April 13, 2017

Assistant Director for Permitting
WVDEP - Division of Air Quality
601 57th Street, SE
Charleston, WV 25304

Overnight Delivery

Axens North America, Inc.
Willow Island Plant - Belmont, WV
DAQ ID# 073-00023

SUBJECT: Application for Administrative Update to Permit R13-2384

Dear Assistant Director:

Axens North America, Inc. (Axens) hereby submits to the Division of Air Quality (DAQ) the enclosed application for a Class II administrative update to Permit R13-2384.

Also enclosed is our Rule 13 permit application fee check for $1,300.00. We will submit to you the Affidavit of Publication of the required Rule 13 Public Notice legal advertisement in the near future.

Please note that we have included as Appendix 1 to this application our source-proposed revisions to the Rule 13 permit specific requirements. We look forward to working with DAQ during the review of this application, and we request an opportunity to review a pre-draft version of the Rule 13 permit.

Note that no Confidential Business Information is included within the attached permit application.

Should you have additional questions regarding this submittal please contact me at (304) 665-4307 or astrimer@axensna.com.

Very truly yours,

Adam Strimer
QHSE Supervisor

Enclosures

TABLE OF CONTENTS

WEST VIRGINIA DEPARTMENT OF ENVIRONMENTAL PROTECTION

DIVISION OF AIR QUALITY

601 57th Street, SE
Charleston, WV 25304
(304) 926-0475
www.wvdep.org/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):* Axens North America, Inc.

2. Federal Employer ID No. ***(FEIN):*** 13-3529567

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

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

5A. Applicant's mailing address:
Axens North America, Inc.
#74 Catalyst Drive
Belmont, WV 26134

5B. Facility's present physical address:
Axens North America, Inc.
#74 Catalyst Drive
Belmont, WV 26134

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: Blue Danube Incorporated

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: Existing 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.): Catalyst Manufacturing Plant

10. North American Industry Classification System **(NAICS)** code for the facility: 325180

11A. DAQ Plant ID No. (for existing facilities only): 073-00023

11B. List all current 45CSR13 and 45CSR30 (Title V) permit numbers associated with this process (for existing facilities only): R13-2384 (effective December 14, 2000)

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**.

From Interstate 77, Exit 179, take State Route 2, north approximately 10 miles. The existing plant site on left (river side) of State Route 2, two miles south of Belmont, WV.

12.B. New site address (if applicable):	12C. Nearest city or town:	12D. County:
NA	Belmont	Pleasants
12.E. UTM Northing (KM): 4,356.22	12F. UTM Easting (KM): 473.42	12G. UTM Zone: 17

13. Briefly describe the proposed change(s) at the facility:

Applicant proposes to replace existing East and West Impregnator Tray Drying Ovens with a new Fluid Bed Dryer and Dust Collector control device; remove North and South CPA Reactors; other equipment minor changes.

14A. Provide the date of anticipated installation or change: June 2017 – 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: August 2017

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:

☐ 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: Fluid bed dryer

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 Michael P. Nau *(Please use blue ink)* DATE: 4-13-2017 *(Please use blue ink)*

35B. Printed name of signee: Michael P. Nau		35C. Title: Plant Manager
35D. E-mail: MNau@axensna.com	36E. Phone: (304) 665-4317	36F. FAX: (304) 665-4331
36A. Printed name of contact person (if different from above): Adam Strimer		36B. Title: QHSE Supervisor
36C. E-mail: astrimer@axensna.com	36D. Phone: (304) 665-4307	36E. FAX: (304) 665-4331

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.

Attachment A

Business Certificate

WEST VIRGINIA
STATE TAX DEPARTMENT

BUSINESS REGISTRATION CERTIFICATE

ISSUED TO:
AXENS NORTH AMERICA, INC.
74 CATALYST DR
BELMONT, WV 26134-9749

BUSINESS REGISTRATION ACCOUNT NUMBER: **2248-0329**

This certificate is issued on: 04/5/2011

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.

atL006 v.4
L1069188224

ATTACHMENT C – INSTALLATION & START UP SCHEDULE

Proposed Plant Changes	Begin Installation Date	Initial Startup Date
Replace existing East and West Impregnator Tray Drying Ovens with a new Fluid Bed Dryer and Dust Collector control device; remove North and South CPA Reactors; other minor changes.	June 2017	August 2017

ATTACHMENT D – REGULATORY DISCUSSION

The following table discusses the Clean Air Act applicable regulatory requirements that Axens believes to apply as a result of this proposed permitting action.

Applicable CAA Requirements

Regulatory Citation	Emission Source Affected	Description of Applicability	Compliance Demonstration
45CSR13-5.4	Impregnation Process Area	Axens is requesting revisions to R13-2384 to replace existing East and West Impregnator Tray Drying Ovens with a new Fluid Bed Dryer and Dust Collector control device; remove North and South CPA Reactors; other minor equipment changes.	Apply for Class II administrative update to permit R13-2384; comply with all Rule 13 permit requirements.
45CSR7-3.1	Vent ID# 031C, 054E, 036C, and 034S	20% max. opacity from PM-emitting process vent points, except the new Fluid Bed Dryer that is limited by NSPS UUU.	Axens will comply with this limit because all PM-emitting vent points, except 054E, are controlled with baghouses (031C and 036C) or wet scrubber (034S). PM emissions from vent 054E are low (less than 1.0 lb/hr), thereby assuring compliance from this vent point.
45CSR7-4.1	Vent ID# 046C, 031C, 054E, 036C and 034S	PM emission limits from PM-emitting process vent points.	Axens will comply with this limit because all PM-emitting vent points, except 054E, are controlled with baghouses (046C, 031C and 036C) or wet scrubber (034S). PM emissions from vent 054E are low (less than 1.0 lb/hr), thereby assuring compliance from this vent point.

ATTACHMENT D – REGULATORY DISCUSSION

Applicable CAA Requirements			
Regulatory Citation	**Emission Source Affected**	**Description of Applicability**	**Compliance Demonstration**
45CSR7-4.2	Vent ID# 046C, 054E, 055E and 034S	Mineral acid concentration emission limits from mineral acid (HCl, HNO3) emitting process vent points.	A calculation analysis was performed for each affected vent point to determine compliance with 45 CSR 7 Section 4.2.
45CSR7-5.1	Impregnation process	Fugitive PM control requirement	Section 5.1 will be satisfied through housekeeping measures, strict control of platinum-containing material, and full enclosure of the process within the process building.

ATTACHMENT D – REGULATORY DISCUSSION

Applicable CAA Requirements

Regulatory Citation	Emission Source Affected	Description of Applicability	Compliance Demonstration
40CFR60 – Subpart UUU	Vent ID# 046C and 034S The proposed new Fluid Bed Dryer and the existing No. 4 Calciner in the Impregnation process area. [Note that the proposed increase in production rate and hours of operation are not deemed modifications to the existing No. 4 Calciner by NSPS General Requirements Subpart A.]	PM emission limit of 0.057 g/dscm (57 mg/dscm) from the new Fluid Bed Dryer vent (after control device) [40 CFR 60.732(a)]. Maximum of 10% opacity from Fluid Bed Dryer vent [40 CFR 60.732 (b)]. PM emission limit remains 0.092 g/dscm (92 mg/dscm) from the existing No. 4 Calciner vent (after control device) [40 CFR 60.732(a)].	Compliance is ensured by R13-2384A permit terms A.2., A.3., B.3. and B.6. Initial performance test for new Fluid Bed Dryer is required by §60.8 & 60.732 not later than 180 days after initial startup. Demonstration via Method 5 for PM emissions, and Method 9 observations for the opacity standard applicable to the new Fluid Bed Dryer [40 CFR 60.11 & 60.736]. Compliance is ensured by R13-2384A permit terms A.21., A.22., A.23. and B.6.

