item (b) assign an ID number to each conveyor, transfer point (including truck, barge and rail car loading/unloading etc...), storage structure, stockpile, crusher, and screening unit. If any equipment is shown on the line drawing(s) which was described in other sections of this application, use the ID numbers assigned to the equipment in those other sections and indicate equipment name or type (e.g. rotary dryer, vertical kiln etc...)
- d. To the extent possible, note the numbers assigned for equipment and storage facilities as per item (c) on the Plot Plans(s).
- e. The assigned ID numbers for equipment and transfer points must be used to complete Tables 1, 2, and 3 following.

TABLE 1: Affected Storage Activity

ID Number	OS7	OS8	OS9	OS10	OS11	OS12
Affected Source Name	OS7	OS8	OS9	OS10	OS11	OS12
Type Storage¹	OS	OS	OS	OS	OS	OS
Material Stored	<½" sized coal	½" - 1 ½" sized coal	> 1½" sized coal	<½" sized coal	½" - 1 ½" sized coal	> 1½" sized coal
Typical Moisture Content %	3.5%	3.5%	3.5%	3.5%	3.5%	3.5%
Avg % of material passing 200 mesh sieve	9	9	9	9	9	9
Maximum Total Yearly Throughput in storage (tons)	340,000	340,000	340,000	340,000	340,000	340,000
Maximum Quantity of Material in Storage²	4,700	4,700	4,700	4,700	4,700	4,700
Maximum Stockpile Base Area (sq. ft.)	5,300	5,300	5,300	5,300	5,300	5,300
Maximum Stockpile Height (ft)	15.5 ft.	15.5 ft.	15.5 ft.	15.5 ft.	15.5 ft.	15.5 ft.
Type dust controls during storage³	N	N	N	N	N	N
Method of material load-in to bin or stockpile⁴	SS	SS	SS	SS	SS	SS
Type dust controls during load-in⁵	N	N	N	N	N	N
Method of material load-out to bin or stockpile⁴	FE	FE	FE	FE	FE	FE
Type dust controls during load out⁵	N	N	N	N	N	N

TABLE 2: Conveying and Transfer

ID Number	Type Conveyor or Transfer Point ⁶	Material Handled (Note nominal size of material transferred) ⁷	Material Conveying or Transfer Rate		Type Dust Control Measures ⁵	Approximate Material Moisture Content (%)
			Maximum TPH	Maximum TPY		
Conveyor Belts						
BC18	BC	< ½"	551	340,000	N	3.5
BC19	BC	½" - 1 ½"	551	340,000	N	3.5
BC20	BC	>1 ½"	551	340,000	N	3.5
BC21	BC	< ½"	551	340,000	N	3.5
BC22	BC	½" - 1 ½"	551	340,000	N	3.5
BC23	BC	>1 ½"	551	340,000	N	3.5
Transfer Points						
TP39	OTH1	10" X 0"	551	340,000	PE	3.5
TP40	OTH2	< ½"	551	340,000	N	3.5
TP41	OTH2	½" - 1 ½"	551	340,000	N	3.5
TP42	OTH2	>1 ½"	551	340,000	N	3.5
TP43	OTH3	< ½"	551	340,000	N	3.5
TP44	OTH3	>1 ½"	551	340,000	N	3.5
TP45	OTH1	10" X 0"	551	340,000	N	3.5
TP46	OTH2	<½"	551	340,000	N	3.5
TP47	OTH2	½" - 1 ½"	551	340,000	N	3.5
TP48	OTH2	>1 ½"	551	340,000	N	3.5
TP49	OTH3	< ½"	551	340,000	N	3.5
TP50	OTH3	>1 ½"	551	340,000	N	3.5
OTH1: Endloader to Screen						
OTH2: Conveyor to Stockpile						
OTH3: Endloader to Stockpile						