Attachment E

Plot Plan

AXENS NORTH AMERICA SITE PLAN
SCALE: 1" = 25'-0"

NO.	DESCRIPTION	BY DATE	CHK DATE
4			
3			
2			
1	ISSUED FOR REVIEW	XXX 10-14	XXX 10-14

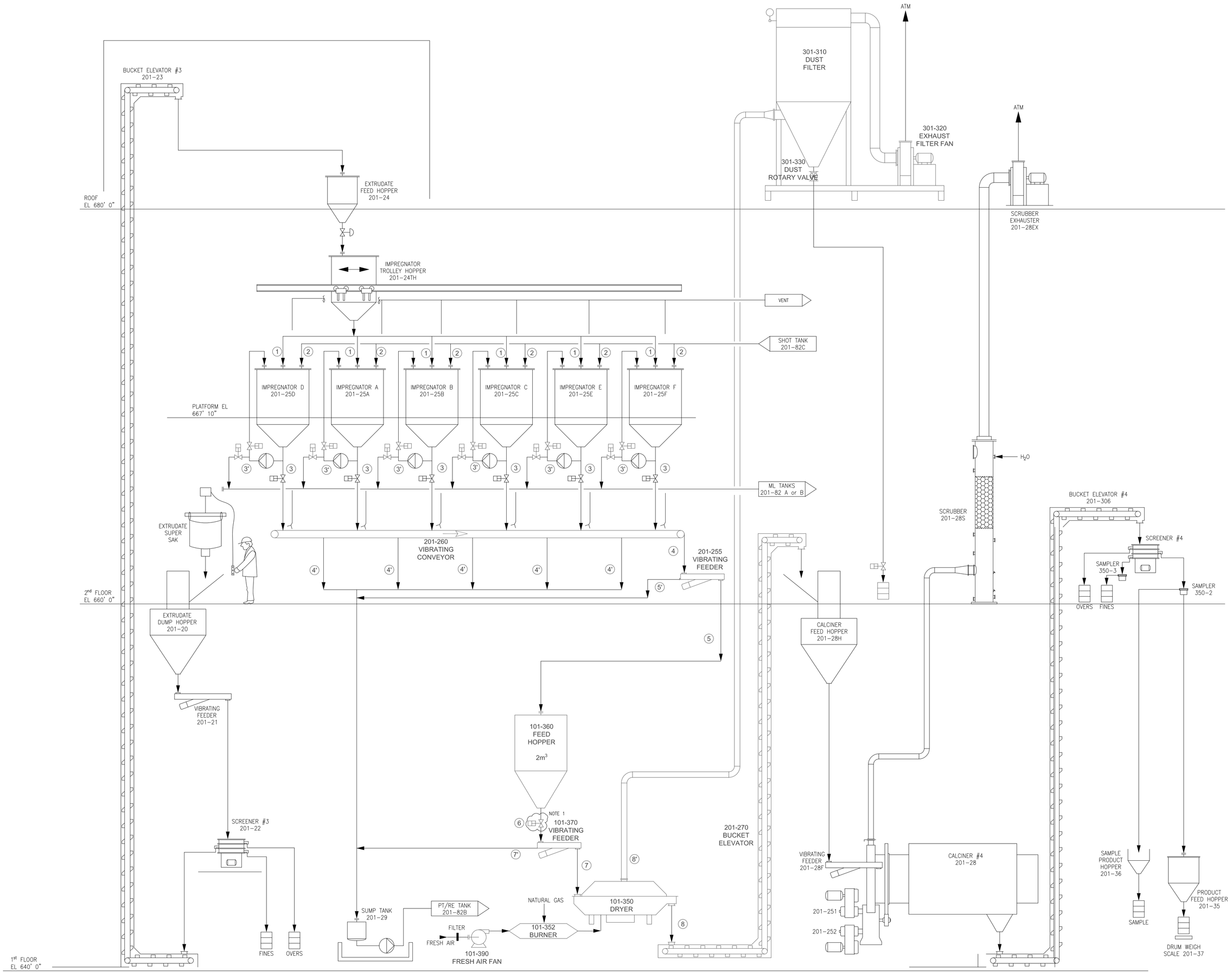
Axens
IFP Group Technologies

74 Catalyst Drive
Belmont, West Virginia 26134
Willow Island

SCALE:	AS NOTED	BLDG. 83 AXENS PROPERTY SITE PLAN		
DR.	X. X. XXXXXX 10-22-14			
CHKD	X. X. XXXXXX XX-XX-XX	SUB. NO.	DRAWING NUMBER	REV.
BLDG.	83	XXX ######	830101	1
BAY	–	ORDER NO.		
FLOOR	–	XX-#####		

Attachment F

Process Flow Diagram



NOTES :

NOTE 1: HOPPER DISCHARGE CONTROL TO BE CONFIRMED

LEGEND :

- EXISTING EQUIPMENT
- EXISTING PIPE OR CHUTE
- NEW EQUIPMENT
- NEW PIPE OR CHUTE

REV	DATE	MODIFICATIONS	DESSINE	RESP
B				
A				
0	06/09/2016	PREMIERE EDITION	C. HOGNON	

PLAN D'ORIGINE N° ---
DC ---

ECHELLE –

PFD

CATALYST PRODUCTION
PROCESS FLOW DIAGRAM FOR IMPREGNATION

Format: A1 | Adresse: ---

N° Crédit ---

Clt: ---

N°:AWI01010 REV

Axens IFP Group Technologies
Catalysts & Adsorbents

BUREAU D'ETUDES
30340 SALINDRES

NOTA: Ce Plan ne doit être modifié que par D.A.O.

ATTACHMENT G – PROCESS DESCRIPTION

Axens North America, Inc. (Axens) proposes revisions to the existing R13-2384 air permit for the Impregnation Process at its Willow Island catalyst manufacturing plant located at Belmont, WV. The purpose of the revisions is to allow the plant to more efficiently impregnate catalyst substrates (extrudates, beads, etc) with catalyst metals (platinum, rhenium, etc), thereby increasing production at the plant.

Impregnation process overview: Aluminum Oxide substrate from the extrudate process is conveyed to the impregnation unit. An impregnation solution consisting of nitric acid, hydrochloric acid and platinum metal (or rhenium or other metal) is combined and then mixed with the aluminum oxide substrate in one of the six impregnators. The impregnated catalyst will be conveyed to the new Fluid Bed Dryer (101-350) for initial drying. Once the material has been processed through the dryer, the material is transferred to the No. 4 Calciner for final drying. The product from the No. 4 Calciner is packaged for distribution to customers.

The most important equipment change proposed by Axens is to replace the existing East and West Impregnator Tray Drying Ovens (201-27A & 201-27B) with a new Fluid Bed Dryer (101-350) and Dust Collector (301-310) control device which will vent to new emission point 046C. This equipment change will allow more efficient drying of the impregnated catalyst substrate.

Axens proposes to add the following new material handling equipment items to the Impregnation Process, which will be located within the production building (full enclosure):

Emission Unit ID	Emission Point ID	Emission Unit Description	Control Device
101-360	054E	Feed Hopper	None
101-370	054E	Vibrating Feeder	None
201-255	054E	Vibrating Feeder	None
201-260	054E	Vibrating Conveyor	None
201-270	036C	#5 Bucket Elevator	151-13-1

Axens proposes to increase the processing rate and annual operating hours for the Impregnation Process only. The impregnation processing rate will increase by an estimated maximum of 45%. The maximum annual operating hours will increase to 8,760 hours per year.

As a result of these proposed changes, Axens proposes to revise the permitted emission limits in R13-2384 at the following permit sections: A.1., A.2., A.3., A.4., A.6., A.8., A.12., A.13., A.14., A.17., A.18. and A.21. The proposed total increase in permitted emissions of regulated air pollutants is below the permit modification threshold levels, as defined in

45CSR13-2.17., and therefore Axens believes that this permit revision qualifies as a Class II administrative update.

Axens has removed the following emission sources from the Impregnation Process, and therefore requests their removal from permit R13-2384: North and South CPA Reactors (101-50A & 101-50B), CPA Off Gas Scrubber (101-50S), No. 5 Bucket Elevator (201-205) and the Lab Acid Hood (301-2).

Axens proposes other minor changes and clarifications to R13-2384 at the following permit sections: A.16., A.20., A.23., B.3., B.5. and B.6.

Please see Appendix 1 of this permit application which contains our source-proposed suggested revisions to R13-2384.

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]
101-350	046C	Fluid Bed Dryer	2017	3.0 MM BTU/hr	New June 2017	301-310
101-360	054E	Feed Hopper	2017	71 cu ft	New June 2017	None
101-370	054E	Vibrating Feeder	2017	Varies	New June 2017	None
201-255	054E	Vibrating Feeder	2017	Varies	New June 2017	None
201-260	054E	Vibrating Conveyor	2017	Varies	New June 2017	None
201-270	036C	#5 Bucket Elevator	2017	Varies	New June 2017	151-13-1
201-27A	041E	East Impregnator Tray Drying Oven	---	2.4 MM BTU/hr	Removal June 2017	None
201-27B	042E	West Impregnator Tray Drying Oven	---	2.4 MM BTU/hr	Removal June 2017	None
201-205	031C	No. 5 Bucket Elevator	Never installed	Varies	Removal	151-13-1
101-50A	04ES	North CPA Reactor	---	30 gallons	Removal June 2006	101-50S
101-50B	04ES	South CPA Reactor	---	30 gallons	Removal June 2006	101-50S
301-2	04AE	Lab Acid Hood	---	NA	Removal June 2006	None

[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.

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			
054E	Vent	201-25A 201-25B 201-25C 201-25D 201-25E 201-25F 101-360 101-370 201-255 201-260	Impregna-tion Vessels A through F, Feed Hopper, Vibrating Feeder, Vibrating Feeder, Vibrating Conveyor	NA	NA	Varies	8760	HCl Acid 7647-01-0 Nitric Acid 7697-37-2 PM	0.03 0.03 0.87	0.13 0.13 3.81	0.03 0.03 0.87	0.13 0.13 3.81	Vapor Vapor Solid	EE EE EE	34 mg/m3 34 mg/m3 NA
031C	Vent	201-20 201-22 201-23 201-24	Extrudate Dump Hopper, Screener #3, Bucket Elevator #3, Extrudate Feed Hopper	201-43-1	Dust Collector	Varies	8760	PM	11.60	50.80	0.58	2.54	Solid	EE	NA
036C	Vent	201-270 201-28H 201-306 201-56 201-35	#5 Bucket Elevator, Calciner Feed Hopper, Bucket Elevator #4, Screener #4, Final Product Hopper & Product Packaging Station	151-13-1	Dust Collector	Varies	8760	PM	3.00	13.25	0.36	1.59	Solid	EE	NA

046C	Vent	101-350	Fluid Bed Dryer process and combustion emissions	301-310	Dust Collector	Varies	8760	HCl Acid 7647-01-0	0.29	1.27	0.29	1.27	Vapor	EE	15 mg/m3
								Nitric Acid 7697-37-2	Negligible	Negligible	Negligible	Negligible	Vapor	EE	Negligible
								PM	185.0	812.0	1.85	8.12	Solid	EE	57 mg/m3
								NOx	2.41	10.57	2.41	10.57	Vapor	EE	NA
								CO	0.96	4.20	0.96	4.20	Vapor	EE	NA
								VOC	0.02	0.07	0.02	0.07	Vapor	EE	NA
								SO2	0.002	0.01	0.002	0.01	Vapor	EE	NA
								CO2	352.9	1,545.9	352.9	1,545.9	Vapor	EE	NA
034S	Vent	201-28	No. 4 Calciner process emissions	201-28S	Water Scrubber	C	8760	HCl Acid 7647-01-0	2.90	12.70	0.29	1.27	Vapor	EE	186 mg/m3
								Nitric Acid 7697-37-2	Negligible	Negligible	Negligible	Negligible	Vapor	EE	Negligible
								PM	3.60	15.90	0.36	1.59	Solid	EE	92 mg/m3
								NOx	2.17	9.50	2.17	9.50	Vapor	EE	NA

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
054E	1.00	70	240	45	640	70	4,356.22	473.42
031C	1.92	70	7000	40	640	71	4,356.22	473.42
036C	2.20	70	10,200	45	640	42	4,356.22	473.42
046C	1.83	214	7,350	46.4	640	78	4,356.22	473.42
034S	0.87	70	457	12.8	640	61	4,356.22	473.42

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

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/hr	ton/yr	lb/hr	ton/yr	
Haul Road/Road Dust Emissions Paved Haul Roads	Not Applicable					
Unpaved Haul Roads	Not Applicable					
Storage Pile Emissions	Not Applicable					
Loading/Unloading Operations	Not Applicable					
Wastewater Treatment Evaporation & Operations	Not Applicable					
Equipment Leaks	Not Applicable					
General Clean-up VOC Emissions	Not Applicable					
Other:	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, 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).

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*): 101-350

1. Name or type and model of proposed affected source:

   Fluid bed dryer; Carrier Model# QAD-2460S-15'-6"-3HP

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:

   Alumina Extrudates: 850 kg/hr (as charged, includes moisture)
   Alumina Beads: 900 kg/hr (as charged, includes moisture)

4. Name(s) and maximum amount of proposed material(s) produced per hour:

   Alumina Extrudates: 550 kg/hr (as produced, after drying)
   Alumina Beads: 500 kg/hr (as produced, after drying)

5. Give chemical reactions, if applicable, that will be involved in the generation of air pollutants:

   Not applicable.

* 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:

Pipeline natural gas (NG): 3.0 MM BTU/hr, or 2,778 cf NG/hr assuming 1,080 BTU/cf NG

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

Pipeline quality natural gas.

(c) Theoretical combustion air requirement (ACF/unit of fuel): *See Note in section 6(e) below.*

@ °F and psia.

(d) Percent excess air: *See Note in section 6(e) below.*

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

There will be one burner: MAXON NP-LE rated at 3.0 MM BTU/hr

Note: The Stelter & Brinck AHDX030 Air Heater includes a Maxon NP-LE burner rated at 3.0 MM BTU/hr. This type of air heater uses an in-line burner with all process air passing across the burner mixing plates. A combustion fan is not required. The fresh process air provides all oxygen for combustion.

(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:

Not applicable.

(g) Proposed maximum design heat input: 3.0 $\times 10^6$ BTU/hr.

7. Projected operating schedule:

Hours/Day	24	Days/Week	7	Weeks/Year	52

8. Projected amount of pollutants that would be emitted from this affected source if no control devices were used: [**Note**: includes combustion emissions and process emissions.]

@ 185 - 214 °F and Atmospheric psia

a.	NO_X	2.41	lb/hr	grains/ACF
b.	SO_2	0.002	lb/hr	grains/ACF
c.	CO	0.96	lb/hr	grains/ACF
d.	PM_{10}	185.02	lb/hr	grains/ACF
e.	Hydrocarbons	See VOC	lb/hr	grains/ACF
f.	VOCs	0.02	lb/hr	grains/ACF
g.	Pb	NA	lb/hr	grains/ACF
h.	Specify other(s)			
	CO2	352.9	lb/hr	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
Monitoring in accordance with NSPS Subpart UUU (60.734): Axens shall install, calibrate, maintain, and operate a continuous monitoring system to measure and record the opacity of emissions discharged into the atmosphere from the control device.	Recordkeeping in accordance with NSPS Subpart UUU (60.735).
REPORTING	TESTING
Notifications and reports in accordance with NSPS Subparts A and UUU (60.735).	Stack testing for PM, in accordance with NSPS Subparts A and UUU (60.736).

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

The operating air flow rate of the burner is 23,760 lb/hr dry air. The burner air heater should be operated with a maximum exhaust air temperature of 420°F. A high temperature limit switch should be set at 470°F. Gas equipment should be maintained per Stelter & Brinck's Instruction Manual which references NFPA-86-2015.

Attachment M
Air Pollution Control Device Sheet
(BAGHOUSE)

Control Device ID No. (must match Emission Units Table): 301-310

Equipment Information and Filter Characteristics

1. Manufacturer: Advanced Integrated Resources Inc.
   Model No. 1211JPT11
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:
   - ☐ Nomex nylon
   - ☐ Wool
   - ☐ Polyester
   - ☐ Polypropylene
   - ☐ Acrylics
   - ☐ Ceramics
   - ☐ Fiber Glass
   - ☐ Cotton Weight oz./sq.yd
   - ☐ Teflon Thickness in
   - ☒ Others, specify PPS coated w/Teflon
7. Bag Dimension:
   Diameter 6 in.
   Length 10.75 ft.
8. Total cloth area: 2,228 ft^2
9. Number of bags: 132
10. Operating air to cloth ratio: 3.87 ft/min
11. Baghouse Operation: ☒ Continuous ☐ Automatic ☐ Intermittent
12. Method used to clean bags:
    - ☐ Mechanical Shaker
    - ☐ Pneumatic Shaker
    - ☐ Bag Collapse
    - ☐ Manual Cleaning
    - ☐ Sonic Cleaning
    - ☐ Reverse Air Flow
    - ☒ Pulse Jet
    - ☐ Reverse Jet
    - ☐ Reverse Air Jet
    - ☐ Other:
13. Cleaning initiated by:
    - ☐ Timer
    - ☒ Expected pressure drop range 4 in. of water
    - ☐ Frequency if timer actuated
    - ☐ Other
14. Operation Hours: Max. per day: 24 Max. per yr: 8,760
15. Collection efficiency: Rating: 99 % Guaranteed minimum: 99 %

Gas Stream Characteristics

16. Gas flow rate into the collector: 7,350 (nominal) ACFM at 185 - 214 °F and 0.12 PSIG (at bag filter inlet)
    ACFM: Design: 8,655 ACFM PSIA Maximum: 0.72 PSIG Average Expected: 0.12 PSIG (at bag filter inlet)
17. Water Vapor Content of Effluent Stream: 0.054 - 0.065 lb. Water/lb. Dry Air
18. Gas Stream Temperature: 185 - 214 °F
19. Fan Requirements: 30 hp OR 8,655 ft^3/min
20. Stabilized static pressure loss across baghouse. Pressure Drop: High 6 in. H_2O Low 3 in. H_2O
21. Particulate Loading: Inlet: 2.49 grain/scf Outlet: 0.0249 grain/scf

22. Type of Pollutant(s) to be collected (if particulate give specific type):
Dust from alumina extrudate and beads.

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	185.0	2.49	1.85	0.0249

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**
0 – 2	Not known	Not known
2 – 4		
4 – 6		
6 – 8		
8 – 10		
10 – 12		
12 – 16		
16 – 20		
20 – 30		
30 – 40		
40 – 50		
50 – 60		
60 – 70		
70 – 80		
80 – 90		
90 – 100		
>100		

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:
    Pressure drop sensor and data historian system.