Table 3: Crushing and Screening

ID Number		SC3	SC4	
Type Crusher or Screen ⁸		chieftain powerscreen	chieftain powerscreen	
Material Sized		Raw Coal	Raw Coal	
Maximum Material Throughput	Tons/hour	551	551	
	Tons/year	1,000,000	1,000,000	
Material sized from/to: ⁹		6" X 0" 1 ½" X 0"	6" X 0" 1 ½" X 0"	
Typical moisture content as crushed or screened %		3.5	3.5	
Type dust control		PE	PE	
Stack Parameters	height ft.	N/A	N/A	
	diameter ft.	N/A	N/A	
	Volume (ACFM)	N/A	N/A	
	Temp (°F)	N/A	N/A	
Maximum Operating Schedule	hour/day	24	24	
	day/year	365	365	
	hour/year	8,760	8,760	
Approximate Percentage of Operation from:	Jan - Mar	25	25	
	April - June	25	25	
	July - Sept.	25	25	
	Oct. - Dec.	25	25	
Maximum Particulate Emissions	lb/hour	55.10 Uncontrolled PM	55.10 Uncontrolled PM	
	Ton/year	50.00 Uncontrolled PM	50.00 Uncontrolled PM	

Emissions from screening was calculated using spreadsheet from General Permit G-10B.

1 Type Storage - Code as follows: (Note capacity of each bin, building or enclosure)

- OS - Open Stockpile
- B - Bin or Storage Silo (full enclosure)
- SB - Storage Building (full enclosure)
- E- Enclosure (walls but no top)
- SWF- Stockpiles with wind fences
- OTH- Other - Specify in footnote or attachment

2. Give maximum and average quantity of material in storage at any given time (e.g. silo capacity, stockpile size, etc...)

3. TYPE DUST CONTROLS DURING STORAGE

If storage is by other than by bin or full enclosure Code as follows:

- N - None
- WS- Water Sprays
- C- Spraying with chemical surfactant
- OTH- Other - Specify in footnote or attachment

4. METHOD OF PLACING MATERIAL ONTO STOCKPILE OR INTO BINS OR LOADING OUT FROM STOCKPILES OR BINS - Code as follows:

- C- Clamshell
- TD- Truck Dumping
- FE- Front Endloader
- ST- Stacking Tubes
- MS- Mobile Conveyor - Stacker
- SS- Stationary Conveyor - Stacker
- P- Pneumatic Conveyor - Stacker
- FC- Fixed Height Chute from bins
- TC- Telescoping Chute from bins
- UC- Under-pole or under-bin reclaim conveyor
- RC- Reclaim Conveyor (rake or bucket reclaim conveyor reclaiming from surface of stockpile)
- OTH- Other - Describe in a footnote or attachment

5. TYPE DUST CONTROLS - Code as follows:

- N- None
- WS- Water Sprays
- WSA- Water Sprays with Wetting Agents
- CS- Chemical Dust Suppressant (sprays, etc...)
- FE- Full Enclosures
- PE- Partial Enclosures
- MD- Minimization of material drop height
- EM- Enclosure and evacuation to mechanical collector
- EB- Enclosure and evacuation to baghouse
- ES- Enclosure and evacuation to scrubber
- OTH- Other - describe in footnote or attachment

6. TYPE CONVEYOR OR TRANSFER POINT - Code as follows:

Conveyors

- BC- Belt Conveyor
- VC- Vibrating Conveyor
- SC- Screw Conveyor
- DL- Drag-link conveyor
- BE- Bucket Elevator
- PS- Pneumatic System
- OTH- Other describe in footnote or attachment

Transfer Points

- 01- Conveyor to Conveyor
 - 02- Conveyor to Bucket Elevator
 - 03- Conveyor to Hopper or Bin
 - 04- Bucket Elevator to Hopper or Bin
 - 05- Pneumatic conveyor to bin
 - 06- Truck Dumping onto ground
 - 07- Truck Dumping into hopper
 - 08- Loading trucks through stationary chute
 - 09- Loading trucks through telescoping chute
 - 10- Loading Trucks by endloader
 - 11- Railcar unloading-side or bottom dumping
 - 12- Railcar unloading-rotary unloader
 - 13- Railcar loading /unloading by pneumatic system
 - 14- Railcar loading through stationary source
 - 15- Railcar loading through telescopic chute
 - 16- Railcar loading by front end-loader
 - 17- Railcar loading by railcar
 - 18- Barge loading/unloading by clamshell
 - 19- Barge unloading - bucket ladder unloader
 - 20- Barge unloading - from a fixed-height conveyor or stationary chute
 - 21- Barge loading - variable height conveyor or telescoping chute
 - 22- Other - describe in footnote or attachment
7. If more than one material is handled by the listed conveyor or transfer point list each material and furnish the requested data in the table for each material.
8. Describe type of unit such as hammermill, ball mill, double-deck (DD) screen, double roll (DR) crusher, etc...
9. Describe nominal size reduction, example +2"/ -3/8