28. Describe any filter seeding being performed:
    Bags are coated with PTFE membrane.

29. Describe any air pollution control device inlet and outlet gas conditioning processes (e.g., gas cooling, gas reheating, gas humidification):
    None.

30. Describe the collection material disposal system:
    Collected material is properly disposed off-site.

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: Monitoring in accordance with NSPS Subpart UUU (60.734): Axens shall install, calibrate, maintain, and operate a continuous monitoring system to measure and record the opacity of emissions discharged into the atmosphere from the control device.	RECORDKEEPING: Recordkeeping in accordance with NSPS Subpart UUU (60.735).
REPORTING: Notifications and reports in accordance with NSPS Subparts A and UUU (60.735).	TESTING: Stack testing for PM, in accordance with NSPS Subparts A and UUU (60.736).

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. Nearly 100%.

34. Manufacturer's Guaranteed Control Efficiency for each air pollutant. 99% for PM-10.

35. Describe all operating ranges and maintenance procedures required by Manufacturer to maintain warranty.
As provided in bag filter operating manual.

R13-2384 UPDATE APPLICATION
ATTACHMENT N -- EMISSIONS CALCULATIONS

Axens - Willow Island, WV

Emissions from New or Increased Emission Sources **rev. 4/13/17**

Impregnation Process Area

Vent/ Stack ID No.	Emission Unit ID No.	Emission Unit Description	Design Capacity	Type of Release [1]	Control System	Control System ID No.	Control System Efficiency (%)	Pollutant	HAP?	Emission Estimate Basis [2]	Emission Factor	Emission Factor Units	Planned Increase in Production Rate Factor [3]	PROPOSED MAXIMUM EMISSIONS		
														Controlled Hourly Emis. Rate (lb/hr)	Maximum Hours of Operation (hr/yr)	Controlled Annual Emis. Rate (ton/yr)
Natural Gas Combustion Emissions:																
046C	101-350	Fluid Bed Dryer	3.00	P	None	NA	NA	**NOx**	N	MG	0.45	lb/hr		**0.45**	**8,760**	**1.97**
		Natural Gas Combustion Emissions	max. MMBtu/hr of					**CO**	N	MG	0.96	lb/hr		**0.96**		**4.20**
			natural gas					**VOC**	N	EF	5.5	lb/MMscf		**0.02**		**0.07**
								Total PM	N	EF	7.6	lb/MMscf		**0.02**		**0.10**
								SO2	N	EF	0.6	lb/MMscf		**0.002**		**0.01**
								CO2	N	EF	120000	lb/MMscf		**352.9**		**1,545.9**
Process Emissions:																
													1.45			
T72E	201-38	Nitric Acid Storage Tank	3,066 gallons	NA	Vapor Return Line during filling	NA	Approx. 100	**Nitric Acid Mist**	N	EN	---			**Negligible**		**Negligible**
055E	201-82C	Mother Liquor Charge Tank	1,500 gallons	P	None	NA	NA	**Nitric Acid Mist**	N	EN	0.05	lb/hr (R13-2384 limit)	1.45	**0.07**		**0.32**
							NA	**HCl Acid Mist**	Y	EN	0.05	lb/hr (R13-2384 limit)	1.45	**0.07**		**0.32**
031C	201-20	Extrudate Dump Hopper	---	P	Non-Platinum Dust Collector	201-43-1	95.0	**PM**	N	EN	0.05	lb/hr (R13-2384 limit)	1.45	**0.07**		**0.32**
None	201-21	Vibrating Feeder	---	F	None	NA	NA	**PM**	N	EN	---			**Negligible**		**Negligible**
031C	201-22	Screener #3	---	P	Non-Platinum Dust Collector	201-43-1	95.0	**PM**	N	EN	0.25	lb/hr (R13-2384 limit)	1.45	**0.36**		**1.59**
031C	201-23	Bucket Elevator #3	---	P	Non-Platinum Dust Collector	201-43-1	95.0	**PM**	N	EN	0.05	lb/hr (R13-2384 limit)	1.45	**0.07**		**0.32**
031C	201-24	Extrudate Feed Hopper	---	P	Non-Platinum Dust Collector	201-43-1	95.0	**PM**	N	EN	0.05	lb/hr	1.45	**0.07**		**0.32**
054E	201-25A to 201-25F	Impregnation Vessels A through F	250 gallons per vessel	P	None	NA	NA	**PM**	N	EF	0.6	lb/hr (R13-2384 limit)	1.45	**0.87**		**3.81**
								Nitric Acid Mist	N	MB	0.02	lb/hr (R13-2384 limit)		**0.03**		**0.13**
								HCl Acid Mist	Y	MB	0.02	lb/hr (R13-2384 limit)		**0.03**		**0.13**
046C	101-350	Fluid Bed Dryer	---	P	Dryer Dust Collector	301-310	99	**PM**	N	NSPS UUU Limit	57	mg/dscm		**1.83**		**8.02**
								Nitric Acid Mist	N	EN	---			**Negligible**		**Negligible**
								HCl Acid Mist	Y	EN	0.20	lb/hr (R13-2384 limit)	1.45	**0.29**		**1.27**
								NOx	N	MB	0.25	% nitrate converted to NOx		**1.96**		**8.60**
034S	201-28	No. 4 Calciner	---	P	No. 4 Scrubber	201-28S	90.0	**PM**	N	EN	0.25	lb/hr (R13-2384 limit)	1.45	**0.36**		**1.59**
							90.0	**Nitric Acid Mist**	N	EN	---			**Negligible**		**Negligible**
							90.0	**HCl Acid Mist**	Y	EN	0.20	lb/hr (R13-2384 limit)	1.45	**0.29**		**1.27**

R13-2384 UPDATE APPLICATION
ATTACHMENT N -- EMISSIONS CALCULATIONS

Axens - Willow Island, WV

Emissions from New or Increased Emission Sources rev. 4/13/17

Impregnation Process Area

Vent/ Stack ID No.	Emission Unit ID No.	Emission Unit Description	Design Capacity	Type of Release [1]	Control System	Control System ID No.	Control System Efficiency (%)	Pollutant	HAP?	Emission Estimate Basis [2]	Emission Factor	Emission Factor Units	Planned Increase in Production Rate Factor [3]	PROPOSED MAXIMUM EMISSIONS		
														Controlled Hourly Emis. Rate (lb/hr)	Maximum Hours of Operation (hr/yr)	Controlled Annual Emis. Rate (ton/yr)
								NOx	N	MB	0.25	% nitrate converted to NOx		**2.17**		**9.50**
054E	201-260	Vibrating Conveyor	---	P	None	NA	NA	**PM**	N	EN	---			**Negligible**		**Negligible**
054E	201-255	Vibrating Feeder	---	P	None	NA	NA	**PM**	N	EN	---			**Negligible**		**Negligible**
054E	101-360	Feed Hopper	---	P	None	NA	NA	**PM**	N	EN	---			**Negligible**		**Negligible**
054E	101-370	Vibrating Feeder	---	P	None	NA	NA	**PM**	N	EN	---			**Negligible**		**Negligible**
036C	201-270	#5 Bucket Elevator	---	P	Platinum Dust Collector	151-13-1	88.0	**PM**	N	EN	0.05	lb/hr	1.45	**0.07**		**0.32**
036C	201-28H	Calciner Feed Hopper	---	P	Platinum Dust Collector	151-13-1	88.0	**PM**	N	EN	0.05	lb/hr	1.45	**0.07**		**0.32**
None	201-28F	Vibrating Feeder	---	F	None	NA	NA	**PM**	N	EN	---			**Negligible**		**Negligible**
036C	201-306	Bucket Elevator #4	---	P	Platinum Dust Collector	151-13-1	88.0	**PM**	N	EN	0.05	lb/hr	1.45	**0.07**		**0.32**
036C	201-56	Screener #4	---	P	Platinum Dust Collector	151-13-1	88.0	**PM**	N	EN	0.05	lb/hr	1.45	**0.07**		**0.32**
036C	201-35	Final Product Hopper & Product Packaging Station	---	P	Platinum Dust Collector	151-13-1	88.0	**PM**	N	EN	0.05	lb/hr (R13-2384 limit)	1.45	**0.07**		**0.32**
None	201-36	Sample Product Hopper	---	F	None	NA	NA	**PM**	N	EN	---			**Negligible**		**Negligible**
		Impregnation Process Area Emissions from New or Increased Sources						**Total PM**								**17.64**
								NOx								**20.07**
								CO								**4.20**
								VOC								**0.07**
								SO2								**0.01**
								Total HAP (HCl)								**2.98**