Powerscreen® Chieftain 1700S 2 Deck

Specification - Rev 5. 01/01/2013

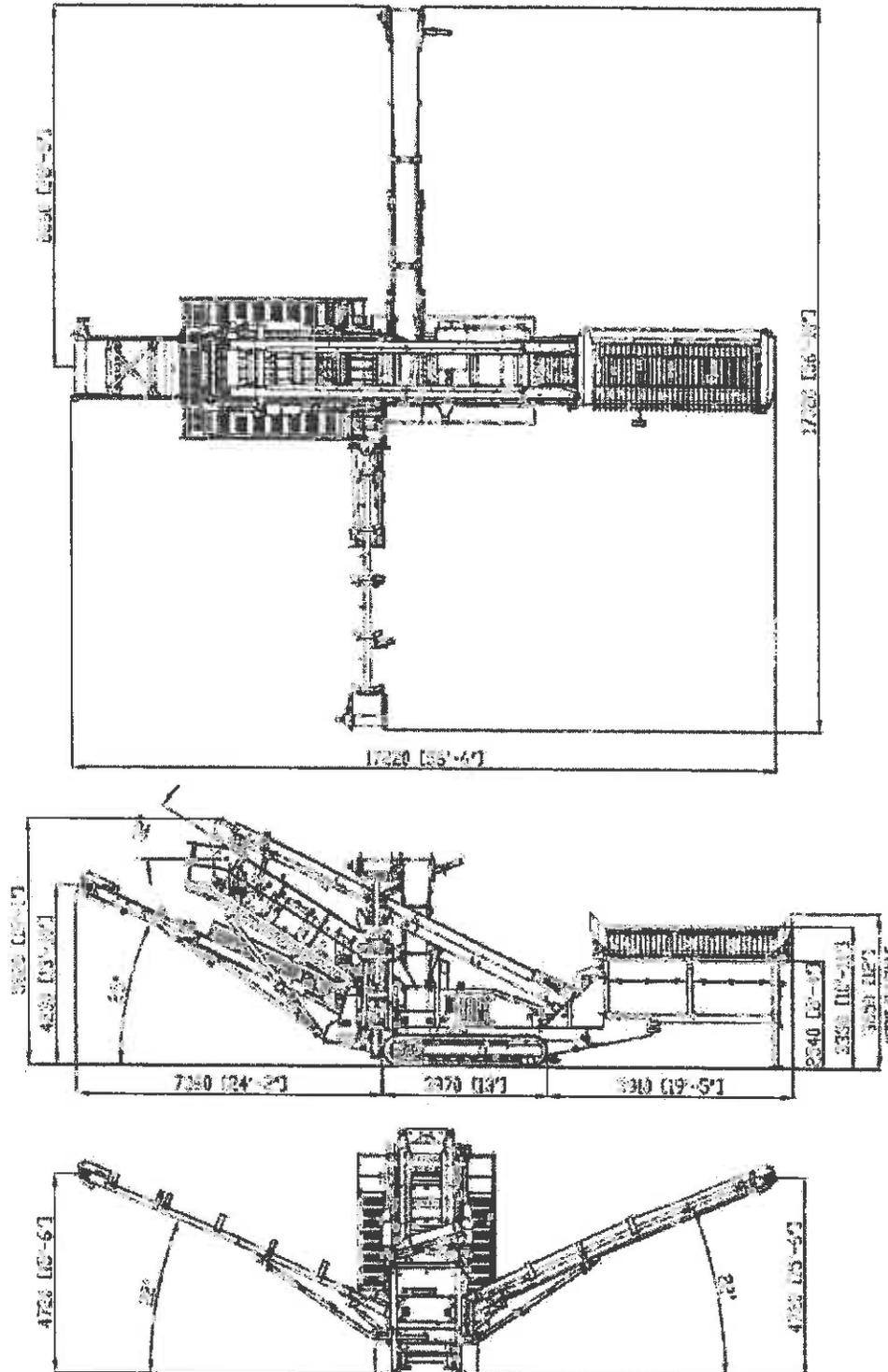


Figure 1: Chieftain 1700S 2 Deck Track Working Position

All specifications subject to change without prior notice



ATTACHMENT N

SUPPORTING EMISSIONS CALCULATIONS

EMISSIONS SUMMARY

Name of applicant: Vindex Energy Corporation
 Name of plant: Dobbin Ridge Prep Plant

Particulate Matter or PM (for 45CSR14 Major Source Determination)

Uncontrolled PM		Controlled PM	
lb/hr	TPY	lb/hr	TPY

FUGITIVE EMISSIONS				
<i>Stockpile Emissions</i>	0.14	0.62	0.14	0.62
<i>Unpaved Haulroad Emissions</i>	137.36	202.98	20.60	30.45
<i>Paved Haulroad Emissions</i>	0.00	0.00	0.00	0.00
Fugitive Emissions Total	137.50	203.61	20.75	31.07

POINT SOURCE EMISSIONS				
<i>Equipment Emissions</i>	110.20	100.00	55.10	50.00
<i>Transfer Point Emissions</i>	11.08	4.52	10.15	3.69
Point Source Emissions Total*	121.28	104.52	65.25	53.69

*Note: Point Source Total Controlled PM TPY emissions is used for 45CSR14 Major Source determination (see below)

Facility Emissions Total	258.78	308.13	86.00	84.76
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***Facility Potential to Emit (PTE) (Baseline Emissions) = 53.69**
 (Based on Point Source Total controlled PM TPY emissions from above) **ENTER ON LINE 26 OF APPLICATION**

Particulate Matter under 10 microns, or PM-10 (for 45CSR30 Major Source Determination)

Uncontrolled PM-10		Controlled PM-10	
lb/hr	TPY	lb/hr	TPY

FUGITIVE EMISSIONS				
<i>Stockpile Emissions</i>	0.07	0.29	0.07	0.29
<i>Unpaved Haulroad Emissions</i>	40.54	59.91	6.08	8.99
<i>Paved Haulroad Emissions</i>	0.00	0.00	0.00	0.00
Fugitive Emissions Total	40.61	60.21	6.15	9.28

POINT SOURCE EMISSIONS				
<i>Equipment Emissions</i>	51.79	47.00	25.90	23.50
<i>Transfer Point Emissions</i>	5.24	2.14	4.80	1.74
Point Source Emissions Total*	57.03	49.14	30.70	25.24

*Note: Point Source Total Controlled PM-10 TPY emissions is used for 45CSR30 Major Source determination

Facility Emissions Total	97.64	109.34	36.85	34.52
---------------------------------	--------------	---------------	--------------	--------------

3. WIND EROSION OF STOCKPILES (including all stockpiles of raw coal, clean coal, coal refuse, etc.)

p =	number of days per year with precipitation >0.01 inch	157
f =	percentage of time that the unobstructed wind speed exceeds 12 mph at the mean pile height	20

Source ID No.	Stockpile Description	Silt Content of Material %	Stockpile base area Max. sqft	Control Device ID Number	Control Efficiency %
OS-7	< 1/2" Coal Stockpile	3.5	5,300	NA	0
OS-8	1/2" to 1 1/2" coal Stockpile	3.5	5,300	NA	0
OS-9	>1 1/2" Coal Stockpile	3.5	5,300	NA	0
OS-10	< 1/2" Coal Stockpile	3.5	5,300	NA	0
OS-11	1/2" to 1 1/2" coal Stockpile	3.5	5,300	NA	0
OS-12	>1 1/2" Coal Stockpile	3.5	5,300	NA	0

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

s =	silt content of road surface material (%)	10
p =	number of days per year with precipitation >0.01 inch	157
M _{dry} =	surface material moisture content (%) - dry conditions	0.2