BASIS FOR EMISSION ESTIMATES:

1. NATURAL GAS COMBUSTION EMISSIONS

a. Natural gas combustion emission factors (lb/mmcf) are based upon AP-42 Natural Gas Combustion Table 1.4-1 [Small Boilers (<100)-Uncontrolled] (Rev. 7/98) for NOx and CO, and Table 1.4-2 for PM(Total), SO2, and VOC.

b. Natural gas combustion emissions are based upon maximum natural gas firing rate of the dryer.

2. PROCESS EMISSIONS

a. Negligible emissions are emissions (less than 0.1 lb/hr) with no practical means to estimate.

b. Plant plans to increase Impregnation Process Area production by 45% after new equipment is installed. Therefore process air emissions from all existing Impregnation Process equipment was increased by a factor of 1.45 times existing R13-2384 emission limits.

c. Fluid bed dryer process emissions are based upon:

i. Subpart UUU maximum allowable emission rate of PM from dryer affected source = 0.057g/dscm = 57 mg/dscm.

ii. Assumes total conversion of any nitric acid vapor to nitrates due to drying zone temperature.

iii. Axens mass balance calculation that 0.25% of the total nitrates on impregnated catalyst substrate is converted to nitrogen oxides (NOx) emissions due to thermal decomposition.

iv. Assumes HCl emissions increased by a factor of 1.45 times existing R13-2384 HCl emission limits from the tray dryers.

d. No. 4 Calciner process emissions are based upon:

i. Assumes total conversion of any nitric acid vapor to nitrates due to calcination zone temperature.

R13-2384 UPDATE APPLICATION
ATTACHMENT N -- EMISSIONS CALCULATIONS

Axens - Willow Island, WV

Emissions from New or Increased Emission Sources **rev. 4/13/17**

Impregnation Process Area

Vent/ Stack ID No.	Emission Unit ID No.	Emission Unit Description	Design Capacity	Type of Release [1]	Control System	Control System ID No.	Control System Efficiency (%)	Pollutant	HAP?	Emission Estimate Basis [2]	Emission Factor	Emission Factor Units	Planned Increase in Production Rate Factor [3]	PROPOSED MAXIMUM EMISSIONS		
														Controlled Hourly Emis. Rate (lb/hr)	Maximum Hours of Operation (hr/yr)	Controlled Annual Emis. Rate (ton/yr)
ii. Axens mass balance calculation that 0.25% of the total nitrates on impregnated catalyst substrate is converted to nitrogen oxides (NOx) emissions due to thermal decomposition.																
iii. Assumes PM and HCl emissions increased by a factor of 1.45 times existing R13-2384 PM and HCl emission limits from the No. 4 Calciner.																
3. MAX. HOURS OF OPERATION																
a. Based upon 8,760 hr/yr, unless otherwise noted.																

NOTES:

[1] P=Point, F=Fugitive

[2] EF=Emission Factor, MB=Material Balance, EN=Engineering Calculation, MO=Monitoring/Measurement, MG=Manufacturer's Guarantee

R13-2384 UPDATE APPLICATION --
ATTACHMENT N -- RULE 7 - SEC. 4.2
COMPLIANCE WORKSHEET

Axens - Willow Island, WV

Emissions from New or Increased Emission Sources **rev. 4/13/17**

Impregnation Process Area

Vent/ Stack ID No.	Emission Unit ID No.	Emission Unit Description	Emission Unit Installed Prior to Reg. 7 Effective?	Control System	Control System ID No.	Control System Efficiency (%)	Pollutant	Proposed Controlled Max. Hourly Emis. Rate (lb/hr)	Vent Air Flow Rate (acfm)	Exit Vent Gas Temp. (degF)	Temp. Corrected Vent Air Flow Rate (scfm)	Percent Water in Exhaust Air Stream (%)	Moisture Corrected Vent Air Flow Rate (dscfm)	Proposed Controlled Max. Hourly Emis. Rate (mg/dscm)	Reg. 7 Allowable Max. Hourly Emis. Rate (mg/dscm)
055E	201-82C	Mother Liquor Charge Tank	No	None	NA	NA	**Nitric Acid Mist**	**0.07**	300	68	300	3.0	285	68	**70**
							HCl Acid Mist	**0.07**	300	68	300	3.0	285	68	**210**
054E	201-25A to 201-25F	Impregnation Vessels A through F	No	None	NA	NA	**Nitric Acid Mist**	**0.03**	240	68	240	3.0	228	34	**70**
							HCl Acid Mist	**0.03**	240	68	240	3.0	228	34	**210**
046C	101-350	Fluid Bed Dryer	Yes	None	NA	NA	**Nitric Acid Mist**	**Negligible**	NA	NA	NA	NA	NA	Negligible	**70**
							HCl Acid Mist	**0.29**	7,350	185	6,017	10.0	5,296	15	**210**
034S	201-28	No. 4 Calciner	Yes	No. 4 Scrubber	201-28S	90.0	**Nitric Acid Mist**	**Negligible**	NA	NA	NA	NA	NA	Negligible	**140**
						90.0	**HCl Acid Mist**	**0.29**	457	87	441	3.2	417	186	**420**

NOTES:

[1] Flow rate was corrected to standard temperature (68 degF) and to remove water content.

[2] Actual flow rate, stack temperature, and moisture content from stack testing results were used above for the No. 4 Calciner/No. 4 Scrubber.

ATTACHMENT P – Public Notice Class I Legal Advertisement

Axens North America, Inc. will submit the required Class I legal advertisement to a local newspaper and will forward the original affidavit of publication to DAQ. The notice will be published no earlier than five (5) working days of receipt by DAQ of this application. The original affidavit of publication will be submitted to DAQ no later than the last day of the public comment period. The anticipated text of the legal ad to be published in *The St. Marys Oracle/Pleasants County Leader* (St. Marys, WV) is as follows:

AIR QUALITY PERMIT NOTICE
Notice of Application

Notice is given that Axens North America, Inc. has applied to the West Virginia Department of Environmental Protection, Division of Air Quality, for a Class II Administrative Update to Permit R13-2384 for its existing Willow Island Plant located at 74 Catalyst Drive, in Belmont, Pleasants County, West Virginia at latitude 39.355019 and longitude -81.308505.

The applicant estimates, as a result of the proposed Class II Administrative Update, the facility's potential to discharge Regulated Air Pollutants will be increased as follows:

Regulated Pollutant	Increased Potential Annual Emissions in tons per year (tpy)
Nitrogen Oxides	19.19
Carbon Monoxide	3.46
Particulate Matter/ PM10/PM2.5	13.27
Total Volatile Organic Compounds	0.02

Startup of proposed operational changes is planned to begin on or about the 1st day of August, 2017. 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 13th day of April, 2017.

By: Michael P. Nau,
Plant Manager
Axens North America, Inc.
#74 Catalyst Drive
Belmont, WV 26134

Office of Air Quality
7012 MacCorkle Avenue, South East
Charleston, WV 25304-2943
Telephone Number: (304) 926-3727
Fax Number: (304) 926-3739

West Virginia Division of Environmental Protection

Cecil H. Underwood Governor		Michael C. Castle Director

PERMIT TO ~~MODIFY~~UPDATE
~~CRITERION CATALYST BUSINESS UNIT~~ AXENS NORTH AMERICA, INC.

IN ACCORDANCE WITH THE WEST VIRGINIA AIR POLLUTION CONTROL LAW (W. Va. Code §§22-5-1 et seq.), AND REGULATIONS PROMULGATED THEREUNDER, THE FOLLOWING PERMITTEE IS AUTHORIZED TO CONSTRUCT, SUBJECT TO THE TERMS AND CONDITIONS OF THIS PERMIT, THE SOURCE DESCRIBED BELOW.

~~This process will lose its grand fathered status as a result of this permit.~~

Name of Permittee:	~~Cytec Industries, Inc.~~ Axens North America, Inc.
Permit No.:	R13-2384A
Plant ID No.:	~~07300003~~07300023
Effective Date of Permit:	~~December 14, 2000~~
Permit Writer:	~~Jay Fedczak~~
Facility Mailing Address:	~~#1 Heilman Avenue, Willow Island, WV 26134~~#74 Catalyst Drive, Belmont, WV 26134
Nearest City or Town:	Willow Island
County:	Pleasants
UTM Coordinates:	Northing: 4,356.22 km Easting: 473.42 km Zone: 17
Directions to Exact Location:	Adjacent to WV Route 2 in Willow Island, Pleasants County
Type of Facility or Modification:	~~Modification to the Impregnation Process (addition of two impregnator vessels and minor equipment replacements or upgrades) of the Criterion Catalysts Business Unit~~ Class II administrative update to replace existing East and West Impregnator Tray Drying Ovens with a new Fluid Bed Dryer and Dust Collector control device; remove North and South CPA Reactors.

THIS SOURCE IS A TITLE V SOURCE. THE COMPANY HAS A DUTY TO UPDATE THEIR TITLE V APPLICATION TO REFLECT THE CHANGES PERMITTED HEREIN.

IN ACCORDANCE WITH THE PERMIT APPLICATION AND ITS AMENDMENTS, THIS PERMIT IS LIMITED AS FOLLOWS:

A. SPECIFIC REQUIREMENTS

1. ~~Emissions~~ Natural gas combustion emissions from ~~each,~~ the ~~East and West Impregnator Tray Drying Ovens~~ Fluid Bed Dryer (Equipment ID No~~s~~. ~~201-27A and 201-27B~~ 101-350, Emission Point ID No~~s~~. ~~041E and 042E~~ 046C), shall not exceed the amounts in the following table.

Pollutant	Pounds per Hour (lb/hr)	Tons Per Year (TPY)
CO	~~0.20~~0.96	~~0.74~~4.20
~~HCl~~	~~0.10~~	~~0.37~~
~~HNO_3~~	~~0.10~~	~~0.37~~
NO_x	~~0.24~~0.45	~~0.88~~1.97
PM	~~0.12~~0.02	~~0.44~~0.10
SO_2	~~0.001~~0.002	0.01
VOC	~~0.01~~0.02	~~0.05~~0.07

2. ~~Hydrochloric acid emissions from each, the East and West Impregnator Tray Drying Ovens shall not exceed 420 milligrams per dry cubic meter at standard conditions (mg/dscm).~~ Controlled process emissions from the Fluid Bed Dryer (Equipment ID No. 101-350, Emission Point ID No. 046C) shall not exceed those listed in the following table.

Pollutant	lb/hr	TPY	mg/dscm
HCl	0.29	1.27	210
HNO_3	Negligible	Negligible	70
PM	1.83	8.02	57
NOx	1.96	8.60	----

3. ~~Nitric acid emissions from each, the East and West Impregnator Tray Drying Ovens shall not exceed 140 mg/dscm.~~ Particulate Matter emissions from Emission Point ID No. 046C shall be controlled by the Dryer Dust Collector (Control Device ID No. 301-310).

4. Nitric acid emissions from the Nitric Acid Storage Tank (Equipment ID No.

201-38, Emission Point ID No. T72E) shall not exceed 140 mg/dscm ~~and 0.02 TPY~~.

5. Nitric acid emissions during filling of the Nitric Acid Storage Tank ~~and the Nitric Acid Weigh/Feed Tank (Equipment ID No. 201-200)~~ shall be controlled by a vapor return line.

6. ~~Hydrochloric acid emissions from the Lab Acid Hood (Equipment ID No. 301-2, Emission Point ID No. 04AE) shall not exceed 210 mg/dscm, 0.10 lb/hr and 0.37 TPY.~~ [Reserved.]

7. Natural gas combustion emissions from the No. 4 Calciner (Equipment ID No. 201-28, Emission Point ID No. 034E) shall not exceed the amounts in the following table.

Pollutant	Pounds per Hour (lb/hr)	Tons Per Year (TPY)
CO	0.12	0.50
NO_x	0.14	0.60
PM	0.01	0.05
SO_2	0.001	0.004
VOC	0.01	0.03

8. ~~Total emissions from the North CPA Reactor and the South CPA Reactor (Equipment ID Nos. 101-50A and 101-50B, Emission Point ID No. 04ES) shall be limited to those listed in the following table.~~ [Reserved.]

~~Pollutant~~	~~lb/hr~~	~~TPY~~	~~mg/dscm~~
~~HCl~~	~~0.28~~	~~1.04~~	~~420~~
~~HNO_3~~	~~0.12~~	~~0.60~~	~~140~~

9. ~~The batch start times for the North and South CPA Reactors shall be separated by at least 4 hours.~~ [Reserved.]

10. ~~Emissions from Emission Point ID No. 04ES shall be controlled by the CPA Off Gas Scrubber (Control Device ID No. 101-50S).~~ [Reserved.]

11. ~~The CPA Off Gas Scrubber shall maintain the scrubbing liquor flow rate at a 7~~

~~gallon per minute minimum.~~ [Reserved.]

12. Nitric acid emissions from the Mother Liquor Charge Tank (Equipment ID No. 201-82C, Emission Point ID No. 055E) shall not exceed 70 mg/dscm, ~~0.05~~0.07 lb/hr, and ~~0.19~~0.32 TPY.

13. Hydrochloric acid emissions from the Mother Liquor Charge Tank shall not exceed 210 mg/dscm, ~~0.05~~0.07 lb/hr, and ~~0.19~~0.32 TPY.

14. Particulate matter emissions combined from the ~~No. 3 Hopper, No. 3 Kason Screener, No. 3 Bucket Elevator, Extrudate Hopper, and No. 5 Bucket Elevator~~ Extrudate Dump Hopper, Screener #3, Bucket Elevator #3, and Extrudate Feed Hopper (Equipment ID Nos. ~~201-39, 201-22, 201-21, 201-23, and 201-205~~, 201-20, 201-22, 201-23, and 201-24, Emission Point ID No. 031C) shall not exceed ~~0.45~~0.58 lb/hr and ~~1.7~~2.54 TPY.

15. Emissions from Emission Point ID No. 031C shall be controlled by the Non-Platinum Dust Collector (Control Device ID No. 201-43-1).

16. The Non-Platinum Dust Collector shall maintain a pressure drop across the system within a normal operating range of 3 to 9 inches H_2O. This requirement applies only while the particulate matter emission sources which vent through this dust collector are emitting PM. Compliance with this requirement shall be verified by calendar daily pressure drop readings, averaged on a calendar monthly basis.

17. Emissions combined from Impregnation Vessels A, B, C, D, E, and F (Equipment ID Nos. 201-25A, 201-25B, 201-25C, 201-25D, 201-25E, and 201-25F, Emission Point ID No. 054E) shall not exceed those listed in the following table.

Pollutant	lb/hr	TPY	mg/dscm
HCl	~~0.02~~0.03	~~0.29~~0.13	210
HNO_3	~~0.02~~0.03	~~0.29~~0.13	70
PM	~~0.60~~0.87	~~0.57~~3.81	----

18. Particulate matter emissions combined from the ~~No. 4 Hopper, Final Product Kason Screener and the Final Product Hopper & Product Packaging Station~~ #5 Bucket Elevator, Calciner Feed Hopper, Bucket Elevator #4, Screener #4 and Final Product Hopper & Product Packaging Station (Equipment ID Nos. ~~201-34, 201-56 and 201-35,~~ 201-270, 201-28H, 201-306, 201-56 and 201-35,

Emission Point ID No. 036C) shall not exceed ~~0.15~~0.36 lb/hr and ~~0.57~~1.59 TPY.

19. Emissions from Emission Point ID No. 036C shall be controlled by the Platinum Dust Collector (Control Device ID No. 151-13-1).

20. The Platinum Dust Collector shall maintain a pressure drop across the system within a normal operating range of 3 to 9 inches H_2O. This requirement applies only while the particulate matter emission sources which vent through this dust collector are emitting PM. Compliance with this requirement shall be verified by calendar daily pressure drop readings, averaged on a calendar monthly basis.

21. Controlled process emissions from the No. 4 Calciner (Equipment ID No. 201-28, Emission Point ID No. 034S) shall not exceed those listed in the following table.