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	Endloader To ROM Coal Transfer	4	32	5	0.1	60	#####	HR-CS	85
2	18 Wheel Truck	18	52	15	0.2	20	50,000	HR-CS	85
3									
4									
5									
6									
7									
8									

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

sL =	road surface silt loading, (g/ft ²)	70
P =	number of days per year with precipitation >0.01 inch	157

Item Number	Description	Mean Vehicle Weight (tons)	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							

EMISSION FACTORS

source: Air Pollution Engineering Manual and References
(lb/ton of material throughput)

PM	
Primary Crushing	0.02
Tertiary Crushing	0.06
Screening	0.1

PM-10	
Primary Crushing	0.0094
Tertiary Crushing	0.0282
Screening	0.047

2. Emissions From TRANSFER POINTS (continued)

Transfer Point ID No.	PM				PM-10			
	Uncontrolled		Controlled		Uncontrolled		Controlled	
	lb/hr	TPY	lb/hr	TPY	lb/hr	TPY	lb/hr	TPY
0	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
0	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
0	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
0	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
TOTALS	11.077	4.523	10.154	3.686	5.239	2.139	4.803	1.743

Source:

AP42, Fifth Edition, Revised 11/2006
 13.2.4 Aggregate Handling and Storage Piles

Emissions From Batch Drop

$$E = k \cdot (0.0032) \cdot [(U/5)^{1.3}] / [(M/2)^{1.4}] = \text{pounds/ton}$$

Where:

		PM	PM-10
k =	Particle Size Multiplier (dimensionless)	0.74	0.35
U =	Mean Wind Speed (mph)		
M =	Material Moisture Content (%)		

Assumptions:

k - Particle size multiplier

For PM (< or equal to 30um) k = 0.74

For PM-10 (< or equal to 10um) k = 0.35

Emission Factor

For PM E= $\$I\$88 \cdot (0.0032) \cdot (((\text{Inputs!}\$I\$72)/5)^{1.3}) / (((\text{Inputs!}G78 + 0.000000001)/2)^{1.4})$
 =lb/ton

For PM-10 E= $\$J\$88 \cdot (0.0032) \cdot (((\text{Inputs!}\$I\$72)/5)^{1.3}) / (((\text{Inputs!}G78 + 0.000000001)/2)^{1.4})$
 =lb/ton

For lb/hr $[\text{lb/ton}] \cdot [\text{ton/hr}] = [\text{lb/hr}]$

For Tons/year $[\text{lb/ton}] \cdot [\text{ton/yr}] \cdot [\text{ton}/2000\text{lb}] = [\text{ton/yr}]$

3. Emissions From WIND EROSION OF STOCKPILES

Stockpile ID No.	PM				PM-10			
	Uncontrolled		Controlled		Uncontrolled		Controlled	
	lb/hr	TPY	lb/hr	TPY	lb/hr	TPY	lb/hr	TPY
OS-7	0.024	0.104	0.024	0.104	0.011	0.049	0.011	0.049
OS-8	0.024	0.104	0.024	0.104	0.011	0.049	0.011	0.049
OS-9	0.024	0.104	0.024	0.104	0.011	0.049	0.011	0.049
OS-10	0.024	0.104	0.024	0.104	0.011	0.049	0.011	0.049
OS-11	0.024	0.104	0.024	0.104	0.011	0.049	0.011	0.049
OS-12	0.024	0.104	0.024	0.104	0.011	0.049	0.011	0.049
0	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
0	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
0	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
0	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
0	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
0	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
TOTALS	0.142	0.624	0.142	0.624	0.067	0.293	0.067	0.293

Source:

Air Pollution Engineering Manual

Storage Pile Wind Erosion (Active Storage)

$$E = 1.7 * [s/1.5] * [(365-p)/235] * [f/15] = (\text{lb/day/acre})$$

Where:

s =	silt content of material
p =	number of days with >0.01 inch of precipitation per year
f =	percentage of time that the unobstructed wind speed exceeds 12 mph at the mean pile height

Emission Factors

For PM $E = (1.7) * ((\text{Inputs!F147})/1.5) * ((365 - \text{Inputs!I139})/235) * ((\text{Inputs!I140})/15)$

For PM-10 $E = 0.47 * (1.7) * ((\text{Inputs!F147})/1.5) * ((365 - \text{Inputs!I139})/235) * ((\text{Inputs!I140})/15)$

For lb/hr $[\text{lb/day/acre}] * [\text{day}/24\text{hr}] * [\text{base area of pile (acres)}] = \text{lb/hr}$

For Ton/yr $[\text{lb/day/acre}] * [365\text{day/yr}] * [\text{Ton}/2000\text{lb}] * [\text{base area of pile (acres)}] = \text{Ton/yr}$

4. Emissions From UNPAVED HAULROADS

Item No.	PM				PM-10			
	Uncontrolled		Controlled		Uncontrolled		Controlled	
	lb/hr	TPY	lb/hr	TPY	lb/hr	TPY	lb/hr	TPY
1	75.08	125.14	11.26	18.77	22.16	36.94	3.32	5.54
2	62.28	77.85	9.34	11.68	18.38	22.98	2.76	3.45
3	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
4	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
5	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
6	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
7	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
8	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
TOTALS	137.36	202.98	20.60	30.45	40.54	59.91	6.08	8.99

Source:

AP42, Fifth Edition, Revised 11/2006
13.2.2 Unpaved Roads

Emission Estimate For Unpaved Haulroads at Industrial Sites (equation 1)

$$E = k \cdot ((s/12)^a) \cdot ((W/3)^b) = \text{lb/vmt}$$

Where:

		PM	PM-10
k =	particle size multiplier	4.90	1.50
a =	empirical constant	0.7	0.9
b =	empirical constant	0.45	0.45

Emission Factors

For PM $E = ((\$35) \cdot (((\text{Inputs!}\$163)/12)^{(\$36)}) \cdot (((\text{Inputs!}H171)/3)^{\$37}))$

For PM-10 $E = ((\$J35) \cdot (((\text{Inputs!}\$163)/12)^{(\$J36)}) \cdot (((\text{Inputs!}H171)/3)^{\$J37}))$

For lb/hr $(\text{lb/vmt}) \cdot (\text{miles per trip}) \cdot (\text{Max trips per hour})$

For Ton/yr $(\text{lb/vmt}) \cdot (\text{miles per trip}) \cdot (\text{Max trips per year}) \cdot (1/2000)$

ATTACHMENT O

**MONITORING, RECORDKEEPING, REPORTING, AND
TESTING PLANS**

ATTACHMENT O

MONITORING, RECORDKEEPING, REPORTING, AND TESTING PLANS

The facility will continue to monitor, keep records, report and test as required by the existing permit.

ATTACHMENT P

PUBLIC NOTICE

Certificate of Publication

State of West Virginia
County of Grant, to-wit:

The undersigned hereby certifies
that the annexed notice was duly
published in the

Grant County Press

a weekly newspaper published at
Petersburg, Grant County, West
Virginia, for 1 consecutive
weeks ending on the 18 day of

August, 2015.

GRANT COUNTY PRESS

By William C. Touch
Editor

Publishing Notice \$ 37.03

Hand Bills _____

Miscellaneous _____

Total \$ 37.03

Sworn before me on this the 18

day of Aug, 2015

Peggy G. Hughes
Notary Public

Dec 17, 2022
My Commission Expires

AIR QUALITY PERMIT NOTICE Notice of Application

Notice is hereby given
that Vindex Energy Corpo-
ration has applied to the West
Virginia Department of Envi-
ronmental Protection, Divi-
sion of Air Quality, for a Mod-
ification Permit for a coal
preparation plant located off
of West Virginia State Route
93, near Blismarck, in Grant
County, West Virginia. The
latitude and longitude are:
Longitude -79.317634, Lat-
itude 39.213375. The appli-
cant estimates the increased
potential to discharge the fol-
lowing Regulated Air Pollu-
tants will be: PM 84.76 tons
per year and PM 10 of 34.52
tons per year.

Startup of operation is
planned to begin on or about
the 1st day of October, 2015.
Written comments will be re-
ceived by the West Virginia
Department of Environmental
Protection, Division of Air
Quality, 601 57th Street, SE,
Charleston, WV 25304, for at
least 30 calendar days from
the date of publication of this
notice.

Any questions regarding
this permit application should
be directed to the DAQ at
(304) 926-0499, extension
1250, during normal business
hours.

Dated this the 18th day of
August, 2015.

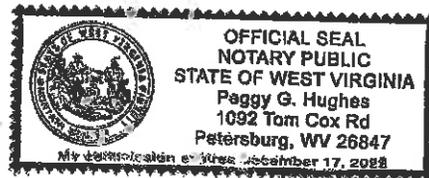
By: **Vindex Energy
Corporation**

Greg Nair

**Manager of Surface
Mine Planning**

**2708 Cranberry Square
Morgantown, WV 26508**

8/18



AIR QUALITY PERMIT NOTICE

Notice of Application

Notice is hereby given that Vindex Energy Corporation has applied to the West Virginia Department of Environmental Protection, Division of Air Quality, for a Modification Permit for a coal preparation plant located off of West Virginia State Route 93 near Bismarck, in Grant County West Virginia. The latitude and longitude are: Longitude -79.317634, Latitude 39.213375

The applicant estimates the increased potential to discharge the following Regulated Air Pollutants will be: PM 84.76 tons per year and PM10 of 34.52 tons per year.

Startup of operation is planned to begin on or about the 1st day of October, 2015. Written comments will be received by the West Virginia Department of Environmental Protection, Division of Air Quality, 601 57th Street, SE, Charleston, WV 25304, for at least 30 calendar days from the date of publication of this notice.

Any questions regarding this permit application should be directed to the DAQ at (304) 926-0499, extension 1250, during normal business hours.

Dated this the 18th day of August, 2015.

By: Vindex Energy Corporation
Greg Nair
Manager of Surface Mine Planning
2708 Cranberry Square
Morgantown, WV 26508

ATTACHMENT R

Authority/Delegation of Authority

POWER OF ATTORNEY

**VINDEX ENERGY CORPORATION
TO
GREG NAIR**

Dated: January 1, 2015

Expires: December 31, 2015

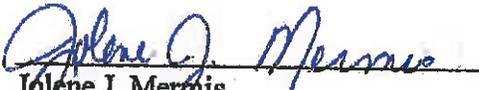
KNOW ALL MEN BY THESE PRESENTS: That Vindex Energy Corporation ("Company"), a corporation organized and existing under the laws of the State of West Virginia, acting by and through James E. Florczak, its duly authorized Vice President and Treasurer, has and does hereby appoint Greg Nair its true and lawful Attorney-in-Fact with power and authority, for and on behalf, and in the name of the Company, during the period herein specified, and subject to the restrictions and limitations set forth in this Power, to execute, acknowledge and deliver in the ordinary and regular course of the Company's business, applications for mining, environmental, safety, and health permits, permit transfers, or permit bond releases or bond adjustments, amendments, supplements or modifications to such permits, certificates or other instruments directly related to such amendments, supplements or modifications, monthly production reports, air quality, water quality or other environmental reports, quarterly discharge monitoring reports and any other like or similar reports required to be filed with any local, state or federal governmental agency.

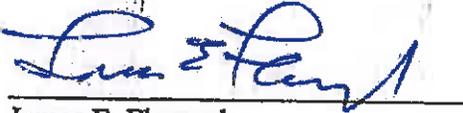
The Attorney herein appointed shall be authorized to act pursuant to this Power from the date hereof only so long as such Attorney shall remain an employee of Arch Coal, Inc. or any subsidiary thereof, or until December 31, 2015, or until such earlier time as this instrument has been revoked, annulled, rescinded or set aside by an instrument of revocation filed with the Secretary of the Company, whichever first occurs.

IN WITNESS WHEREOF, the Company has caused this Power of Attorney to be executed on its behalf, and its seal to be hereunto affixed and attested as of the day and year first above written, by the undersigned, James E. Florczak, duly authorized Vice President and Treasurer of the Company, and Jolene J. Mermis, duly elected Assistant Secretary of the Company.

Attest:

VINDEX ENERGY CORPORATION


Jolene J. Mermis
Assistant Secretary of the Company


James E. Florczak
Vice President and Treasurer