Pollutant	lb/hr	TPY	mg/dscm
HCl	~~0.20~~0.29	~~0.88~~1.27	420
HNO_3	~~0.21~~ Negligible	~~0.92~~ Negligible	140
PM	~~0.25~~0.36	~~1.10~~1.59	~~----~~92
NOx	2.17	9.50	----

22. Process emissions from the No. 4 Calciner shall be controlled by the No. 4 Scrubber (Control Device ID No. 201-28S).

23. The No. 4 Scrubber shall maintain a minimum 1.1 inches of water column ~~value for~~ pressure drop and maintain a ~~value for~~ 80 to 120% of 12 gpm scrubbing liquor flow rate, as ~~at the levels~~ established during the initial performance test pursuant to the requirements of 40 CFR Part 60 Subpart UUU (§60.735(c)(2), §60.735(c)(3), and §60.736(c)). This requirement applies only while the No. 4 Calciner is emitting PM. Compliance with this requirement shall be verified by an arithmetic average over a 2-hour period of pressure drop and scrubbing liquor flow readings, recorded as a calendar daily average.

B. OTHER REQUIREMENTS

1. The permitted facility shall comply with all applicable provisions of 45CSR4, provided, however, that compliance with any more stringent limitation set forth

under Section A of this permit shall also be demonstrated. The principal provisions of 45CSR4 applicable to the permitted facility are as follows:

§45-4-3.1.

No person shall cause, suffer, allow or permit the discharge of air pollutants which causes or contribute to an objectionable odor at any location occupied by the public.

2. The permitted facility shall comply with all applicable provisions of 45CSR7, provided, however, that compliance with any more stringent limitation set forth under Section A of this permit shall also be demonstrated. The principal provisions of 45CSR7 applicable to the permitted facility are as follows:

§45-7-3.1.

No person shall cause, suffer, allow or permit emission of smoke and/or particulate matter into the open air from any process source operation which is greater than twenty (20) percent opacity, except as noted in subsections 3.2, 3.3, 3.4, 3.5, 3.6, and 3.7.

§45-7-3.7.

No person shall cause, suffer, allow or permit visible emissions from any storage structure(s) associated with any manufacturing process(es) that pursuant to subsection 5.1 is required to have a full enclosure and be equipped with a particulate matter control device.

§45-7-4.1.

No person shall cause, suffer, allow, or permit particulate matter to be vented into the open air from any type source operation or duplicate source operation, or from all air pollution control equipment installed on any type source operation or duplicate source operation in excess of the quantity specified under the appropriate source operation type in Table 45-7A found at the end of this rule.

§45-7-4.2.

Mineral acids shall not be released from any type source operation or duplicate source operation or from all air pollution control equipment installed on any type source operation or duplicate source operation in excess of the quantity given in Table 45-7B found at the end of this rule.

§45-7-5.1.

No person shall cause, suffer, allow or permit any manufacturing process or storage structure generating fugitive particulate matter to operate that is not equipped with a system, which may include, but not be limited to, process equipment design, control equipment design or operation and maintenance procedures, to minimize the emissions of fugitive particulate matter. To

minimize means such system shall be installed, maintained and operated to ensure the lowest fugitive particulate matter emissions reasonably achievable.

§45-7-5.2.

The owner or operator of a plant shall maintain particulate matter control of the plant premises, and plant owned, leased or controlled access roads, by paving, application of asphalt, chemical dust suppressants or other suitable dust control measures. Good operating practices shall be implemented and when necessary particulate matter suppressants shall be applied in relation to stockpiling and general material handling to minimize particulate matter generation and atmospheric entrainment.

§45-7-6.

After July 1, 1970 all persons owning and/or operating an existing manufacturing process source operation not previously registered shall register such source operation with the Director. The information required for registration shall be determined by the Director, and shall be provided in the manner specified by the Director.

§45-7-8.1.

At such reasonable times as the Director may designate, the operator of any manufacturing process source operation may be required to conduct or have conducted stack tests to determine the particulate matter loading in exhaust gases. Such tests shall be conducted in such manner as the Director may specify and be filed on forms and in a manner acceptable to the Director. The Director, or his duly authorized representative, may at his option witness or conduct such stack tests. Should the Director exercise his option to conduct such tests, the operator will provide all the necessary sampling connections and sampling ports to be located in such manner as the Director may require, power for test equipment and the required safety equipment such as scaffolding, railings and ladders to comply with generally accepted good safety practices.

§45-7-8.2.

The Director, or his duly authorized representative, may conduct such other tests as he or she may deem necessary to evaluate air pollution emissions.

§45-7-9.1.

Due to unavoidable malfunction of equipment, emissions exceeding those set forth in this rule may be permitted by the Director for periods not to exceed ten (10) days upon specific application to the Director. Such application shall be made within twenty-four (24) hours of the malfunction. In cases of major equipment failure, additional time periods may be granted by

the Director provided a corrective program has been submitted by the owner or operator and approved by the Director.

3. ~~To determine compliance with the opacity limit set forth in paragraph 2 of this section, the permittee shall perform weekly visible emission inspection of all process vents within the impregnation process area. The permittee shall maintain a log which contains the date and time of the visible emissions inspection, list of vents inspected, and whether or not any visible emissions were observed. If visible emissions are observed, the observer shall immediately notify appropriate unit personnel, who shall then attempt to determine cause of the emissions and remedy the situation. If the visible emissions have not ceased within 30 minutes, then steps shall be taken to perform a visible emission test in accordance with the method described in 45CSR7A.~~ For the purpose of determining compliance with the opacity limits of 45CSR§§7-3.1 and 7-3.2, the permittee shall conduct visible emission checks or opacity monitoring and recordkeeping for all emission points and equipment subject to an opacity limit.

   Monitoring shall be conducted initially at least once per month with a maximum of forty-five (45) days between consecutive readings. After three consecutive monthly readings in which no visible emissions are observed from any of the subject emission points, those emission points will be allowed to conduct visible emission checks or opacity monitoring once per calendar quarter. If visible emissions or opacity are observed during a quarterly monitoring from an emission point(s), then that emission point(s) with observed emissions or opacity shall be required to revert to monthly monitoring. Any emission point that has reverted to monthly monitoring shall be allowed to again conduct quarterly visible emission checks or opacity monitoring only after three consecutive monthly readings in which no visible emissions are observed from the subject emission point.

   These checks shall be conducted by personnel trained in the practices and limitations of 40CFR60 Appendix A, Method 9 or Method 22, or 45CSR§7A, during periods of normal operation of emission sources that vent from the referenced emission points for a sufficient time interval to determine if there is a visible emission. For observations of visible emissions from any emission point(s) which follows a water scrubber, when condensed water vapor is present in the plume as it emerges from the emission outlet, opacity observations shall be made beyond the point in the plume at which condensed water vapor is no longer visible; the observer shall record the approximate distance from the emission outlet to the point in the plume at which the observations are made.

   If visible emissions are identified during the visible emission check, or at any

other time regardless of operations, the permittee shall conduct an opacity reading using the procedures and requirements of 45CSR§7A within seventy-two (72) hours of the first signs of visible emissions. A 45CSR§7A evaluation shall not be required if the visible emission condition is corrected within seventy-two (72) hours after the visible emission and the sources are operating at normal conditions.

Records shall be maintained documenting the date and time of each visible emission check, the name of the responsible observer, the results of the check, and, if necessary, all corrective actions taken. Should an opacity reading be required per 45CSR§7A, records shall be maintained per the procedures of 45CSR§7A-2.

4. To determine compliance with CO, NO_x, SO_2, and VOC limits set forth in Section A, SPECIFIC REQUIREMENTS No. 1, the permittee shall keep records of the amount of natural gas combusted within the ~~East and West Impregnator Tray Drying Ovens~~ Fluid Bed Dryer. This information may be used in conjunction with appropriate emission factors from EPA's *Compilation of Air Pollutant Emission Factors AP-42 Fifth Edition, Volume I, Supplement D: Stationary Point and Area Sources* (AP-42), Chapter 1.4. to determine hourly and yearly emissions.

5. To determine compliance with the mineral acid concentration limits set forth in Section A, SPECIFIC REQUIREMENTS Nos. 2, 3, 4, ~~6, 8,~~ 12, 13, 17, and 21 the permittee shall perform stack tests upon request by the Chief under the authority given in paragraph 2 of this section and according to the methods set forth in 45CSR7A.

6. To determine compliance with mineral acid and particulate matter mass emission limits set forth in Section A, SPECIFIC REQUIREMENTS Nos. 1, 2, 4, ~~6, 8,~~ 12, 13, 17, and 21, the permittee shall perform calculations utilizing results of the tests which determined the concentration of such mineral acid along with volumetric flow rate of the appropriate stack (at dry standard conditions), by tank charging calculations and AP-42 emissions estimates for tanks, or by engineering calculations, where applicable.

7. To determine compliance with Section A, SPECIFIC REQUIREMENTS No. 5, the permittee shall ensure that, during all filling times, there will be a vapor return line linking the two vessels from and to which the material is being transferred.

8. To determine compliance with the emissions limits set forth in Section A, SPECIFIC REQUIREMENTS No. 7, the permittee shall keep records of the amount of natural gas consumed in the No. 4 Calciner. These records shall

be used in conjunction with appropriate emission factors from EPA's *Compilation of Air Pollutant Emission Factors AP-42 Fifth Edition, Volume I, Supplement D: Stationary Point and Area Sources* (AP-42), Chapter 1.4. to determine hourly and yearly emissions.

9. ~~To demonstrate compliance with Section A, SPECIFIC REQUIREMENTS No. 9, the permittee shall keep a Batch Start Time Operations Log Sheet which records the batch start time and date for each CPA Reactor.~~ [Reserved.]

10. ~~To determine compliance with Section A, SPECIFIC REQUIREMENTS Nos. 10 and 11, the off-gases from the North and South CPA Reactors shall, at all times, be vented to the CPA Off Gas Scrubber and the scrubbing liquor flow rate shall be continuously monitored. There shall be an alarm indicating a Lo-flow condition. Corrective measures shall be taken immediately upon an alarm. The date and time of each Lo-flow alarm event and the corrective action taken shall be recorded.~~ [Reserved.]

11. To determine compliance with the particulate matter emissions limits set forth in Section A, SPECIFIC REQUIREMENTS Nos. 14 and 18, the permittee shall perform stack tests upon request by the Chief or a duly authorized representative of the Chief.

12. To determine compliance with Section A, SPECIFIC REQUIREMENTS No. 15, the permittee shall ensure that, at all times, all process emissions specified in Section A, SPECIFIC REQUIREMENTS No. 14 are routed through the Non-Platinum Dust Collector prior to exiting to the atmosphere.

13. To determine compliance with Section A, SPECIFIC REQUIREMENTS No. 19, the permittee shall ensure that, at all times, all process emissions specified in Section A, SPECIFIC REQUIREMENTS No. 18 are routed through the Platinum Dust Collector prior to exiting to the atmosphere.

14. To determine compliance with Section A, SPECIFIC REQUIREMENTS Nos. 16 and 20, the permittee shall measure the system pressure drop and compare it to the baseline value. This shall be continuously monitored and there shall be an alarm indicating a pressure drop out of range. Corrective measures shall be taken immediately upon an alarm. The date and time of each pressure drop out of range and the corrective action taken shall be recorded.

15. To demonstrate compliance with Section A, SPECIFIC REQUIREMENTS No. 22, the permittee shall ensure that, at all times, process emissions from the No. 4 Calciner are routed through the No. 4 Scrubber prior to exiting to the atmosphere.

16. To demonstrate compliance with Section A, SPECIFIC REQUIREMENTS No. 23, the permittee shall measure the scrubbing liquor flow rate and static pressure drop and compare such rates to the baseline values in the manner as prescribed in 40 CFR Part 60 Subpart UUU.

17. All data and information required to be recorded or obtained under the terms of this permit shall be maintained in a permanent form suitable for inspection and shall be retained for at least five (5) years following the date of the record or report. All such data and information shall be submitted in accordance with the terms of this permit or made available to the Chief upon request or during any facility inspection by an authorized representative of the Chief.

18. All reports required under the conditions of this permit shall be forwarded to:
Chief
~~WV DEP Office~~ WVDEP – Division of Air Quality
~~7012 MacCorkle Avenue, South East~~601 57th Street, SE
Charleston, WV 25304

19. The pertinent sections of 45CSR13 applicable to this facility include, but are not limited to, the following:

§45-13-6.1.
At a time a stationary source is alleged to be in compliance with an applicable emission standard and at reasonable times to be determined by the Director thereafter, appropriate tests consisting of visual determinations or conventional in-stack measurements or other tests the Director may specify shall be conducted to determine compliance.

§45-13-6.2.
For cause, the Chief may request the owner or operator of a stationary source to install such stack gas monitoring devices as the Chief deems necessary to determine continuing compliance. The data from such devices shall be readily available for review at the source location or such other reasonable location that the Chief may specify. At the request of the Chief, such data shall be made available for inspection or copying and the Chief may require periodic submission of excess emission reports.

§45-13-10.2.
The Director may suspend or revoke a permit if, after (6) months from the date of issuance, the holder of the permit cannot provide the Director, at the Director's request, with written proof of a good faith effort that construction, modification, or relocation, if applicable, has commenced. Such proof shall be provided not later than thirty (30) days after the Director's

request. If construction or modification of a stationary source is discontinued for a period of eighteen (18) months or longer, the Director may suspend or revoke the permit.

§45-13-10.3.

The Director may suspend or revoke a permit if the plans and specifications upon which the approval was based or the conditions established in the permit are not adhered to. Upon notice of the Director's intent to suspend, modify or revoke a permit, the permit holder may request a conference with the Director in accordance with the provisions of W.Va. Code § 22-5-5 to show cause why the permit should not be suspended, modified or revoked.

20. The permitted facility shall comply with all applicable provisions of 45CSR16, which, by incorporation, subjects the facility to the provisions of 40 CFR 60 Subpart UUU -Standards of Performance for Calciners and Dryers in Mineral Industries. Provided, however, that compliance with any more stringent limitation set forth under Section A of this permit shall also be demonstrated.

C. GENERAL REQUIREMENTS

1. In accordance with 45CSR30 - "Operating Permit Program", the permittee shall not operate nor cause to operate the permitted facility or other associated facilities on the same or contiguous sites comprising the plant without first filing a Certified Emissions Statement and paying the appropriate fee. Such Certified Emissions Statement shall be filed and the appropriate fee paid annually. A receipt for the appropriate fee shall be maintained on the premises for which the receipt has been issued, and shall be made immediately available for inspection by the Chief or his/her duly authorized representative.

2. Approval of this permit does not relieve the permittee herein of the responsibility to apply for and obtain all other permits, licenses, and/or approvals from other agencies; i.e., local, state, and federal, which may have jurisdiction over the construction and/or operation of the source(s) and/or facility herein permitted.

3. The permitted facility shall be constructed and operated in accordance with information filed in Permit Application R13-2384A and any amendments thereto. The Chief may suspend or revoke a permit if the plans and specifications upon which the approval was based are not adhered to.

4. At such reasonable time(s) as the Chief may designate, the permittee shall conduct or have conducted test(s) to determine compliance with the emission limitations established in the permit application and/or applicable regulations. Test(s) shall be conducted in such a manner as the Chief may specify or approve and shall be filed in a manner acceptable to the Chief. The Chief, or his duly authorized representative, may at his option witness or conduct such test. Should the Chief exercise his option to conduct such test(s), the operator shall provide all the necessary sampling connections and sampling ports to be located in such manner as the Chief may require, power for test equipment, and the required safety equipment such as scaffolding, railings, and ladders to comply with generally accepted good safety practices. For any tests to be conducted by the permittee, a test protocol shall be submitted to the OAQ by the permittee at least thirty (30) days prior to the test and shall be approved by the Chief. The Chief shall be notified at least fifteen (15) days in advance of the actual dates and times during which the test will be conducted.

5. In the event the permittee should deem it necessary to suspend, for a period in excess of sixty (60) consecutive calendar days, the operations, ~~either~~ in whole ~~or in part~~, authorized by this permit, the permittee shall notify the Chief, in writing, within two (2) calendar weeks of the passing of the sixtieth (60) day of the suspension period.

6. The provisions of this permit are severable and should any provision(s) be declared by a court of competent jurisdiction to be invalid or unenforceable, all other provisions shall remain in full force and effect.

7. The permittee shall notify the Chief, in writing, within fifteen (15) calendar days of the commencement of the construction, modification, or relocation activities authorized under this permit.

8. The permittee shall notify the Chief, in writing, at least fifteen (15) calendar days prior to actual startup of the operations authorized under this permit.

9. This permit is transferable in accordance with the requirements outlined in Section 8.1 of 45CSR13.

10. Violations of any of the conditions contained in this permit, or incorporated herein by reference, may subject the permittee to civil and/or criminal penalties for each violation and further action or remedies as provided by West Virginia Code 22-5-6 and 22-5-7.

ISSUED BY:

~~EDWARD L. KROPP, CHIEF~~
WV DIVISION OF ENVIRONMENTAL PROTECTION
~~OFFICE~~ DIVISION OF AIR QUALITY

DATE SIGNED: