Title V Permit Renewal Application

Kingsford Manufacturing Company

Beryl, West Virginia Facility

Submitted to:

State of West Virginia
Department of Environmental Protection
Division of Air Quality
601 57th Street, SE
Charleston, WV 25304

Submitted by:

Kingsford Manufacturing Company
P.O. Box 464
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Prepared by:

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March 2012

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1. INTRODUCTION

1.1 OVERVIEW

Kingsford Manufacturing Company (KMC) operates a wood char manufacturing facility in Beryl, Mineral County, West Virginia. Char is produced from bark/wood material and is used as an ingredient in the production of charcoal briquets. The Beryl facility is subject to Title V air permitting requirements because potential emissions of particulate matter (PM) and nitrogen oxides (NO_x) exceed 100 tons per year (tpy). KMC submitted a Title V operating permit application in May 1996. The original application was updated in 1998 and the revisions were determined to be administratively complete in March 1998. Further revisions were submitted in March 2001 and KMC was issued a Title V permit in January 2003, operating permit #R30-05700003-2003 which was renewed and reissued with modifications in October 2007. This permit expires on October 26, 2012. This Title V permit renewal application is being submitted six (6) months prior to expiration date of the permit. The application addresses facility changes that have occurred since 2007 and addresses new regulatory requirements.

There have been no changes to the Beryl facility since 2007 that have required any changes to the plant's operating permit. However, there is a new applicable air quality requirement that will apply to an emergency generator at the Beryl plant. The federal National Emissions Standard for Hazardous Air Pollutants (NESHAP) for reciprocating internal combustion engines (RICE) at area sources imposes work practice standards on the natural gas-fired emergency generator at the Beryl facility. The applicability of the RICE NESHAP to the emergency generator is addressed in this application.

Section 3 of this report provides a facility-wide air emission inventory summarizing plant-wide emissions. Potential emissions of hazardous air pollutants (HAPs) are summarized to demonstrate that the KMC Beryl plant is an area source of HAPs and therefore not subject to potentially applicable federal NESHAP standards for major HAP sources. Potential emissions of sulfur dioxide (SO_2) are also shown to be less than 100 tpy to demonstrate that the Beryl facility is not a major SO_2 source with regard to the 2008 SO_2 NAAQS nonattainment designation process. Potential emissions of greenhouse gases (GHGs) are also presented to demonstrate that the Beryl facility is not classified as a major source of CO_2e emissions and is therefore not

potentially subject to the Tailoring Rule. Supporting emissions calculations are provided in Appendix C.

Section 4 summarizes applicable federal and state air quality requirements and requests an updated permit shield for potentially applicable requirements. Revisions to the current Title V permit conditions are requested and are discussed in Section 4.

The WVDEP application forms are provided in Appendix A.

1.2 REPORT ORGANIZATION

This report has been prepared to provide WVDEP with the necessary information to renew KMC's Title V Operating Permit. The WVDEP permit application forms are provided in Appendix A of this report. The report consists of the following sections and appendices:

Section 1 – Introduction provides an overview of the renewal and the report organization.

Section 2 – Process Description describes current facility operations including changes to the plant that have occurred since 2007.

Section 3 – Emission Inventory summarizes criteria air pollutant emissions estimates for the facility, provides background documentation for the current emission estimates, and provides criteria pollutant, GHG, and HAP potential emissions estimates.

Section 4 – Applicable Requirements summarizes new potentially applicable federal and WVDEP air quality requirements, provides an updated Permit Shield request and proposes revisions to the current Title V permit.

Appendix A – WVDEP Application Forms includes applicable WVDEP air quality application forms.

Appendix B – Facility Emissions provides detailed potential emissions calculations for the Beryl facility.

2. PROCESS DESCRIPTION

2.1 FACILITY OPERATIONS

The KMC Beryl plant is located in Mineral County, West Virginia along WV Route 46. The location of the facility is shown in the WVDEP application forms (Appendix A, Attachment A) a section of the Westernport, West Virginia USGS quadrangle map. The facility is located on the Maryland border and is adjacent to a pulp and paper mill owned by NewPage.

KMC receives bark at the Beryl plant from the adjacent paper mill woodyard operations via a conveyor belt. During times when this conveyor system is inoperable due to production or maintenance downtime, bark is transported to the facility by truck. The Beryl plant processes the bark in a wood dryer and retort furnace to produce char. The char is then conveyed by truck for further processing into charcoal briquets at the KMC Parsons, WV briquetting facility. In addition, a portion of the unprocessed bark is conveyed by truck to the KMC Parsons plant to be processed into char at that facility. The emissions inventory tables in Appendix B (Tables B-3 and B-5) include fugitive dust emissions associated with bark loading to trucks and bark truck traffic on Beryl plant roadways.

The Beryl plant is classified as a major source of NO_x and PM emissions and therefore submitted a Title V application addressing all applicable state and federal air quality requirements in May 1996. KMC was issued a Title V permit in October 2007, #R30-05700003-2007 which expires on October 26, 2012. The WVDEP application forms (Appendix A, Attachment D) list the plant emitting units that are defined in the current Title V permit. The table lists the emitting units, and their associated sources, control devices, and stacks.

2.2 MODIFICATIONS TO PLANT

There were no modifications to the Beryl plant since 2007 requiring any modification of the operating permit. However, the facility operates a small 46-hp natural gas-fired emergency generator which is subject to the federal RICE NESHAP for area sources (40 CFR 63 Subpart ZZZZ). This engine was installed in 1996 and has been identified as an insignificant activity. The engine is being identified as Emission Unit 006-01 in the attached application forms.

3. EMISSION INVENTORY

3.1 FACILITY-WIDE EMISSIONS

Table 3-1 summarizes potential emission rates from the Beryl facility. Supporting emissions calculations are provided in Appendix C. The table demonstrates that the facility is a major source of PM_{10} and NO_x emissions because potential emission rates exceed 100 tpy based on allowable emission limits. However actual emissions, as submitted in the 2010 iSteps report, are below the 100 tpy threshold for both of these pollutants due to the fact that the plant is operating below capacity and that actual emission rates (determined by stack testing) are lower than the permitted emission rates.

3.2 CHANGES TO EMISSION INVENTORY

KMC has revised the previous estimates of fugitive particulate emission from vehicle traffic on the roadways of the Beryl facility. Previous estimates of this fugitive road dust emissions used US EPA AP-42 methodology from 1988 in conjunction with default AP-42 road surface silt loading factors. KMC has revised these emissions estimates by applying the most recent AP-42 emissions factors in Section 13.2.1 (January 2011) as well as using road surface silt loading data collected during sampling at conducted at the KMC Parsons, WV plant.

KMC has also revised the Beryl facility emission inventory to include the amount of particulate matter 2.5 microns or smaller ($PM_{2.5}$). $PM_{2.5}$ was calculated using AP-42 particle size multipliers where appropriate. For emissions from the charring/after combustion chamber (ACC) stack, $PM_{2.5}$ emissions have been estimated based on the results of stack testing conducted at similar KMC facilities.

3.3 GREENHOUSE GAS EMISSIONS

Potential greenhouse gas (GHG) emissions from the KMC Beryl facility are shown in Table B-10 of the emission inventory. Potential GHG emissions were calculated for both natural gas combustion and wood combusted in the charring process. Emission factors from 40 CFR Part 98 were used to calculate emissions of carbon dioxide (CO_2), and carbon dioxide equivalent (CO_2e)

emissions of both methane (CH_4) and nitrous oxide (N_2O). Both biogenic and nonbiogenic emissions were calculated, although only non-biogenic emissions are currently regulated by the US EPA. It is important to note that the potential GHG emissions were calculated using both the total heat input rating of all the natural gas fired burners in the ACC and the retort furnace operating at maximum heat input at 8,760 hours per year, as well as the total wood combusted under the 28,000 tons char production cap. In actual operation, such a scenario could not occur, as sufficient heat to the ACC is provided from wood charring off-gases during normal operations, and the ACC burners are typically only used for startup or for process upsets. Actual greenhouse gas emissions from the Beryl facility are less than 3,000 tons/year nonbiogenic CO_2e per year.

3.4 MINOR SOURCE STATUS FOR HAP EMISSIONS

The Beryl facility is a minor source of hazardous air pollutants (HAPs). As part of annual Toxics Release Inventory (Form R) reporting, KMC estimates air emission rates for two HAPs: methanol and lead. Annual emissions of methanol are estimated to be less than 2.0 tpy based on estimates of methanol generation rates in the wood charring operation and estimates of methanol destruction efficiency in the ACC afterburner. KMC also estimates small quantities of lead emissions in the Form R reports based on EPA guidance that trace quantities of lead are present in wood. Lead emission rates are estimated to be less than 0.001 tpy total. The Beryl facility also operates a small (46 hp) natural gas fired emergency generator. Total potential HAP emissions were calculated for the generator using a total non-emergency hourly operating limit of 100 hours per year, and total HAP emissions were calculated to be less than .0009 tons per year.

In addition, the KMC Beryl Title V permit limits VOC emissions from the charring operation ACC stack to 8.1 tpy (Condition 6.1.1). Because methanol is a VOC, this demonstrates that potential emissions of methanol are less than the major source threshold of 10 tpy for a single HAP.

Based on these considerations, it is KMC's assessment that the Beryl plant is a minor source of HAP emissions. The permit requirement to maintain a minimum ACC combustion chamber

temperature of 1,400^{o}F (Condition 6.2.2) ensures that potential methanol emissions remain below the major source threshold of 10 tpy.

TABLE 3-1
FACILITY POTENTIAL EMISSIONS
KINGSFORD MANUFACTURING CO. - BERYL, WEST VIRGINIA

Source	Potential Annual Emissions (tons/yr)[a]									Potential Maximum Hourly Emissions (lbs/hr)[a]							
	NO_x	CO	VOC	SO_2	PM	PM_{10}	$PM_{2.5}$	Total HAPs	CO_2e[b]	NO_x	CO	VOC	SO_2	PM	PM_{10}	$PM_{2.5}$	Total HAPs
Wood Pile Management and Traffic					6.45	3.03	0.45	1.29E-05						1.47	0.69	0.10	0.000003
Material Handling					0.86	0.54	0.31	3.29E-06						0.20	0.12	0.07	0.000001
Drying and Charring	182.00	28.82	8.10	42.00	158.20	94.90	64.70	0.21	35,722.61	65.70	8.93	2.52	17.00	49.00	29.40	20.04	0.07
Plant Roadways					1.34	0.27	0.07							0.31	0.06	0.02	
Storage Tanks				0.22								0.05					
Emergency Generator	0.06	0.10	0.001	0.00002	0.0005	0.0005	0.0005	0.0009		1.18	1.98	0.02	0.0003	0.01	0.01	0.01	0.02
Total	**182.06**	**28.92**	**8.10**	**42.22**	**166.85**	**98.74**	**65.53**	**0.21**	**35,722.61**	**66.88**	**10.91**	**2.59**	**17.00**	**50.98**	**30.29**	**20.24**	**0.09**

[a] See Table B-2 through B-10 for emissions calculations.

[b] CO_2e total is total reportable (non-biogenic) CO_2e emissions. See Table B-10.

Source	Operating Schedule (hr/yr)	Units	Maximum Annual Production (ton/yr)	Average Hourly Production (ton/hr)	Maximum Hourly Production (ton/hr)	Yield (wood:char)	Wood Moisture Content (%)
Wood Pile	8,760	Wood (wet)	224,000			4.00	50%
		Wood (dry)	112,000				
Mulch Pile	8760	Mulch (wet)	33,900				
		Mulch (dry)	16,950				
ACC	8,760	Char	28,000	3.20	4.50		

4. APPLICABLE REQUIREMENTS

The following subsections contain an assessment of new federal and state air regulations that are potentially applicable to the Beryl plant operations. Applicable requirements are identified on the "Applicable Requirement" section of the WVDEP "Emission Unit Form" provided in Appendix A, Attachment E. The summary provided in Subsections 4.1 and 4.2 below is intended to supplement the application checklist and to provide the WVDEP with KMC's assessment of the non-applicability of various newly promulgated air regulations. Revisions to the existing Beryl plant Title V permit conditions are requested in Subsection 4.3.

4.1 NEW FEDERAL REGULATIONS

The potential applicability of the following federal air quality regulations are discussed in this subsection:

- New Source Review (NSR) Regulations and Nonattainment Designation Status
- National Emissions Standards for Hazardous Air Pollutants (NESHAP) for area sources
- Federal Greenhouse Gas Reporting Requirements

4.1.1 New Source Review and Nonattainment Status

The KMC Beryl facility is located in Mineral County which is currently classified as attainment for all criteria pollutants. KMC understands that the WVDEP has proposed that Mineral County be classified as "unclassifiable" under the new 2008 SO_2 NAAQS standard, but that US EPA has not yet made final nonattainment area designations. As shown in Section 3, the Beryl facility is a minor source of SO_2 emissions (less than 100 tpy on a potential basis) and is therefore not expected to be included in any SO_2 NAAQS attainment designation process.

Because the KMC Beryl facility is classified as a major source and because the plant is located in an area designated as attainment for all criteria pollutants, plant modifications are potentially subject to the federal PSD construction permit provisions at 40 CFR 52.21. Future plant modifications will be reviewed by KMC with regard to the revised federal PSD regulation and

applicability provisions at 40 CFR 52.21 and at 45CSR14, including the GHG "Tailoring Rule" that went into effect on July 1, 2011. However, as shown on Table B-10, the KMC Beryl facility is not classified as a major source of CO_2-e emissions because potential emissions of non-biogenic CO_2-e emissions are below 100,000 tpy. Consequently, only plant modifications that result in more than 100,000 tpy CO_2-e emissions will trigger PSD review under the Tailoring Rule.

4.1.2 National Emission Standards for Hazardous Air Pollutants (NESHAP)

NESHAP promulgated prior to the 1990 Clean Air Act Amendments (CAAA) found in 40 CFR Part 61, applies to seven specific compounds emitted from specific sources. Pursuant to the CAAA of 1990, NESHAP specific to processes identified that emit an additional 188 air pollutants are promulgated in 40 CFR Part 63. The KMC Beryl plant is a minor source of HAPs as shown in Section 3 and is therefore not subject to any of the major source NESHAP "MACT" standards. However, there have been area source NESHAP regulations promulgated since 2007 that have the potential to apply to the KMC Beryl plant, including the Industrial, Commercial, and Institutional (ICI) Boiler NESHAP at 40 CFR 63 Subpart JJJJJJ and the Reciprocating Internal Combustion Engine (RICE) NESHAP at 40 CFR 63 Subpart ZZZZ.

The ICI Boiler NESHAP was promulgated in March of 2011. The Beryl facility contains no sources affected by the regulations (no steam boilers) and the regulation therefore does not apply to the Beryl facility.

The RICE NESHAP affects stationary RICE sources including diesel or natural gas-fired emergency generators located at area sources of HAP emissions. The Beryl facility has a small (46 hp) natural gas-fired emergency generator located at the facility to provide power during electrical disruptions. This generator was installed in 1996 and was previously identified as an insignificant source. As this engine is now affected by operational work practice requirements specified in the RICE NESHAP regulations, KMC requests this generator be added to the operating permit and the applicable requirements be included in the permit. KMC is identifying the emergency generator as Emission Unit 006-01. The RICE NESHAP work practice standards for spark ignition engines become applicable on October 19, 2013 and will require routine replacement of engine oil and filter, inspection of air filter, hoses and belts, and operation in

accordance with a maintenance plan. The applicable requirements of the RICE NESHAP are identified on page 20 of the attached application forms.

4.1.3 Federal Greenhouse Gas Reporting Requirements

In 2009, the EPA promulgated GHG reporting requirements under 40 CFR Part 98 requiring facilities to report GHG emissions if the facility emitted greater than 25,000 metric tons CO_2-e during the reporting year starting in calendar year 2010. As described in Section 3, the Beryl facility does have the potential to emit GHGs in exceedance of this reporting limit, but on an actual basis the facility is well below this level of emissions, and as such has not had to report GHG emissions under this requirement. KMC will continue to track GHG emissions and will report GHG emissions should the reporting threshold ever be exceeded. Note that biogenic CO_2 emissions are not counted towards Part 98 reporting applicability.

4.2 NEW WEST VIRGINIA REGULATIONS

Recently promulgated WVDEP air quality regulations have been reviewed and have been determined to not apply to the KMC Beryl plant operations. In particular, the NOx and SO_2 emissions limitations for electric generating units (45CSR39 and 45CSR41) are not applicable to the Beryl operations based on the facility source types and equipment capacities.

4.3 REQUESTED REVISIONS TO TITLE V PERMIT

KMC is requesting several minor revisions to the current Title V permit conditions. KMC believes that the revisions are minor and represent administrative changes to the permit conditions.

The revisions to the current Title V permit conditions that are requested consist of the following:

- Add the existing 46-hp emergency natural gas-fired generator to the permit as Emission Unit 006-01.

- Add the applicable requirements under 40 CFR 63 Subpart ZZZZ (the RICE NESHAP) for spark ignition engines to the permit as applicable to the emergency generator (Emission Unit 006-01).

- Add 40CFR63 Subpart JJJJJJ to the list of non-applicable air quality requirements in Condition 3.7.2 of the Permit Shield section of the Title V permit. The basis for non-applicability is that the Beryl plant has no affected sources.

APPENDIX A
WVDEP APPLICATION FORMS

WEST VIRGINIA DEPARTMENT OF ENVIRONMENTAL PROTECTION
DIVISION OF AIR QUALITY
601 57th Street SE
Charleston, WV 25304
Phone: (304) 926-0475
www.dep.wv.gov/daq

INITIAL/RENEWAL TITLE V PERMIT APPLICATION - GENERAL FORMS

Section 1: General Information

1. **Name of Applicant (As registered with the WV Secretary of State's Office):**
Kingsford Manufacturing Company

2. Facility Name or Location:
Beryl Plant
Beryl, Mineral County, West Virginia

3. DAQ Plant ID No.:
0 5 7 — 0 0 0 0 3

4. Federal Employer ID No. (FEIN):
9 4 3 2 4 0 5 2 4

5. **Permit Application Type:**

☐ Initial Permit — When did operations commence? MM/DD/YYYY
☒ Permit Renewal — What is the expiration date of the existing permit? 10/26/2012
☐ Update to Initial/Renewal Permit Application

6. Type of Business Entity:

☒ Corporation ☐ Governmental Agency ☐ LLC
☐ Partnership ☐ Limited Partnership

7. Is the Applicant the:

☐ Owner ☐ Operator ☒ Both

If the Applicant is not both the owner and operator, please provide the name and address of the other party.

_____
_____
_____

8. Number of onsite employees:
13

9. Governmental Code:

☒ Privately owned and operated; 0
☐ Federally owned and operated; 1
☐ State government owned and operated; 2
☐ County government owned and operated; 3
☐ Municipality government owned and operated; 4
☐ District government owned and operated; 5

10. 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.

11. Mailing Address		
Street or P.O. Box: P.O. Box 6		
City: Luke	**State:** MD	**Zip: 21540-0006**
Telephone Number: (304)355-2311	**Fax Number:** (304) 355-2312	

12. Facility Location		
Street: Route 46	**City:** Beryl	**County:** Mineral
UTM Easting: 666.0 km	**UTM Northing:** 4,371.0 km	**Zone:** ☒ 17 or ☐ 18
Directions: The facility is located adjacent to WV Route 46 near the WV-Maryland border, slightly west of the town of Luke, MD.		
Portable Source? ☐ Yes ☒ No		
Is facility located within a nonattainment area? ☐ Yes ☒ No		**If yes, for what air pollutants?**
Is facility located within 50 miles of another state? ☒ Yes ☐ No		**If yes, name the affected state(s).** MD, PA
Is facility located within 100 km of a Class I Area[1]? ☒ Yes ☐ No **If no, do emissions impact a Class I Area[1]?** ☐ Yes ☐ No		**If yes, name the area(s).** Dolly Sods Otter Creek

[1] *Class I areas include Dolly Sods and Otter Creek Wilderness Areas in West Virginia, and Shenandoah National Park and James River Face Wilderness Area in Virginia.*

13. Contact Information		
Responsible Official: Carey Preston		**Title:** Plant Manager
Street or P.O. Box: P.O. Box 464		
City: Parsons	**State:** WV	**Zip: 26287-**
Telephone Number: (304) 478-2911	**Fax Number:** (304) 478-2129	
E-mail address: carey.preston@clorox.com		
Environmental Contact: Scott Stephenson		**Title:** Plant Engineering Manager
Street or P.O. Box: P.O. Box 464		
City: Parsons	**State:** WV	**Zip: 26287-**
Telephone Number: (304) 478-2911	**Fax Number:** (304) 478-2129	
E-mail address: scott.stephenson@clorox.com		
Application Preparer: Gavin L. Biebuyck		**Title:** Principal Consultant
Company: Liberty Environmental, Inc.		
Street or P.O. Box: 50 North Fifth Street		
City: Reading	**State:** PA	**Zip: 19601-**
Telephone Number: (610) 375-9301	**Fax Number:** (610) 375-9302	
E-mail address: gbiebuyck@libertyenviro.com		

14. Facility Description

List all processes, products, NAICS and SIC codes for normal operation, in order of priority. Also list any process, products, NAICS and SIC codes associated with any alternative operating scenarios if different from those listed for normal operation.

Process	Products	NAICS	SIC
Wood char manufacturing facility	Wood char	N/D	2861

Provide a general description of operations.

The Kingsford Manufacturing Company Beryl plant processes bark from the paper mill woodyard operations and produces char for use at the KMC Parsons, WV charcoal briquetting plant. The plant receives bark, which is processed in a wood dryer and retort furnace to produce char. The char is then conveyed by truck for further processing into charcoal briquets at the Parsons facility. A portion of the unprocessed bark is also conveyed by truck to the Parsons facility to be processed into char at that facility.

15. Provide an **Area Map** showing plant location as **ATTACHMENT A**.

16. Provide a **Plot Plan(s)**, e.g. scaled map(s) and/or sketch(es) showing the location of the property on which the stationary source(s) is located as **ATTACHMENT B**. For instructions, refer to "Plot Plan - Guidelines."

17. Provide a detailed **Process Flow Diagram(s)** showing each process or emissions unit as **ATTACHMENT C**. Process Flow Diagrams should show all emission units, control equipment, emission points, and their relationships.

Section 2: Applicable Requirements

18. Applicable Requirements Summary	
Instructions: Mark all applicable requirements.	
☒ SIP	☐ FIP
☒ Minor source NSR (45CSR13)	☐ PSD (45CSR14)
☐ NESHAP (45CSR15)	☐ Nonattainment NSR (45CSR19)
☐ Section 111 NSPS	☒ Section 112(d) MACT standards
☐ Section 112(g) Case-by-case MACT	☐ 112(r) RMP
☐ Section 112(i) Early reduction of HAP	☐ Consumer/commercial prod. reqts., section 183(e)
☐ Section 129 Standards/Reqts.	☐ Stratospheric ozone (Title VI)
☐ Tank vessel reqt., section 183(f)	☐ Emissions cap 45CSR§30-2.6.1
☐ NAAQS, increments or visibility (temp. sources)	☐ 45CSR27 State enforceable only rule
☒ 45CSR4 State enforceable only rule	☐ Acid Rain (Title IV, 45CSR33)
☐ Emissions Trading and Banking (45CSR28)	☒ **C**ompliance **A**ssurance **M**onitoring (40CFR64)
☐ CAIR NO_x Annual Trading Program (45CSR39)	☐ CAIR NO_x Ozone Season Trading Program (45CSR40)
☐ CAIR SO_2 Trading Program (45CSR41)	

19. Non Applicability Determinations

List all requirements which the source has determined not applicable and for which a permit shield is requested. The listing shall also include the rule citation and the reason why the shield applies.

Existing (in current permit shield) Non-applicable Requirements		
Requirement	**Regulatory Citation**	**Basis for Non-Applicability**
PM Emissions from Fuel Combustion in Indirect Heat Exchangers	45CSR2	Per 45CSR§7-10.1. if PM emissions are subject to 45CSR7, they are exempt from this Rule
PM emissions from Coal Preparation and Handling Plants	45CSR5	No coal handling operations at Beryl facility.
PM emissions from an incinerator	45CSR§6-4.1.	The PM emission standard from 45CSR7 (45CSR§7-4.1.) also applies and is more stringent. Because of the "inconsistency between rules" provision in 45CSR6 and 7, the more stringent rule will apply and therefore the PM standard from 45CSR6 is moot and the Permit Shield applies.
Opacity limits for an incinerator	45CSR§6-4.3. and 4.4	The opacity standard from 45CSR7 (45CSR§§7- 3.1. and 3.2.) also applies and is more stringent. Because of the "inconsistency between rules" provision in 45CSR6 and 7, the more stringent rule will apply and therefore the opacity requirement from 45CSR6 is moot and the Permit Shield applies.
Type "d" chemical operation source	45CSR7A	This facility was previously determined by the Director as type "a" source, therefore it is not considered a type "d" source
Testing, Monitoring, Recordkeeping and Reporting of Sulfur Oxides emissions	45CSR§10-8	Per 45CSR§10-10.3. partial wood combustion during the manufacture of charcoal shall be exempt from this requirement
Preparation of standby plans for reducing the emissions of air pollution during periods of an Air Pollution Alert, Air pollution Warning, and Air pollution Emergency	45CSR§11-5.1.	This facility is not in Priority I or II regions, therefore it is not subject to this requirement

☒ Permit Shield

19. Non Applicability Determinations *(Continued)* - *Attach additional pages as necessary.*

List all requirements which the source has determined not applicable and for which a permit shield is requested. The listing shall also include the rule citation and the reason why the shield applies.

Existing (in current permit shield) Non-applicable Requirements (Continued)		
Requirement	**Regulatory Citation**	**Basis for Non-Applicability**
PSD source	45CSR14	Emission limits and production caps are accepted by the facility to avoid triggering PSD
Hazardous Air Pollutants Federal NESHAP standards	45CSR15 40CFR61	No affected sources at Beryl facility with exception of Asbestos Demolition/Renovation.
Federal NSPS standards	45CSR16 40CFR60	No affected sources at Beryl facility
Fugitive emissions from material handling	45CSR17	Per 45CSR§7-6.1. if sources are subject to 45CSR7 they are exempt from the requirements of this Rule
NSR permitting for non-attainment areas	45CSR19	Beryl facility is not in affected areas
VOC emissions regulations	45CSR21	Beryl facility is not in affected areas
Emissions of toxic air pollutants	45CSR27	Beryl facility does not operate any "chemical processing units" and does not use listed chemicals
Federal Acid Rain provisions	45CSR33 Title IV of CAAA	No affected sources at Beryl facility
Federal Major Source MACT standards	45CSR34 40CFR63	Beryl facility discharges less than 10 tpy of a single HAP and less than 25 tpy of aggregated HAPs
Emission Standards for Hot Mix Asphalt Plants	45CSR3	No affected sources at Beryl facility
Emission Standards for Municipal Solid Waste Landfills	45CSR23	No affected sources at Beryl facility
Emission Standards for Medical Waste Incinerators	45CSR24	No affected sources at Beryl facility
Emission Standards for Hazardous Waste Treatment, Storage or Disposal Facilities	45CSR25	No affected sources at Beryl facility
Transportation Plan Requirements	45CSR36	No affected sources at Beryl facility
Mercury Budget Trading Program	45CSR37	No affected sources at Beryl facility
CAIR NOx/SO2 Trading Program	45CSR39,40,41	No affected sources at Beryl facility
New Non-applicable Requirements		
Requirement	**Regulatory Citation**	**Basis for Non-Applicability**
Federal Area Source NESHAP – ICI Boiler and Process Heaters MACT	40CFR63 – Subpart JJJJJJ	No affected sources at Beryl facility

☒ Permit Shield

20. Facility-Wide Applicable Requirements

List all facility-wide applicable requirements. For each applicable requirement, include the underlying rule/regulation citation and/or construction permit with the condition number. (*Note: Title V permit condition numbers alone are not the underlying applicable requirements*).

Existing Facility-Wide Requirements	
Requirement	**Regulatory Citation**
Odors	45CSR4
Open Burning	45CSR6
Fugitive Particulate Emissions and Opacity	45CSR7
SOx Emission Requirements	45CSR10
Air Pollution Episode Requirements	45CSR11
Construction Permitting	45CSR13
Fee Program	45CSR22
Title V Permitting	45CSR30
Confidential Information	45CSR31
Emission Inventory/Testing Requirements	WVa Code 22-5-4
Asbestos Demolition/Renovation	40CFR61
Risk Management Plan	40CFR68
Ozone Depleting Substances	40CFR82
Compliance Assurance Monitoring	40CFR64
Please refer to the current Title V operating permit (R30-05700003-2003) for additional detail	

☒ Permit Shield

For all facility-wide applicable requirements listed above, provide monitoring/testing / recordkeeping / reporting which shall be used to demonstrate compliance. If the method is based on a permit or rule, include the condition number and/or citation. (Note: Each requirement listed above must have an associated method of demonstrating compliance. If there is not already a required method in place, then a method must be proposed.)

Facility-Wide Requirement Compliance Demonstration Methods		
Requirement	**Citation**	**Compliance Demonstration Method**
Existing Facility-Wide Requirements	See above	See existing Title V operating permit for details

Are you in compliance with all facility-wide applicable requirements? ☒ Yes ☐ No

If no, complete the **Schedule of Compliance Form** as **ATTACHMENT F**.

20. Facility-Wide Applicable Requirements *(Continued)* - *Attach additional pages as necessary.*

List all facility-wide applicable requirements. For each applicable requirement, include the rule citation and/or permit with the condition number.

☐ Permit Shield

For all facility-wide applicable requirements listed above, provide monitoring/testing/recordkeeping/ reporting which shall be used to demonstrate compliance. If the method is based on a permit or rule, include the condition number and/or citation. (Note: Each requirement listed above must have an associated method of demonstrating compliance. If there is not already a required method in place, then a method must be proposed.)

Are you in compliance with all facility-wide applicable requirements? ☐ Yes ☐ No

If no, complete the **Schedule of Compliance Form** as **ATTACHMENT F**.

21. Active Permits/Consent Orders		
Permit or Consent Order Number	Date of Issuance MM/DD/YYYY	List any Permit Determinations that Affect the Permit *(if any)*
Title V Operating Permit No. R30-05700003-2007	10/26/2007	Not applicable
NPDES # WV0070734	4/30/2007	Not applicable
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22. Inactive Permits/Obsolete Permit Conditions		
Permit Number	Date of Issuance	Permit Condition Number
Not applicable		
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Section 3: Facility-Wide Emissions

23. Facility-Wide Emissions Summary [Tons per Year] See Section 3 of Report	
Criteria Pollutants	Potential Emissions
Carbon Monoxide (CO)	28.92
Nitrogen Oxides (NO_X)	182.06
Lead (Pb)	0.001
Particulate Matter ($PM_{2.5}$)[1]	65.53
Particulate Matter (PM_{10})[1]	98.74
Total Particulate Matter (TSP)	166.85
Sulfur Dioxide (SO_2)	42.22
Volatile Organic Compounds (VOC)	8.10
Hazardous Air Pollutants[2]	Potential Emissions
Total HAPs	< 10
Regulated Pollutants other than Criteria and HAP	Potential Emissions

[1] *$PM_{2.5}$ and PM_{10} are components of TSP.*
[2] *For HAPs that are also considered PM or VOCs, emissions should be included in both the HAPs section and the Criteria Pollutants section.*

Section 4: Insignificant Activities

24. Insignificant Activities (Check all that apply)		
☒	1.	Air compressors and pneumatically operated equipment, including hand tools.
☐	2.	Air contaminant detectors or recorders, combustion controllers or shutoffs.
☒	3.	Any consumer product used in the same manner as in normal consumer use, provided the use results in a duration and frequency of exposure which are not greater than those experienced by consumer, and which may include, but not be limited to, personal use items; janitorial cleaning supplies, office supplies and supplies to maintain copying equipment.
☒	4.	Bathroom/toilet vent emissions.
☒	5.	Batteries and battery charging stations, except at battery manufacturing plants.
☒	6.	Bench-scale laboratory equipment used for physical or chemical analysis, but not lab fume hoods or vents. Many lab fume hoods or vents might qualify for treatment as insignificant (depending on the applicable SIP) or be grouped together for purposes of description.
☐	7.	Blacksmith forges.
☐	8.	Boiler water treatment operations, not including cooling towers.
☒	9.	Brazing, soldering or welding equipment used as an auxiliary to the principal equipment at the source.
☐	10.	CO_2 lasers, used only on metals and other materials which do not emit HAP in the process.
☒	11.	Combustion emissions from propulsion of mobile sources, except for vessel emissions from Outer Continental Shelf sources.
☒	12.	Combustion units designed and used exclusively for comfort heating that use liquid petroleum gas or natural gas as fuel.
☒	13.	Comfort air conditioning or ventilation systems not used to remove air contaminants generated by or released from specific units of equipment.
☐	14.	Demineralized water tanks and demineralizer vents.
☒	15.	Drop hammers or hydraulic presses for forging or metalworking.
☒	16.	Electric or steam-heated drying ovens and autoclaves, but not the emissions from the articles or substances being processed in the ovens or autoclaves or the boilers delivering the steam.
☐	17.	Emergency (backup) electrical generators at residential locations.
☐	18.	Emergency road flares.
☒	19.	Emission units which do not have any applicable requirements and which emit criteria pollutants (CO, NO_x, SO_2, VOC and PM) into the atmosphere at a rate of less than 1 pound per hour and less than 10,000 pounds per year aggregate total for each criteria pollutant from all emission units. Please specify all emission units for which this exemption applies along with the quantity of criteria pollutants emitted on an hourly and annual basis: E-05-01 Gasoline storage tank with conservation vent – 1,000 gallons E-05-02 Diesel oil tank with conservation vent – 1,000 gallons See Attachment B for emissions information.

24. Insignificant Activities (Check all that apply)		
☐	20.	Emission units which do not have any applicable requirements and which emit hazardous air pollutants into the atmosphere at a rate of less than 0.1 pounds per hour and less than 1,000 pounds per year aggregate total for all HAPs from all emission sources. This limitation cannot be used for any source which emits dioxin/furans nor for toxic air pollutants as per 45CSR27. Please specify all emission units for which this exemption applies along with the quantity of hazardous air pollutants emitted on an hourly and annual basis: _____ _____ _____ _____ _____
☐	21.	Environmental chambers not using hazardous air pollutant (HAP) gases.
☒	22.	Equipment on the premises of industrial and manufacturing operations used solely for the purpose of preparing food for human consumption.
☐	23.	Equipment used exclusively to slaughter animals, but not including other equipment at slaughterhouses, such as rendering cookers, boilers, heating plants, incinerators, and electrical power generating equipment.
☒	24.	Equipment used for quality control/assurance or inspection purposes, including sampling equipment used to withdraw materials for analysis.
☐	25.	Equipment used for surface coating, painting, dipping or spray operations, except those that will emit VOC or HAP.
☐	26.	Fire suppression systems.
☒	27.	Firefighting equipment and the equipment used to train firefighters.
☐	28.	Flares used solely to indicate danger to the public.
☒	29.	Fugitive emission related to movement of passenger vehicle provided the emissions are not counted for applicability purposes and any required fugitive dust control plan or its equivalent is submitted.
☐	30.	Hand-held applicator equipment for hot melt adhesives with no VOC in the adhesive formulation.
☒	31.	Hand-held equipment for buffing, polishing, cutting, drilling, sawing, grinding, turning or machining wood, metal or plastic.
☐	32.	Humidity chambers.
☐	33.	Hydraulic and hydrostatic testing equipment.
☒	34.	Indoor or outdoor kerosene heaters.
☒	35.	Internal combustion engines used for landscaping purposes.
☐	36.	Laser trimmers using dust collection to prevent fugitive emissions.
☐	37.	Laundry activities, except for dry-cleaning and steam boilers.
☒	38.	Natural gas pressure regulator vents, excluding venting at oil and gas production facilities.
☐	39.	Oxygen scavenging (de-aeration) of water.
☐	40.	Ozone generators.
☒	41.	Plant maintenance and upkeep activities (e.g., grounds-keeping, general repairs, cleaning, painting, welding, plumbing, re-tarring roofs, installing insulation, and paving parking lots) provided these activities are not conducted as part of a manufacturing process, are not related to the source's primary business activity, and not otherwise triggering a permit modification. (Cleaning and painting activities qualify if they are not subject to VOC or HAP control requirements. Asphalt batch plant

24. Insignificant Activities (Check all that apply)		
		owners/operators must still get a permit if otherwise requested.)
☐	42.	Portable electrical generators that can be moved by hand from one location to another. "Moved by Hand" means that it can be moved without the assistance of any motorized or non-motorized vehicle, conveyance, or device.
☒	43.	Process water filtration systems and demineralizers.
☒	44.	Repair or maintenance shop activities not related to the source's primary business activity, not including emissions from surface coating or de-greasing (solvent metal cleaning) activities, and not otherwise triggering a permit modification.
☒	45.	Repairs or maintenance where no structural repairs are made and where no new air pollutant emitting facilities are installed or modified.
☒	46.	Routing calibration and maintenance of laboratory equipment or other analytical instruments.
☐	47.	Salt baths using nonvolatile salts that do not result in emissions of any regulated air pollutants. Shock chambers.
☐	48.	Shock chambers.
☐	49.	Solar simulators.
☒	50.	Space heaters operating by direct heat transfer.
☐	51.	Steam cleaning operations.
☐	52.	Steam leaks.
☐	53.	Steam sterilizers.
☐	54.	Steam vents and safety relief valves.
☐	55.	Storage tanks, reservoirs, and pumping and handling equipment of any size containing soaps, vegetable oil, grease, animal fat, and nonvolatile aqueous salt solutions, provided appropriate lids and covers are utilized.
☒	56.	Storage tanks, vessels, and containers holding or storing liquid substances that will not emit any VOC or HAP. Exemptions for storage tanks containing petroleum liquids or other volatile organic liquids should be based on size limits such as storage tank capacity and vapor pressure of liquids stored and are not appropriate for this list.
☐	57.	Such other sources or activities as the Director may determine.
☒	58.	Tobacco smoking rooms and areas.
☒	59.	Vents from continuous emissions monitors and other analyzers.

Section 5: Emission Units, Control Devices, and Emission Points

25. Equipment Table
Fill out the **Title V Equipment Table** and provide it as **ATTACHMENT D**.
26. Emission Units
For each emission unit listed in the **Title V Equipment Table**, fill out and provide an **Emission Unit Form** as **ATTACHMENT E**.
For each emission unit not in compliance with an applicable requirement, fill out a **Schedule of Compliance Form** as **ATTACHMENT F**.
27. Control Devices
For each control device listed in the **Title V Equipment Table**, fill out and provide an **Air Pollution Control Device Form** as **ATTACHMENT G**.
For any control device that is required on an emission unit in order to meet a standard or limitation for which the potential pre-control device emissions of an applicable regulated air pollutant is greater than or equal to the Title V Major Source Threshold Level, refer to the **Compliance Assurance Monitoring (CAM) Form(s)** for CAM applicability. Fill out and provide these forms, if applicable, for each Pollutant Specific Emission Unit (PSEU) as **ATTACHMENT H**.

Section 6: Certification of Information

28. Certification of Truth, Accuracy and Completeness and Certification of Compliance

*Note: This Certification must be signed by a responsible official. The **original**, signed in **blue ink**, must be submitted with the application. Applications without an **original** signed certification will be considered as incomplete.*

a. Certification of Truth, Accuracy and Completeness

I certify that I am a responsible official (as defined at 45CSR§30-2.38) and am accordingly authorized to make this submission on behalf of the owners or operators of the source described in this document and its attachments. I certify under penalty of law that I have personally examined and am familiar with the statements and information submitted in this document and all its attachments. Based on my inquiry of those individuals with primary responsibility for obtaining the information, I certify that the statements and information are to the best of my knowledge and belief true, accurate, and complete. I am aware that there are significant penalties for submitting false statements and information or omitting required statements and information, including the possibility of fine and/or imprisonment.

b. 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.

Responsible official (type or print)	
Name: Carey Preston	Title: Plant Manager

Responsible official's signature:

Signature: _____ Signature Date: _____

(Must be signed and dated in blue ink)

Note: Please check all applicable attachments included with this permit application:	
☒	ATTACHMENT A: Area Map
☒	ATTACHMENT B: Plot Plan(s)
☒	ATTACHMENT C: Process Flow Diagram(s)
☒	ATTACHMENT D: Equipment Table
☒	ATTACHMENT E: Emission Unit Form(s)
☐	ATTACHMENT F: Schedule of Compliance Form(s)
☒	ATTACHMENT G: Air Pollution Control Device Form(s)
☐	ATTACHMENT H: Compliance Assurance Monitoring (CAM) Form(s)

All of the required forms and additional information can be found and downloaded from, the DEP website at www.dep.wv.gov/daq, requested by phone (304) 926-0475, and/or obtained through the mail.

Liberty Environmental, Inc.

50 N. Fifth Street, 5th Floor
Reading, PA 19601
Phone: 610-375-9301
Fax: 610-375-9302

NORTH

ATTACHMENT A: SITE LOCATION MAP

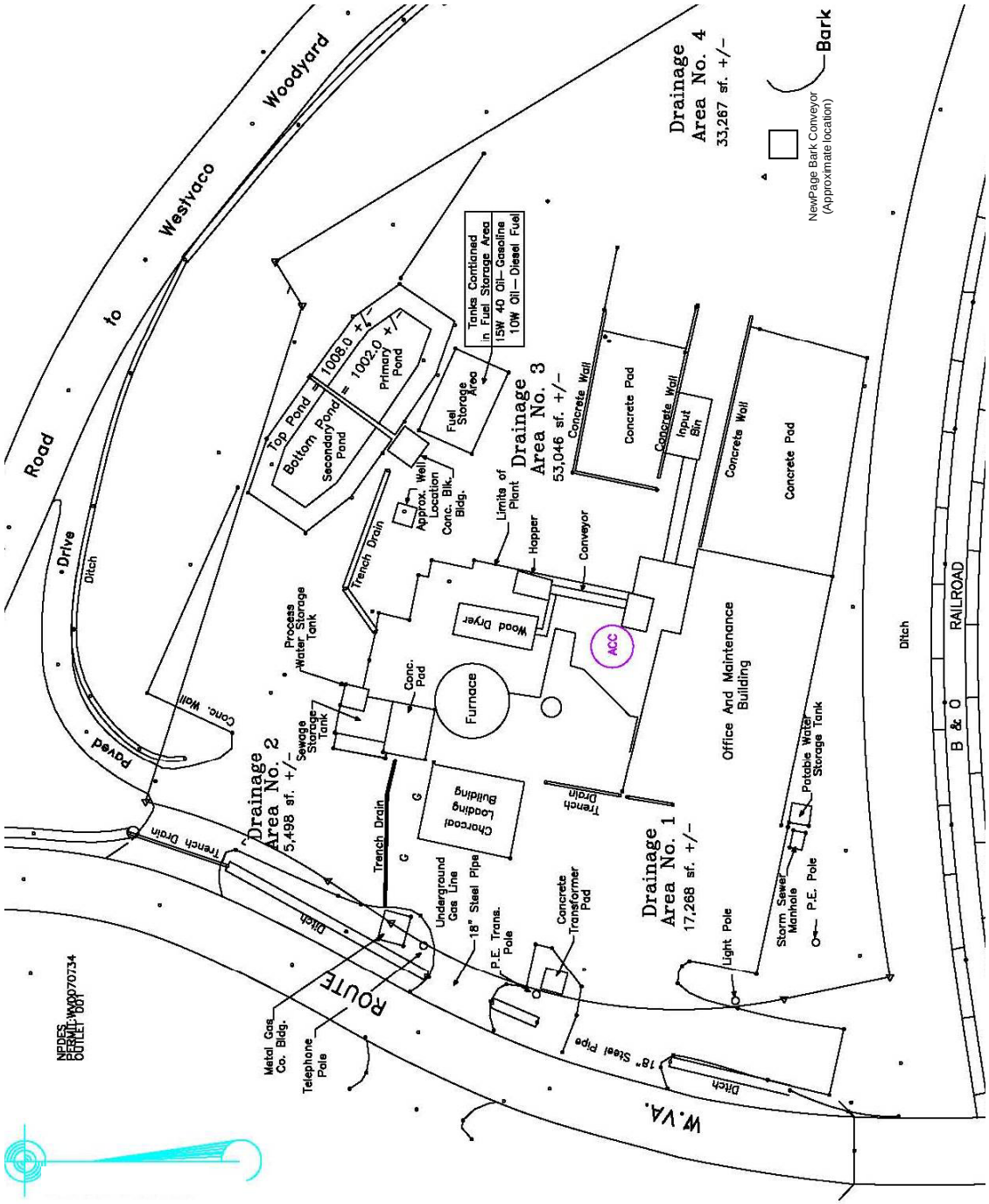
BERYL PLANT

KINGSFORD MANUFACTURING COMPANY

USGS MAP QUADRANGLE: WESTERNPORT, MD

SCALE : 1" = 2000 FEET

0 2000 4000



Liberty Environmental, Inc.

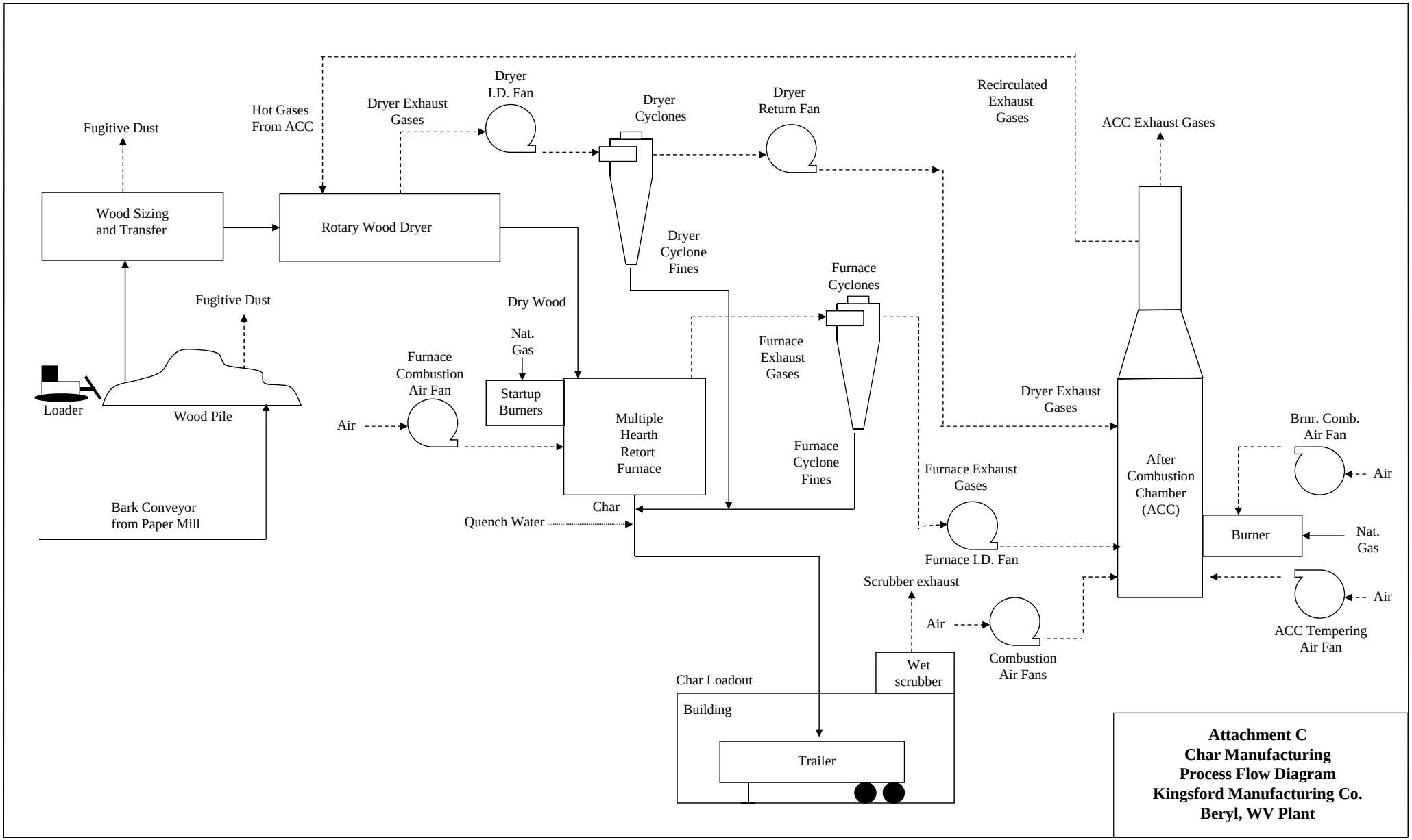
50 N. Fifth Street, 5th Floor
Reading, PA 19601
Phone: 610-375-9301
Fax: 610-375-9302

NORTH

ATTACHMENT B: PLOT PLAN

BERYL PLANT

KINGSFORD MANUFACTURING COMPANY



Attachment C
Char Manufacturing
Process Flow Diagram
Kingsford Manufacturing Co.
Beryl, WV Plant

ATTACHMENT D - Emission Units Table
(includes all emission units at the facility except those designated as insignificant activities in Section 4, Item 24 of the General Forms)

Source ID	Emission Point ID	Equipment Description and ID	Year Installed	Design Capacity or Allowable Limit	Control Device Description and ID
001-01	S-07	Wood Pile management: wood pile E-01-01	1963	N/A	None
001-02	S-07	Wood Pile management: mulch pile E-01-02	1984	N/A	None
002-01	S-07	Transfer to hopper by end loader E-02-01	1963, mod.1994	257,900 TPY	None
002-02	S-07	Hopper reverse chain to ground E-02-02	1963, mod.1994	257,900 TPY	None
002-03	S-07	Hopper to 48" belt E-02-03	1963, mod.1994	257,900 TPY	Full Enclosure
002-04	S-07	48" belt into hog E-02-04	1963, mod.1993	257,900 TPY	Full Enclosure
002-05	S-07	Scrape bottom of 48" belt to ground E-02-05	1993	258 TPY	Partial Enclosure
002-06	S-07	Block conveyor to live bottom bin E-02-06	1963	224,000 TPY	Full Enclosure
002-07	S-07	Mulch chute to ground E-02-07	1996	33,900 TPY	None
002-08	S-07	Wood bypass screw to hopper E-02-08	1998	124 TPY	Partial Enclosure
002-09	S-07	Char to trailer E-02-09	1999	28,000 TPY	Wet Scrubber
002-10	S-07	Bypass Hopper E-02-10	2001	50 TPY	None
002-11	S-07	Bypass Block conveyor E-02-11	2001	50 TPY	Partial enclosure
003-01	S-02	Rotary Wood Dryer E-03-01 (Heil SD-105-32)	1998	36 tph wet wood	Primary Dryer Cyclone C-05; (2) Secondary Dryer Cyclones C-06; After Combustion Chamber (ACC) C-08
003-02	S-02	Multi-hearth Retort Furnace E-03-02 (Nichols-Herreshoff)	1962, mod.1997	4.5 tph char	(2) Furnace Cyclones C-07; After Combustion Chamber (ACC) C-08
003-02	S-02	(1) Low NOx natural gas burner to provide heat to ACC during start ups and system interruptions, to maintain temperature during operation; (6) natural gas burners for Retort Furnace start up periods	1998	40 MMBtu/hr 4 MMBtu/hr each	None
004-01	S-07	Paved Roads: End-loader Traffic E-04-01, Vehicle Traffic E-04-02	1990	N/A	None
005-01	S-04	Gasoline tank E-05-01 with conservation vent	1990	1,000 gal	None
005-02	S-05	Diesel oil tank E-05-02 with conservation vent (negligible emissions)	1990	1,000 gal	None
006-01	S-07	Natural Gas Fired Emergency Generator	1996	48 hp	None
Control Device	S-02	Primary Dryer Cyclone C-05 (Heil)	1963	unknown	(2) Secondary Dryer Cyclones C-06
Control Device	S-02	(2) Secondary Dryer Cyclones C-06 (Fisher- Klosterman XQ 120-41)	1997	22,000 ACFM each	After Combustion Chamber (ACC) C-08
Control Device	S-02	(2) Furnace Cyclones C-07 (Fisher-Klosterman XQ 120-27-2.75CR)	1997	11,000 ACFM each	After Combustion Chamber (ACC) C-08
Control Device	S-02	Thermal After Combustion Chamber (ACC) C-08 (self-manufactured)	1997	368,970 ACFM of wood derived gases, destruction efficiency: 99% for CO, VOC	None
Control Device	S-07	Wet Scrubber Hosokawa Model 30DS.2	1999	90% of PM	None

[1]For 45CSR13 permitted sources, the numbering system used for the emission points, control devices, and emission units should be consistent with the numbering system used in the 45CSR13 permit. For grandfathered sources, the numbering system should be consistent with registrations or emissions inventory previously submitted to DAQ. For emission points, control devices, and emissions units which have not been previously labeled, use the following 45CSR13 numbering system: 1S, 2S, 3S,... or other appropriate description for emission units; 1C, 2C, 3C,... or other appropriate designation for control devices; 1E, 2E, 3E, ... or other appropriate designation for emission points.

ATTACHMENT E - Emission Unit Form

Emission Unit Description

Emission unit ID number:	**Emission unit name:**	**List any control devices associated with this emission unit:**
001-01, 02	Wood Pile E-01-01 Mulch Pile E-01-02	None

Provide a description of the emission unit (type, method of operation, design parameters, etc.):
Wet bark is transferred from the adjacent NewPage paper mill to the KMC bark storage area via a belt conveyor. The bark is transferred into storage piles (E-01-02) using a front end loader.

Manufacturer:	**Model number:**	**Serial number:**
Not applicable	Not applicable	Not applicable

Construction date:	**Installation date:**	**Modification date(s):**
E-01-01 1963 E-01-02 1984	E-01-01 1963 E-01-02 1984	E-01-01 1963 E-01-02 1984

Design Capacity (examples: furnaces - tons/hr, tanks - gallons):
E-01-03 50 tph wet wood

Maximum Hourly Throughput:	**Maximum Annual Throughput:**	**Maximum Operating Schedule:**
E-01-03 50 tph wet wood	Not determined	8,760 hours/.yr

Fuel Usage Data **(fill out all applicable fields)**

Does this emission unit combust fuel? ___Yes _X_ No	**If yes, is it?** Not applicable ___ Indirect Fired ___Direct Fired
Maximum design heat input and/or maximum horsepower rating: Not applicable	**Type and Btu/hr rating of burners:** Not applicable

List the primary fuel type(s) and if applicable, the secondary fuel type(s). For each fuel type listed, provide the maximum hourly and annual fuel usage for each.
Not applicable

Describe each fuel expected to be used during the term of the permit.

Fuel Type	Max. Sulfur Content	Max. Ash Content	BTU Value
Not applicable			

Emissions Data		
Criteria Pollutants	Potential Emissions	
	PPH	TPY
Carbon Monoxide (CO)	NA	NA
Nitrogen Oxides (NO_X)	NA	NA
Lead (Pb)	2.94E-06	1.29E-05
Particulate Matter ($PM_{2.5}$)	0.1	0.45
Particulate Matter (PM_{10})	0.69	3.03
Total Particulate Matter (TSP)	1.47	6.45
Sulfur Dioxide (SO_2)	NA	NA
Volatile Organic Compounds (VOC)	NA	NA
Hazardous Air Pollutants	Potential Emissions	
	PPH	TPY
NA		
Regulated Pollutants other than Criteria and HAP	Potential Emissions	
	PPH	TPY
NA		

List the method(s) used to calculate the potential emissions (include dates of any stack tests conducted, versions of software used, source and dates of emission factors, etc.).

See Appendix C for detailed emissions summary

Applicable Requirements

List all applicable requirements for this emission unit. For each applicable requirement, include the underlying rule/regulation citation and/or <u>construction permit</u> with the condition number. (*Note: Title V permit condition numbers alone are not the underlying applicable requirements*). If an emission limit is calculated based on the type of source and design capacity or if a standard is based on a design parameter, this information should also be included.

(Per Title V Operating Permit No R30-05700003-2007)

7.1. Limitations and Standards

7.1.1. The control devices and procedures, specified in the Emission Units Table 1.0. for Emission Point S-07, shall be maintained and operated to control and minimize any fugitive escape of pollutants including but not limited to: enclosures, wet scrubber, chemical dust suppressants. Good operating practices shall be implemented and when necessary dust suppressants shall be applied in relation to stockpiling and general material handling to prevent dust generation and atmospheric entrainment. **[45CSR§30-5.1.c. and 45CSR§7-5.2.]**

7.1.2. The permittee shall inspect all fugitive dust control systems, specified in the Emission Units Table 1.0 for Emission Point S-07, weekly to ensure that they are operated and maintained in conformance with their designs. **[45CSR§30-5.1.c.]**

__X__ Permit Shield

For all applicable requirements listed above, provide monitoring/testing/recordkeeping/reporting which shall be used to demonstrate compliance. If the method is based on a permit or rule, include the condition number or citation. (Note: Each requirement listed above must have an associated method of demonstrating compliance. If there is not already a required method in place, then a method must be proposed.)

(Per Title V Operating Permit No R30-05700003-2003)

7.2. Monitoring Requirements

7.2.1. Visual emission checks of the units listed in the Emission Units Table 1.0. for Emission Point S-07 emitting directly into the open air from points other than a stack outlet (including visible fugitive dust emissions that leave the plant site boundaries), shall be conducted during periods of normal facility operation for a minimum of 6 minutes to determine if the unit has visible emissions using procedures outlined in 40 C.F.R. 60, Appendix A, Method 22. If sources of visible emissions are identified during the survey, or at any other time, permittee shall conduct an evaluation as outlined in 4 5CSR§7A-2.1.a,b within 24 hour period unless the permittee can demonstrate a valid reason that the time frame should be extended. A 45CSR§7A-2.1.a,b evaluation shall not be required if the visible emission condition is corrected in a timely manner and the units are operated at normal operating conditions. Upon issuance of this Permit weekly Method 22 checks shall be conducted for a minimum of 4 consecutive weeks. If in compliance with the opacity limit per 45CSR§7-3.1, then monthly Method 22 checks shall be conducted. Anytime when not in compliance with the opacity limit per 45CSR§7-3.1, then monitoring shall revert back to the weekly frequency requirement and begin the progressive monitoring cycle again. **[45CSR§30-5.1.c.]**

Are you in compliance with all applicable requirements for this emission unit? _X__Yes ___No

If no, complete the **Schedule of Compliance Form** as **ATTACHMENT F**.

Applicable Requirements

List all applicable requirements for this emission unit. For each applicable requirement, include the underlying rule/regulation citation and/or <u>construction permit</u> with the condition number. (*Note: Title V permit condition numbers alone are not the underlying applicable requirements*). If an emission limit is calculated based on the type of source and design capacity or if a standard is based on a design parameter, this information should also be included.

See Above

__X__ Permit Shield

For all applicable requirements listed above, provide monitoring/testing/recordkeeping/reporting which shall be used to demonstrate compliance. If the method is based on a permit or rule, include the condition number or citation. (Note: Each requirement listed above must have an associated method of demonstrating compliance. If there is not already a required method in place, then a method must be proposed.)

(Per Title V Operating Permit No R30-05700003-2003)

7.3. Recordkeeping Requirements

7.3.1. The permittee shall maintain records indicating the use of any dust suppressants or any other suitable dust control measures applied at the facility (wood piles, transfer points, paved and unpaved roads). These records shall be maintained on site for a period of no less than five (5) years and shall be made available to the Director or his/her duly authorized representative upon request. **[45CSR§30-5.1.c.]**

7.3.2. The permittee shall maintain records of the results of weekly inspections of the systems to minimize fugitive emissions per Requirement 7.1.2. Records shall state the times the systems were inoperable, what corrective actions taken as a result of the weekly inspections and all scheduled and unscheduled maintenance procedures. Such records shall be maintained on site for a period of no less than five (5) years and shall be made available to the Director or his/her duly authorized representative upon request. **[45CSR§30-5.1.c.]**

7.3.3. A record of each visible emission check per Requirement 7.2.1. shall be maintained on site for a period of no less than five (5) years and shall be made available to the Director or his/her duly authorized representative upon request. Said records shall include, but not be limited to, the date, time, name of emission unit, the applicable visible emission requirement, the results of the check, what action(s), if any, was/were taken, and the name of the observer. **[45CSR§30-5.1.c.]**

Are you in compliance with all applicable requirements for this emission unit? _X__Yes ___No

If no, complete the **Schedule of Compliance Form** as **ATTACHMENT F**.

ATTACHMENT E - Emission Unit Form

Emission Unit Description

Emission unit ID number:	**Emission unit name:**	**List any control devices associated with this emission unit.**
002-01 through 11 Material Handling and Transfer Operations	See Attachment D	E-02-03,04,06 Full enclosure E-02-05,07,11 Partial enclosure E-02-09 - Wet scrubber (C-09)

Provide a description of the emission unit (type, method of operation, design parameters, etc.):
Wet bark is transferred from the KMC storage piles (E-01-01, 02) to the bark handling and transfer operations or directly into trucks for shipment to the Parsons facility via a front end loader (E-02-01). The bark conveying and handling operations consist of various hoppers, chutes, and conveyors that move the bark from the storage piles through a bark sizing hog to the rotary wood dryer (E-03-01) followed by the multi-hearth retort furnace (E-03-02). After the bark has been converted to char, the material handling and transfer operations convey the char to trailers for shipment to the KMC Parsons, WV facility.

Manufacturer:	**Model number:**	**Serial number:**
Not applicable	Not applicable	Not applicable
Construction date:	**Installation date:**	**Modification date(s):**
See Attachment D	See Attachment D	See Attachment D

Design Capacity (examples: furnaces - tons/hr, tanks - gallons):
See Attachment D

Maximum Hourly Throughput:	**Maximum Annual Throughput:**	**Maximum Operating Schedule:**
See Attachment D	See Attachment D	8,760 hours/.yr

Fuel Usage Data **(fill out all applicable fields)**

Does this emission unit combust fuel? ___Yes _X_ No	**If yes, is it?** Not applicable ___ Indirect Fired ___Direct Fired
Maximum design heat input and/or maximum horsepower rating: Not applicable	**Type and Btu/hr rating of burners:** Not applicable

List the primary fuel type(s) and if applicable, the secondary fuel type(s). For each fuel type listed, provide the maximum hourly and annual fuel usage for each.
Not applicable

Describe each fuel expected to be used during the term of the permit.

Fuel Type	Max. Sulfur Content	Max. Ash Content	BTU Value
Not applicable			

Emissions Data		
Criteria Pollutants	Potential Emissions	
	PPH	TPY
Carbon Monoxide (CO)	NA	NA
Nitrogen Oxides (NO_X)	NA	NA
Lead (Pb)	7.51 E-07	3.29E-06
Particulate Matter ($PM_{2.5}$)	0.07	0.31
Particulate Matter (PM_{10})	0.12	0.54
Total Particulate Matter (TSP)	0.2	0.86
Sulfur Dioxide (SO_2)	NA	NA
Volatile Organic Compounds (VOC)	NA	NA
Hazardous Air Pollutants	Potential Emissions	
	PPH	TPY
NA		
Regulated Pollutants other than Criteria and HAP	Potential Emissions	
	PPH	TPY
NA		

List the method(s) used to calculate the potential emissions (include dates of any stack tests conducted, versions of software used, source and dates of emission factors, etc.).

See Appendix C for detailed emissions summary

Applicable Requirements
List all applicable requirements for this emission unit. For each applicable requirement, include the underlying rule/regulation citation and/or <u>construction permit</u> with the condition number. (*Note: Title V permit condition numbers alone are not the underlying applicable requirements*). If an emission limit is calculated based on the type of source and design capacity or if a standard is based on a design parameter, this information should also be included. **See E-01-01,02,03 requirements**
__X__ Permit Shield
For all applicable requirements listed above, provide monitoring/testing/recordkeeping/reporting which shall be used to demonstrate compliance. If the method is based on a permit or rule, include the condition number or citation. (Note: Each requirement listed above must have an associated method of demonstrating compliance. If there is not already a required method in place, then a method must be proposed.) **See E-01-01,02,03 requirements**
Are you in compliance with all applicable requirements for this emission unit? _X__Yes ___No If no, complete the **Schedule of Compliance Form** as **ATTACHMENT F**.

ATTACHMENT E - Emission Unit Form

Emission Unit Description

Emission unit ID number:	**Emission unit name:**	**List any control devices associated with this emission unit.**
003-01	Rotary Wood Dryer E-03-01	Primary Dryer Cyclone C-05 (2) Secondary Dryer Cyclones C-06 After Combustion Chamber (ACC) C-08

Provide a description of the emission unit (type, method of operation, design parameters, etc.):
Sized, wet bark is dried by the wood dryer with heat provided by the ACC. The dried wood is fed to the retort furnace where it is converted into char through pyrolysis in a starved air environment. Heat is provided to the dryer by the ACC (C-08) afterburner. The dryer exhaust passes through the primary dryer cyclone (C-05) followed by the secondary dryer cyclones (C-06) followed by the ACC (C-08). The cyclones are primarily used for product recovery. The primary cyclone recovers the dry wood which is then conveyed to the retort furnace. Dried wood particles captured by the secondary cyclones are combined with the char produced by the furnace.

Manufacturer:	**Model number:**	**Serial number:**
Heil	SD-105-32	1427
Construction date:	**Installation date:**	**Modification date(s):**
1998	1998	Not applicable

Design Capacity (examples: furnaces - tons/hr, tanks - gallons):
36 tph wet wood

Maximum Hourly Throughput:	**Maximum Annual Throughput:**	**Maximum Operating Schedule:**
36 tph wet wood	Not determined	8,760 hours/.yr

Fuel Usage Data **(fill out all applicable fields)**

Does this emission unit combust fuel? ___Yes _X_ No	**If yes, is it?** Not applicable ___ Indirect Fired ___Direct Fired
Maximum design heat input and/or maximum horsepower rating: Not applicable	**Type and Btu/hr rating of burners:** Not applicable

List the primary fuel type(s) and if applicable, the secondary fuel type(s). For each fuel type listed, provide the maximum hourly and annual fuel usage for each.
Not applicable

Describe each fuel expected to be used during the term of the permit.

Fuel Type	Max. Sulfur Content	Max. Ash Content	BTU Value
Not applicable			

Emissions Data		
Criteria Pollutants	Potential Emissions	
	PPH	TPY
Carbon Monoxide (CO)	See emissions listed for EU 003-02.	
Nitrogen Oxides (NO_X)		
Lead (Pb)		
Particulate Matter ($PM_{2.5}$)		
Particulate Matter (PM_{10})		
Total Particulate Matter (TSP)		
Sulfur Dioxide (SO_2)		
Volatile Organic Compounds (VOC)		
Hazardous Air Pollutants	Potential Emissions	
	PPH	TPY
See emissions listed for EU 003-02.		
Regulated Pollutants other than Criteria and HAP	Potential Emissions	
	PPH	TPY
See emissions listed for EU 003-02.		
List the method(s) used to calculate the potential emissions (include dates of any stack tests conducted, versions of software used, source and dates of emission factors, etc.).		

Applicable Requirements

List all applicable requirements for this emission unit. For each applicable requirement, include the underlying rule/regulation citation and/or construction permit with the condition number. (*Note: Title V permit condition numbers alone are not the underlying applicable requirements*). If an emission limit is calculated based on the type of source and design capacity or if a standard is based on a design parameter, this information should also be included.
(Per Title V Operating Permit No R30-05700003-2007)

4.1. Limitations and Standards

4.1.1. The Rotary Wood Dryer, Equipment ID E-03-01, shall process no more than 36 tons of wet wood per hour. **[45CSR13, R13-2117D, A.1.]**

4.1.2. Emissions generated as a result of the operation of the Rotary Wood Dryer shall be routed to and combusted by the After Combustion Chamber, Control Device ID C-08, prior to their release to the atmosphere. **[45CSR13, R13-2117D, A.3.]**

4.1.3. The control devices in the Emission Units Table 1.0. for the Rotary Wood Dryer, shall be maintained and operated in a manner consistent with good air pollution control practice for minimizing emissions. **[45CSR§30-5.1.c.]**

4.1.4. The permittee shall inspect all control systems, specified in the Emission Units Table 1.0 for the Rotary Wood Dryer, weekly to ensure that they are operated and maintained in conformance with their designs. **[45CSR§30-5.1.c.]**

__X__ Permit Shield

For all applicable requirements listed above, provide monitoring/testing/recordkeeping/reporting which shall be used to demonstrate compliance. If the method is based on a permit or rule, include the condition number or citation. (Note: Each requirement listed above must have an associated method of demonstrating compliance. If there is not already a required method in place, then a method must be proposed.)
(Per Title V Operating Permit No R30-05700003-2007)

4.2. Recordkeeping Requirements

4.2.1 The permittee shall maintain accurate records on the amount of wet wood charged to the Rotary Wood Dryer. **[45CSR13, R13-2117D, B.7.]**

4.2.2. The permittee shall maintain accurate records on the hours of operation of the Rotary Wood Dryer on a daily basis. According to the facility process specifications, hours of operation of the Rotary Wood Dryer are equivalent to the time to load trailers with finished wood char. **[45CSR§30-5.1.c.]**

4.2.3. Compliance with the hourly maximum limit [of wet wood charged to the Rotary Wood Dryer] shall be calculated on the basis of a rolling thirty day average expressed in pounds per hour based on the hours of production for any specific 30 day period. Said records shall be certified by a responsible official and maintained on site for a period of no less than five (5)years. **[45CSR13, R13-2117D, B.7.]**

4.2.4. Calculation of amount of wood charged to the Rotary Wood Dryer shall be performed as set forth in Section 5.2.4.

4.2.5. The permittee shall maintain records of the results of weekly inspections of the control systems per Requirement 4.1.4. Records shall state the times the systems were inoperable, what corrective actions taken as a result of the weekly inspections and all scheduled and unscheduled maintenance procedures. Such records shall be maintained on site for a period of no less than five (5) years and shall be made available to the Director or his/her duly authorized representative upon request. **[45CSR§30-5.1.c.]**

Are you in compliance with all applicable requirements for this emission unit? _X__Yes ___No

If no, complete the **Schedule of Compliance Form** as **ATTACHMENT F**.

ATTACHMENT E - Emission Unit Form

Emission Unit Description

Emission unit ID number:	**Emission unit name:**	**List any control devices associated with this emission unit.**
003-02	Multi-Hearth Retort Furnace E-03-02	(2) Furnace Cyclones C-07 After Combustion Chamber (ACC) C-08

Provide a description of the emission unit (type, method of operation, design parameters, etc.):
Dried bark is pyrolized into char in a 5-hearth continuous retort furnace. Charred wood is quenched with water and transferred by screws to trailers (E-02-09) for shipment to the KMC Parsons, WV plant. The furnace exhaust gas stream passes through the furnace cyclones (C-07) for material recovery followed by the ACC (C-08) for combustion. Charred wood particles captured by the furnace cyclones are combined with the char produced by the furnace. Natural gas burners, 6 @ 4MMBtu/hr, are used during startup of the furnace. The ACC is equipped with a 40 MMBtu/hr natural gas-fired burner to maintain temperatures in the afterburner of at least 1,400F. During normal operations, the ACC heat is supplied by the combustion of retort furnace off-gases.

Manufacturer:	**Model number:**	**Serial number:**
Nichols-Herreshoff	None	None

Construction date:	**Installation date:**	**Modification date(s):**
Retort 1962 Burners 1998	Retort 1962 Burners 1998	Retort 1998 Burners 1998

Design Capacity (examples: furnaces - tons/hr, tanks - gallons):
18 tph dry wood
4.5 tph char

Maximum Hourly Throughput:	**Maximum Annual Throughput:**	**Maximum Operating Schedule:**
18 tph dry wood 4.5 tph char	28,000 tpy char	8,760 hours/.yr

Fuel Usage Data **(fill out all applicable fields)**

Does this emission unit combust fuel? _X__Yes __ No	**If yes, is it?** ___ Indirect Fired _X_Direct Fired
Maximum design heat input and/or maximum horsepower rating: One (1) Low NOx burner @ 40 MMBtu/hr (ACC burner) Four (4) burners @ 4 MMBtu/hr, each (Retort Furnace burners)	**Type and Btu/hr rating of burners:** Not applicable

List the primary fuel type(s) and if applicable, the secondary fuel type(s). For each fuel type listed, provide the maximum hourly and annual fuel usage for each.
Natural gas

Describe each fuel expected to be used during the term of the permit.

Fuel Type	Max. Sulfur Content	Max. Ash Content	BTU Value
Natural gas	Not applicable	Not applicable	1,020 Btu/scf

Emissions Data		
Criteria Pollutants	Potential Emissions	
	PPH	TPY
Carbon Monoxide (CO)	8.93	28.82
Nitrogen Oxides (NO_X)	65.7	182
Lead (Pb)	4.92E-04	0.001
Particulate Matter ($PM_{2.5}$)	20.0	64.7
Particulate Matter (PM_{10})	29.4	94.9
Total Particulate Matter (TSP)	49	158.2
Sulfur Dioxide (SO_2)	17	42
Volatile Organic Compounds (VOC)	2.52	8.1
Hazardous Air Pollutants	Potential Emissions	
	PPH	TPY
Methanol	0.05	0.15
Regulated Pollutants other than Criteria and HAP	Potential Emissions	
	PPH	TPY
NA		

List the method(s) used to calculate the potential emissions (include dates of any stack tests conducted, versions of software used, source and dates of emission factors, etc.).

See Appendix C for detailed emissions summary

Applicable Requirements

List all applicable requirements for this emission unit. For each applicable requirement, include the underlying rule/regulation citation and/or <u>construction permit</u> with the condition number. (*Note: Title V permit condition numbers alone are not the underlying applicable requirements*). If an emission limit is calculated based on the type of source and design capacity or if a standard is based on a design parameter, this information should also be included.
(Per Title V Operating Permit No R30-05700003-2007)

5.1. Limitations and Standards

5.1.1. The Multi-Hearth Retort Furnace, Equipment ID E-03-02, shall process no more than 18 tons of dry wood per hour. **[45CSR13, R13-2117D, A.2.]**

5.1.2. The permittee shall produce no more than 4.5 tons of wood char per hour or 28,000 tons of wood char per year. **[45CSR13, R13-2117D, A.5.]**

5.1.3. Emissions generated as a result of the operation of the Multi-Hearth Retort Furnace shall be routed to and combusted by the After Combustion Chamber, Control Device ID C-08, prior to their release to the atmosphere. **[45CSR13, R13-2117D, A.3.]**

5.1.4. The control devices in the Emission Units Table 1.0. for the Multi-Hearth Retort Furnace, shall be maintained and operated in a manner consistent with good air pollution control practice for minimizing emissions. **[45CSR§30-5.1.c.]**

5.1.5. The permittee shall inspect all control systems, specified in the Emission Units Table 1.0 for the Multi-Hearth Retort Furnace, weekly to ensure that they are operated and maintained in conformance with their designs. **[45CSR§30-5.1.c.]**

__X__ Permit Shield

For all applicable requirements listed above, provide monitoring/testing/recordkeeping/reporting which shall be used to demonstrate compliance. If the method is based on a permit or rule, include the condition number or citation. (Note: Each requirement listed above must have an associated method of demonstrating compliance. If there is not already a required method in place, then a method must be proposed.)
(Per Title V Operating Permit No R30-05700003-2007)

5.1. Recordkeeping Requirements

5.2.1. The permittee shall maintain accurate records on the amount of dry wood charged to the Multi-hearth Retort Furnace. **[45CSR13, R13-2117D, B.7.]**

5.2.2. The permittee shall maintain accurate records on the hours of operation of the Multi-hearth Retort Furnace on a daily basis. According to the facility process specifications, hours of operation of the Multi-hearth Retort Furnace are equivalent to the time to load trailers with finished wood char. **[45CSR§ 30-5.1.c.]**

5.2.3. Compliance with the hourly maximum limit [of the amount of dry wood charged to the Multi-hearth Retort Furnace] shall be calculated on the basis of a rolling thirty day average expressed in pounds per hour based on the hours of production for any specific 30 day period. Said records shall be certified by a responsible official and maintained on site for a period of no less than five (5) years. **[45CSR13, R13-2117D, B.7.]**

5.2.4. The permittee shall maintain accurate records on the amount of wood char produced by the facility. The permittee shall keep accurate records of the date and time to load each truck at the Beryl Facility (production time), the quantity (tons) of char loaded on each truck and the monthly total of char produced. The rate of char production will then be utilized to back calculate the amount of wood charged to the process. Said records shall be certified by a responsible official and maintained on site for a period of no less than five (5) years. **[45CSR13, R13-2117D, B.7.]**

Are you in compliance with all applicable requirements for this emission unit? _X__Yes ___No

If no, complete the **Schedule of Compliance Form** as **ATTACHMENT F**.

Applicable Requirements

List all applicable requirements for this emission unit. For each applicable requirement, include the underlying rule/regulation citation and/or <u>construction permit</u> with the condition number. (*Note: Title V permit condition numbers alone are not the underlying applicable requirements*). If an emission limit is calculated based on the type of source and design capacity or if a standard is based on a design parameter, this information should also be included.

See Above

__X__ Permit Shield

For all applicable requirements listed above, provide monitoring/testing/recordkeeping/reporting which shall be used to demonstrate compliance. If the method is based on a permit or rule, include the condition number or citation. (Note: Each requirement listed above must have an associated method of demonstrating compliance. If there is not already a required method in place, then a method must be proposed.)
(Per Title V Operating Permit No R30-05700003-2007)

5.1. Recordkeeping Requirements (continued)

5.2.5. Compliance with the hourly maximum limit [of wood char produced] shall be calculated on the basis of a rolling thirty day average expressed in tons per hour based on the hours of production for any specific 30 day period. **[45CSR13, R13-2117D, B.7.]**

5.2.6. Compliance with the yearly char production limit shall be determined using a rolling yearly total. A rolling yearly total shall mean the sum of char production, in tons, at any given time for the previous twelve (12) months. **[45CSR13, R13-2117D, B.7.]**

5.2.7. The permittee shall maintain records of the results of weekly inspections of the control systems per Requirement 5.1.5. Records shall state the times the systems were inoperable, what corrective actions taken as a result of the weekly inspections and all scheduled and unscheduled maintenance procedures. Such records shall be maintained on site for a period of no less than five (5) years and shall be made available to the Director or his/her duly authorized representative upon request. **[45CSR§30-5.1.c.]**

Are you in compliance with all applicable requirements for this emission unit? _X__Yes ___No

If no, complete the **Schedule of Compliance Form** as **ATTACHMENT F**.

ATTACHMENT E - Emission Unit Form

Emission Unit Description

Emission unit ID number:	**Emission unit name:**	**List any control devices associated with this emission unit.**
004-01 and 02 Paved Roads	End loader traffic (E-04-01) Vehicle Traffic (E-04-02)	None

Provide a description of the emission unit (type, method of operation, design parameters, etc.):
A front end loader (E-04-01) is used to move wet bark from the bark conveyor drop (E-01-03) to the wood and mulch piles (E-01-01, 02) as well as the Material Handling and Transfer Operations (E-02-01 through E-02-11). Char and mulch are transferred out of the facility using tractor trailers (E-04-02). Actual plant traffic has been greatly reduced since the installation of the bark conveyor (E-01-03) which reduced the need to transport bark into the plant using trucks, although some bark still is delivered via truck during production or maintance downtime for the conveyor and trucks are also used to convey a portion of unprocessed bark to the Parsons facility (E-04-01).

Manufacturer:	**Model number:**	**Serial number:**
Not applicable	Not applicable	Not applicable
Construction date:	**Installation date:**	**Modification date(s):**
1990	Not applicable	Not applicable

Design Capacity (examples: furnaces - tons/hr, tanks - gallons):
Not applicable

Maximum Hourly Throughput:	**Maximum Annual Throughput:**	**Maximum Operating Schedule:**
Not applicable	Not applicable	8,760 hours/.yr

Fuel Usage Data **(fill out all applicable fields)**

Does this emission unit combust fuel? ___Yes _X_ No	**If yes, is it?** Not applicable ___ Indirect Fired ___Direct Fired
Maximum design heat input and/or maximum horsepower rating: Not applicable	**Type and Btu/hr rating of burners:** Not applicable

List the primary fuel type(s) and if applicable, the secondary fuel type(s). For each fuel type listed, provide the maximum hourly and annual fuel usage for each.
Not applicable

Describe each fuel expected to be used during the term of the permit.

Fuel Type	Max. Sulfur Content	Max. Ash Content	BTU Value
Not applicable			

Emissions Data		
Criteria Pollutants	Potential Emissions	
	PPH	TPY
Carbon Monoxide (CO)	NA	NA
Nitrogen Oxides (NO_X)	NA	NA
Lead (Pb)	NA	NA
Particulate Matter ($PM_{2.5}$)	0.015	0.066
Particulate Matter (PM_{10})	0.061	0.269
Total Particulate Matter (TSP)	0.307	1.343
Sulfur Dioxide (SO_2)	NA	NA
Volatile Organic Compounds (VOC)	NA	NA
Hazardous Air Pollutants	Potential Emissions	
	PPH	TPY
NA		
Regulated Pollutants other than Criteria and HAP	Potential Emissions	
	PPH	TPY
NA		

List the method(s) used to calculate the potential emissions (include dates of any stack tests conducted, versions of software used, source and dates of emission factors, etc.).

See Appendix C for detailed emissions summary

Applicable Requirements
List all applicable requirements for this emission unit. For each applicable requirement, include the underlying rule/regulation citation and/or <u>construction permit</u> with the condition number. (*Note: Title V permit condition numbers alone are not the underlying applicable requirements*). If an emission limit is calculated based on the type of source and design capacity or if a standard is based on a design parameter, this information should also be included. **See E-01-01,02,03 requirements**
__X__ Permit Shield
For all applicable requirements listed above, provide monitoring/testing/recordkeeping/reporting which shall be used to demonstrate compliance. If the method is based on a permit or rule, include the condition number or citation. (Note: Each requirement listed above must have an associated method of demonstrating compliance. If there is not already a required method in place, then a method must be proposed.) **See E-01-01,02,03 requirements**
Are you in compliance with all applicable requirements for this emission unit? _X__Yes ___No If no, complete the **Schedule of Compliance Form** as **ATTACHMENT F**.

ATTACHMENT E - Emission Unit Form

Emission Unit Description

Emission unit ID number: 006-01 Emergency Generator	**Emission unit name:** Emergency Generator (E-06-01)	**List any control devices associated with this emission unit.** None

Provide a description of the emission unit (type, method of operation, design parameters, etc.):
A 48-hp, natural gas-fired emergency generator is located at the facility to provide electricity during power outages.

Manufacturer: Olympian	**Model number:** CG030	**Serial number:** 97A04628S
Construction date: 1996	**Installation date:** 1996	**Modification date(s):** Not applicable

Design Capacity (examples: furnaces - tons/hr, tanks - gallons):
Not applicable

Maximum Hourly Throughput: Not applicable	**Maximum Annual Throughput:** Not applicable	**Maximum Operating Schedule:** Not applicable

Fuel Usage Data **(fill out all applicable fields)**

Does this emission unit combust fuel? _X_Yes __ No	**If yes, is it?** ___ Indirect Fired _X_Direct Fired
Maximum design heat input and/or maximum horsepower rating: 100hp	**Type and Btu/hr rating of burners:** Not applicable

List the primary fuel type(s) and if applicable, the secondary fuel type(s). For each fuel type listed, provide the maximum hourly and annual fuel usage for each.
Natural Gas

Describe each fuel expected to be used during the term of the permit.

Fuel Type	Max. Sulfur Content	Max. Ash Content	BTU Value
Natural gas	Not applicable	Not applicable	1,020 Btu/scf

Emissions Data		
Criteria Pollutants	Potential Emissions	
	PPH	TPY
Carbon Monoxide (CO)	1.98	0.1
Nitrogen Oxides (NO_X)	1.18	0.06
Lead (Pb)	NA	NA
Particulate Matter ($PM_{2.5}$)	0.0103	0.005
Particulate Matter (PM_{10})	0.0103	0.005
Total Particulate Matter (TSP)	0.0103	0.005
Sulfur Dioxide (SO_2)	3.13E-04	1.57E-05
Volatile Organic Compounds (VOC)	0.0158	0.0008
Hazardous Air Pollutants	Potential Emissions	
	PPH	TPY
Total HAPs	1.73E-02	8.63E-04
Regulated Pollutants other than Criteria and HAP	Potential Emissions	
	PPH	TPY
NA		

List the method(s) used to calculate the potential emissions (include dates of any stack tests conducted, versions of software used, source and dates of emission factors, etc.).

See Appendix C for detailed emissions summary

Applicable Requirements

List all applicable requirements for this emission unit. For each applicable requirement, include the underlying rule/regulation citation and/or <u>construction permit</u> with the condition number. (*Note: Title V permit condition numbers alone are not the underlying applicable requirements*). If an emission limit is calculated based on the type of source and design capacity or if a standard is based on a design parameter, this information should also be included.

Beginning no later than October 19, 2013, for a natural gas fired emergency generator at an area source of HAP emissions, the permittee shall:

(1) Change oil and filter every 500 hours of operation or annually, whichever comes first;
(2) Inspect air cleaner every 1,000 hours of operation or annually, whichever comes first; and
(3) Inspect all hoses and belts every 500 hours of operation or annually, whichever comes first.
(4) Minimize the engine's time spent at idle and minimize the engine's startup time to a period needed for appropriate and safe loading of the engine, not to exceed 30 minutes, after which time the non-startup emission limitations apply.
(5) Operate and maintain the stationary RICE according to the manufacturer's emission-related written instructions or develop your own maintenance plan which must provide, to the extent practicable, for the maintenance and operation of the engine in a manner consistent with good air pollution control practice for minimizing emissions.

[40 CFR 63.6595(a), 40 CFR 63.6603, 40 CFR 63.6625(e), 40 CFR 63.6625(h), and 40 CFR 63.6640(a)]

As an alternative to the requirement to change the oil every 500 hours of operation or annually, the permittee has the option of utilizing an oil analysis program, according to the methods and requirements in 40 CFR 63.6625(i), in order to extend the specified oil change requirements. **[40 CFR 63.6625(i)]**

Any operation other than emergency operation, maintenance and testing, and operation in non-emergency situations for more than 50 hours per year is prohibited. There is no limit on the use of emergency stationary RICE in emergency situations. Maintenance checks and readiness testing of these units is limited to 100 hours per year. Operation of the unit in nonemergency situations is counted towards the 100 hours per year provided for maintenance testing, including for use in demand response programs. **[40 CFR 63.6640(f)]**

The permittee must be in compliance with the emission limitations and operating limitations that apply at all times. [**40 CFR 63.6605(a)]**

__X__ Permit Shield

For all applicable requirements listed above, provide monitoring/testing/recordkeeping/reporting which shall be used to demonstrate compliance. If the method is based on a permit or rule, include the condition number or citation. (Note: Each requirement listed above must have an associated method of demonstrating compliance. If there is not already a required method in place, then a method must be proposed.)

By no later than May 13, 2012, the permittee shall install a non-resettable hour meter if one is not already installed. [**40 CFR 63.6625(f)]**

The permittee must keep records for five years of each notification and report that is submitted, the occurrence and duration of each malfunction of operation, records of all required maintenance, and records of actions taken during periods of malfunction to minimize emissions in accordance with 40 CFR 63.6605(b), including corrective actions to restore malfunctioning equipment to its normal or usual manner of operation. [**40 CFR 63.6655(a), 40 CFR 6660(b), and 40 CFR 6660(c)]**

The permittee shall maintain records for five years of the maintenance conducted on the engine in order to demonstrate that the engine was operated and maintained according to the maintenance plan for the engine. [**40 CFR 63.6655(e)]**

If an engine is not satisfied to the standards applicable to non-emergency engines, then the permittee must keep records of the hours of operation of the engine that is recorded through the non-resettable hour meter. The owner or operator must document how many hours are spent for emergency operation; including, what classified the operation as emergency and how many hours are spent for non-emergency operation. If the engine is used for demand response, records must be kept of the notification of the emergency situation, and the time the engine was operated as part of demand response. [**40 CFR 63.6655(f)]**

The permittee must report each instance in which the operating limitations have not been met and reported according to 40 CFR 63.6650. [**40 CFR 63.6640(b)]**

The permittee much report each instance in which the requirements of Table 8 of Subpart ZZZZ of 40 CFR 63 have not been met. [**40 CFR 63.6640(e) and 40 CFR 63.6645(a)(5)]**

Each affected source that has obtained a Title V operating permit must report all deviations as defined in this subpart in the semiannual monitoring report required by 40 CFR 70.6(a)(3)(iii)(A) or 40 CFR 71.6(a)(3)(iii)(A). [**40 CFR 63.6650(f)]**

Are you in compliance with all applicable requirements for this emission unit? _X__Yes ___No

If no, complete the **Schedule of Compliance Form** as **ATTACHMENT F**.

ATTACHMENT G - Air Pollution Control Device Form

Control device ID number: C-05 Primary Dryer Cyclone	**List all emission units associated with this control device.** E-03-01 Rotary Wood Dryer	
Manufacturer: Heil	**Model number:** None	**Installation date:** 1963

Type of Air Pollution Control Device:

___ Baghouse/Fabric Filter	___ Venturi Scrubber	___ Multiclone
___ Carbon Bed Adsorber	___ Packed Tower Scrubber	_X_ Single Cyclone
___ Carbon Drum(s)	___ Other Wet Scrubber	___ Cyclone Bank
___ Catalytic Incinerator	___ Condenser	___ Settling Chamber
___ Thermal Incinerator	___ Flare	___ Other (describe) _____
___ Wet Plate Electrostatic Precipitator		___ Dry Plate Electrostatic Precipitator

List the pollutants for which this device is intended to control and the capture and control efficiencies.

Pollutant	Capture Efficiency	Control Efficiency
PM/PM10	100%	90+%

Explain the characteristic design parameters of this control device (flow rates, pressure drops, number of bags, size, temperatures, etc.).
The wood dryer exhaust is passed through this cyclone for the primary purpose of material recovery. The recovered material is sent to the retort and the exhaust gas goes on to the secondary dryer cyclones (C-06).

Is this device subject to the CAM requirements of 40 C.F.R. 64? ___ Yes _X_ No

If Yes, **Complete ATTACHMENT H**

If No**, Provide justification.** The cyclone is used to recover the dry wood from the rotary wood dryer, it is not primarily a pollution control device.

Describe the parameters monitored and/or methods used to indicate performance of this control device.
See the requirements for the ACC (C-08).

ATTACHMENT G - Air Pollution Control Device Form

Control device ID number: C-06 Two (2) Secondary Dryer Cyclones	**List all emission units associated with this control device.** E-03-01 Rotary Wood Dryer	
Manufacturer: Fisher-Klosterman	**Model number:** XQ 120-41	**Installation date:** 1997

Type of Air Pollution Control Device:

___ Baghouse/Fabric Filter	___ Venturi Scrubber	___ Multiclone
___ Carbon Bed Adsorber	___ Packed Tower Scrubber	___ Single Cyclone
___ Carbon Drum(s)	___ Other Wet Scrubber	_X_ Cyclone Bank
___ Catalytic Incinerator	___ Condenser	___ Settling Chamber
___ Thermal Incinerator	___ Flare	___ Other (describe) _____
___ Wet Plate Electrostatic Precipitator		___ Dry Plate Electrostatic Precipitator

List the pollutants for which this device is intended to control and the capture and control efficiencies.

Pollutant	Capture Efficiency	Control Efficiency
PM/PM10	100%	90+%

Explain the characteristic design parameters of this control device (flow rates, pressure drops, number of bags, size, temperatures, etc.).
The primary dryer cyclone (C-05) exhaust is passed through two (2), 22,000 cfm secondary dryer cyclones (C-06) in parallel for the purpose of material recovery. The recovered wood is mixed with char and shipped offsite. The cyclone exhaust is sent to the ACC (C-08).

Is this device subject to the CAM requirements of 40 C.F.R. 64? ___ Yes _X_ No

If Yes, **Complete ATTACHMENT H**

If No**, Provide justification.** The cyclones are primarily used for product recovery rather than for air pollution control.

Describe the parameters monitored and/or methods used to indicate performance of this control device.
See the requirements for the ACC (C-08).

ATTACHMENT G - Air Pollution Control Device Form

Control device ID number: C-07 Two (2) Furnace Cyclones	**List all emission units associated with this control device.** E-03-02 Multi-hearth Retort Furnace	
Manufacturer: Fisher-Klosterman	**Model number:** XQ 120-27-2.75CR	**Installation date:** 1997

Type of Air Pollution Control Device:

___ Baghouse/Fabric Filter ___ Venturi Scrubber ___ Multiclone

___ Carbon Bed Adsorber ___ Packed Tower Scrubber ___ Single Cyclone

___ Carbon Drum(s) ___ Other Wet Scrubber _X_ Cyclone Bank

___ Catalytic Incinerator ___ Condenser ___ Settling Chamber

___ Thermal Incinerator ___ Flare ___ Other (describe) _____

___ Wet Plate Electrostatic Precipitator ___ Dry Plate Electrostatic Precipitator

List the pollutants for which this device is intended to control and the capture and control efficiencies.

Pollutant	Capture Efficiency	Control Efficiency
PM/PM10	100%	90+%

Explain the characteristic design parameters of this control device (flow rates, pressure drops, number of bags, size, temperatures, etc.).
The retort furnace E-03-02) exhaust is passed through two (2) 11,000 cfm furnace cyclones (C-07) in parallel for the purpose of material recovery. The recovered wood is mixed with char, conveyed to the char trailers and shipped offsite. The cyclone exhaust is sent to the ACC (C-08).

Is this device subject to the CAM requirements of 40 C.F.R. 64? ___ Yes _X_ No

If Yes, **Complete ATTACHMENT H**

If No**, Provide justification.** The cyclones are primarily used for product recovery rather than for air pollution control.

Describe the parameters monitored and/or methods used to indicate performance of this control device.
See the requirements for the ACC (C-08).

ATTACHMENT G - Air Pollution Control Device Form

Control device ID number: C-08 Thermal After-Combustion Chamber (ACC)	**List all emission units associated with this control device.** E-03-01 Rotary Wood Dryer E-03-02 Multi-hearth Retort Furnace	
Manufacturer: Kingsford Mfg. Co.	**Model number:** None	**Installation date:** 1997

Type of Air Pollution Control Device:

___ Baghouse/Fabric Filter ___ Venturi Scrubber ___ Multiclone

___ Carbon Bed Adsorber ___ Packed Tower Scrubber ___ Single Cyclone

___ Carbon Drum(s) ___ Other Wet Scrubber ___ Cyclone Bank

___ Catalytic Incinerator ___ Condenser ___ Settling Chamber

_X_ Thermal Incinerator ___ Flare ___ Other (describe) _____

___ Wet Plate Electrostatic Precipitator ___ Dry Plate Electrostatic Precipitator

List the pollutants for which this device is intended to control and the capture and control efficiencies.

Pollutant	Capture Efficiency	Control Efficiency
CO	100%	99%
VOC	100%	99%
PM/PM10	100%	95%

Explain the characteristic design parameters of this control device (flow rates, pressure drops, number of bags, size, temperatures, etc.).
The purpose of the ACC is waste heat energy recovery and control of particulates, CO and VOC. Volatile gases from the retort furnace are ducted by the furnace cyclones (C-07) to the ACC where they are combusted. Some of the resulting combustion gases are routed to the wood dryer as a heat source with the remainder of the ACC exhaust gases venting through the ACC stack (S-02). A low-NOx natural gas burner (40 MMBtu) is used during startups short duration maintenance shutdowns, and periodically during operation to maintain ACC temperatures above 1,400^{o}F.

Is this device subject to the CAM requirements of 40 C.F.R. 64? _X_ Yes ___ No

If Yes, **Complete ATTACHMENT H**

If No**, Provide justification.**

Describe the parameters monitored and/or methods used to indicate performance of this control device.
See attached sheets.

ATTACHMENT G - Air Pollution Control Device Form

Describe the parameters monitored and/or methods used to indicate performance of this control device.

(Per Title V Operating Permit No R30-05700003-2003)

6.1. Limitations and Standards

6.1.1. Emissions generated as a result of the operation of the After Combustion Chamber shall be limited to the following:

Pollutant	**Maximum Allowable Emissions**	
	(lbs/hr)	**(tons/yr)**
CO	8.93	28.82
NOx	65.7	182
PM	49	158.2
PM10	29.4	94.9
SO2	17	42
VOC	2.52	8.1

[45CSR13, R13-2117D, A.4.]

6.1.2. No person shall cause, suffer, allow or permit the emission of particles of unburned or partially burned refuse or ash from any incinerator which are large enough to be individually distinguished in the open air. **[45CSR§6-4.5.]**

6.1.3. Incinerators, including all associated equipment and grounds, shall be designed, operated and maintained so as to prevent the emission of objectionable odors. **[45CSR§6-4.6.]**

6.2. Monitoring Requirements

6.2.1. The permittee shall install, calibrate, maintain, and operate a monitoring device with recorder for the measurement of the ACC combustion chamber temperature. The monitoring device is to be certified by the manufacture to be accurate within + one (1) percent in degrees Fahrenheit. **[45CSR§30-5.1.c.]**

6.2.2. Compliance with the hourly emission limits set forth in Requirement 6.1.1. will be demonstrated if the ACC combustion chamber temperature is maintained at or above a minimum of 1,400^{o}F during normal operations (not including periods of system startup, shutdown or maintenance).**[45CSR§30-5.1.c.]**

6.2.3. Compliance with Section 3 of 45CSR7 and with requirement of Section 6.1.2. of this Permit shall be determined by conducting daily visual emission observations in accordance with Method 22 of 40 CFR 60, Appendix A for emission point S-02. These observations shall be conducted during periods of normal facility operation for a sufficient time interval to determine if the unit has visible emissions using procedures outlined in 40CFR60 Appendix A, Method 22. If sources of visible emissions are identified during the survey, the permittee shall conduct an Opacity Evaluation as outlined in 45CSR7A-2.1.a,b, within 24 hours. A 45CSR7A-2.1.a,b evaluation shall not be required if the visible emission condition is corrected in a timely manner and the units are operated at normal operating conditions with no visible emissions being observed. Records shall be maintained on site reporting the results of each test. An Opacity Evaluation shall only be conducted by an employee or contractor certified in 40CFR60 Appendix A, Method 9 . Upon observing any visible emissions during an Opacity Evaluation in excess of twenty percent (20%) opacity (but less than forty percent (40%) opacity) for any period or periods aggregating more than five (5) minutes in any sixty (60) minute period, or upon observing any visible emissions in excess of forty percent (40%) opacity, the Company shall submit a written report, certified by a responsible official, to the Director of the Division of Air Quality within five (5) days after taking said reading. When in compliance on a daily basis for four (4) consecutive weeks, then the observation frequency shall be decreased to a once-a-week sampling schedule. If an exceedance of the opacity limit is measured, then the observation frequency shall be reverted to the once-a-day sampling schedule and begin the progressive monitoring cycle again. **[45CSR13, R13-2117D, B.6. and 45CSR§30-5.1.c.]**

ATTACHMENT G - Air Pollution Control Device Form

Describe the parameters monitored and/or methods used to indicate performance of this control device.

(Per Title V Operating Permit No R30-05700003-2003)

6.2. Monitoring Requirements (continued)

6.2.4. Each opacity evaluation observation per 45CSR§ 7A-2.1.a,b (6.2.3.) shall be a minimum of six (6) minutes (24 single fifteen (15) second readings) without averaging of results, unless any one fifteen (15) second reading is greater that the opacity limit for the emission unit, in which case the observation period shall be extended to a 60 minutes or until a violation of the emissions standard per 45CSR§7-3.2. has been documented (more than twenty (20) single fifteen (15) second readings of opacity are in excess of 20% opacity, but less than 40% opacity, or any single reading is equal or in excess of 40% opacity); whichever is the shorter period. **[45CSR§30-5.1.c.]**

6.3. Testing Requirements

6.3.1. The permittee shall demonstrate compliance with the emission limits set forth in Requirement 6.1.1. by conducting performance tests utilizing the methods listed below. The performance tests shall be conducted in accordance with the schedule specified in Condition 6.3.2.

Test Method	**Pollutant**
EPA Reference Method 5	PM
EPA Reference Method 201 and 202	PM10
EPA Reference Method 6	SO2
EPA Reference Method 7E	NOx
EPA Reference Method 10	CO
EPA Reference Method 18, 25 or 25A	VOC

This compliance testing shall be conducted in accordance with corresponding U.S. EPA test method. The Director may require a different test method or approve an alternative method in light of any new technology advancements or special operating conditions that may occur. **[45CSR13, R13-2117D, B.5. and 45CSR§30-5.1.c.]**

6.3.2. Stack testing per Requirement 6.3.1. shall be performed in accordance with 40 C.F.R. 60, Appendix A, once per permit term within the first 14 months of the Permit issuance. The permittee shall submit an emissions testing protocol for DAQ review within 180 days after issuance of the permit. Results from such testing shall be submitted to the Director within sixty (60) days from the date of completion of said testing. The test shall demonstrate that the ACC unit can operate at the maximum processing rate specified in Requirements 4.1.1. and 5.1.1. in compliance with the emissions limits set forth in Requirement 6.1.1. **[45CSR§30-5.1.c.]**

6.4. Recordkeeping Requirements

6.4.1. Records shall be maintained on site reporting the results of each visible emission test (as per Requirement 6.2.3.). A record of each visible emission check required above shall be maintained on site for a period of no less than five (5) years. Said record shall include, but not be limited to, the date, time, name of emission unit, the applicable visible emissions requirement, the results of the check, what action(s) if any, was/were taken, and the name of the observer. **[45CSR13, R13-2117D, B.6. and 45CSR§30-5.1.c.]**

6.4.2. The combustion chamber temperature records per Requirement 6.2.2 shall be recorded hourly and maintained on site for a period of at least five years and be made available to the Director or his/her duly authorized representative upon request. **[45CSR§30-5.1.c.]**

6.4.3. To demonstrate compliance with Requirement 6.1.3. the permittee shall maintain a record of all odor complaints received. Such record shall contain an assessment of the validity of the complaints as well as any corrective actions taken. **[45CSR§30-5.1.c.]**

6.5. Reporting Requirements

6.5.1. Reporting shall be initiated as noted in 6.2.3.

ATTACHMENT G - Air Pollution Control Device Form

Control device ID number: C-09 Wet Scrubber	**List all emission units associated with this control device.** E-02-09 Char to Trailer	
Manufacturer: Hosokawa	**Model number:** 30DS.2	**Installation date:** 1999

Type of Air Pollution Control Device:

___ Baghouse/Fabric Filter	___ Venturi Scrubber	___ Multiclone
___ Carbon Bed Adsorber	___ Packed Tower Scrubber	___ Single Cyclone
___ Carbon Drum(s)	_X_ Other Wet Scrubber	___ Cyclone Bank
___ Catalytic Incinerator	___ Condenser	___ Settling Chamber
___ Thermal Incinerator	___ Flare	___ Other (describe) _____
___ Wet Plate Electrostatic Precipitator		___ Dry Plate Electrostatic Precipitator

List the pollutants for which this device is intended to control and the capture and control efficiencies.

Pollutant	Capture Efficiency	Control Efficiency
PM/PM10	100%	90+%

Explain the characteristic design parameters of this control device (flow rates, pressure drops, number of bags, size, temperatures, etc.).
The char conveying system and char truck loading operations are controlled by a wet scrubber. The scrubber is used to control dust from the char transfer process. The scrubber water is discharged to an onsite settling pond.

Is this device subject to the CAM requirements of 40 C.F.R. 64? ___ Yes _X_ No

If Yes, **Complete ATTACHMENT H**

If No**, Provide justification.** Potential uncontrolled PM emissions have been calculated to be less than 100 tpy for the scrubber.

Describe the parameters monitored and/or methods used to indicate performance of this control device.
See the requirements for material handling and transfer operations (E-02-01 through 11).

APPENDIX B
FACILITY EMISSIONS

TABLE B-1
FACILITY POTENTIAL EMISSIONS
KINGSFORD MANUFACTURING CO. - BERYL, WEST VIRGINIA

Source	Potential Annual Emissions (tons/yr)[a]									Potential Maximum Hourly Emissions (lbs/hr)[a]							
	NO_x	CO	VOC	SO_2	PM	PM_{10}	$PM_{2.5}$	Total HAPs	CO_2e[b]	NO_x	CO	VOC	SO_2	PM	PM_{10}	$PM_{2.5}$	Total HAPs
Wood Pile Management and Traffic					6.45	3.03	0.45	1.29E-05						1.47	0.69	0.10	0.000003
Material Handling					0.86	0.54	0.31	3.29E-06						0.20	0.12	0.07	0.000001
Drying and Charring	182.00	28.82	8.10	42.00	158.20	94.90	64.70	0.21	35,722.61	65.70	8.93	2.52	17.00	49.00	29.40	20.04	0.07
Plant Roadways					1.34	0.27	0.07							0.31	0.06	0.02	
Storage Tanks				0.22								0.05					
Emergency Generator	0.06	0.10	0.001	0.00002	0.0005	0.0005	0.0005	0.0009		1.18	1.98	0.02	0.0003	0.01	0.01	0.01	0.02
Total	**182.06**	**28.92**	**8.10**	**42.22**	**166.85**	**98.74**	**65.53**	**0.21**	**35,722.61**	**66.88**	**10.91**	**2.59**	**17.00**	**50.98**	**30.29**	**20.24**	**0.09**

[a] See Table B-2 through B-10 for emissions calculations.

[b] CO_2e total is total reportable (non-biogenic) CO_2e emissions. See Table B-10.

Source	Operating Schedule (hr/yr)	Units	Maximum Annual Production (ton/yr)	Average Hourly Production (ton/hr)	Maximum Hourly Production (ton/hr)	Yield (wood:char)	Wood Moisture Content (%)
Wood Pile	8,760	Wood (wet)	224,000			4.00	50%
		Wood (dry)	112,000				
Mulch Pile	8760	Mulch (wet)	33,900				
		Mulch (dry)	16,950				
ACC	8,760	Char	28,000	3.20	4.50		

TABLE B-2
STORAGE PILE POTENTIAL EMISSIONS
KINGSFORD MANUFACTURING CO. - BERYL, WEST VIRGINIA

EMISSIONS UNIT NUMBER	EMISIONS POINT NUMBER	NAME OF EMISSIONS UNIT	ANNUAL THROUGHPUT (WET TONS)	ANNUAL THROUGHPUT (DRY TONS)	EMISSION FACTOR[a] (LB/DRY TON)	HOURLY PM EMISS. RATE (LBS)	HOURLY PM_{10} EMISS. RATE (LBS)	HOURLY $PM_{2.5}$ EMISS. RATE (LBS)	ANNUAL PM EMISS. RATE (TONS)	ANNUAL PM_{10} EMISS. RATE (TONS)	ANNUAL $PM_{2.5}$ EMISS. RATE (TONS)
01	01	BARK PILE	224,000	112,000	0.1	1.28	0.60	0.09	5.60	2.63	0.39
	02	MULCH PILE	33,900	16,950	0.1	0.19	0.09	0.01	0.85	0.40	0.06
TOTALS						1.47	0.69	0.10	6.45	3.03	0.45

[a] Emission factor based on conservative adjustment of AP-42 factors. PM10 and PM2.5 fractions were calculated pursuant to AP-42 Section 13.2.4. See Table B-3 for details.

TABLE B-3
MATERIAL HANDLING POTENTIAL EMISSIONS
KINGSFORD MANUFACTURING CO. - BERYL, WEST VIRGINIA

EMISSIONS UNIT NUMBER	EMISIONS POINT NUMBER	NAME OF EMISSIONS UNIT	ANNUAL TPY/NORMAL CFM (WET TONS)	PM EMISSION FACTOR[a] (LB/WET TON) (GR/CF)	PM_{10} EMISSION FACTOR[a] (LB/WET TON) (GR/CF)	$PM_{2.5}$EMISSION FACTOR[a] (LB/WET TON) (GR/CF)	CONTROL FACTOR	HOURLY PM EMISS. RATE (LBS)	HOURLY PM_{10} EMISS. RATE (LBS)	HOURLY $PM_{2.5}$ EMISS. RATE (LBS)	ANNUAL PM EMISS. RATE (TONS)	ANNUAL PM_{10} EMISS. RATE (TONS)	ANNUAL $PM_{2.5}$ EMISS. RATE (TONS)
02	01	TRANSFER BY FRONT-END LOADER TO HOPPER OR TRUCK	257,900	9.19E-04	4.35E-04	6.59E-05	0	0.027069572	0.012803176	0.001938767	0.119	0.056	0.008
02	02	HOPPER REVERSE CHAIN TO GROUND	257,900	9.19E-04	4.35E-04	6.59E-05	0	0.027069572	0.012803176	0.001938767	0.119	0.056	0.008
02	03	HOPPER TO 48" BELT	257,900	9.19E-04	4.35E-04	6.59E-05	0	0.027069572	0.012803176	0.001938767	0.119	0.056	0.008
02	04	48" BELT INTO HOG	257,900	9.19E-04	4.35E-04	6.59E-05	0	0.027069572	0.012803176	0.001938767	0.119	0.056	0.008
02	05	SCRAPE BOTTOM OF 48" BELT TO GROUND	258	9.19E-04	4.35E-04	6.59E-05	0	2.70696E-05	1.28032E-05	1.93877E-06	0.000	5.61E-05	8.49E-06
02	06	BLOCK CONVEYOR TO LIVE BOTTOM BIN	224,000	9.19E-04	4.35E-04	6.59E-05	0	0.023511377	0.011120246	0.001683923	0.103	0.049	0.007
02	07	MULCH CHUTE TO GROUND	33,900	9.19E-04	4.35E-04	6.59E-05	0	0.003558195	0.00168293	0.000254844	0.016	0.007	0.001
02	08	WOOD BYPASS SCREW TO HOPPER	124	9.19E-04	4.35E-04	6.59E-05	0	1.30619E-05	6.17791E-06	9.35513E-07	5.72E-05	2.71E-05	4.10E-06
SUBTOTAL								0.135	0.064	0.010	0.593	0.280	0.042
02	09	CHAR TO TRAILER	700	0.1	0.1	0.1	0.9	0.06	0.06	0.06	0.263	0.263	0.263
TOTALS								0.20	0.12	0.07	0.86	0.54	0.31

[a]PM, PM_{10} and $PM_{2.5}$ emission factors estimated per AP-42, Section 13.2.4 (11/06)
Emissions Factor = Particle Size Multiplier x 0.0032 x (Wind Speed/5)$^{1.3}$ / (Moisture Content/2)$^{1.4}$
per AP-42, Section 13.2.4.
Particle size multiplier = 0.74 for PM_{30}, 0.35 for PM_{10}-, 0.053 for $PM_{2.5}$.
Wind speed = 6.2 mph
Moisture content conservatively assumed to be similar to coal (4.8%)

TABLE B-4
ACC POTENTIAL EMISSIONS
KINGSFORD MANUFACTURING CO. - BERYL, WEST VIRGINIA

Emissions Unit Number	Emissions Point Number	Name of Emissions Point	Pollutant	Maximum Annual Char Production (tons/yr)	Maximum Hourly Char Production (tons/hr)	Emission Factor (lbs/ton char)	ACC Stack Emission Rate[a] (lb/hr)	(ton/yr)
03	01/02	Drying/Charring System	NO_x	28,000	4.5	13.0	65.7	182
			CO	28,000	4.5	2.1	8.93	28.82
			VOC	28,000	4.5	0.6	2.52	8.1
			SO_2	28,000	4.5	3.0	17	42
			PM	28,000	4.5	11.3	49	158.2
			PM_{10}	28,000	4.5	6.8	29.4	94.9
			$PM_{2.5}$	28,000	4.5	4.6	20.0	64.7

[a] Criteria pollutant ACC emission rates from current permit (R30-05700003-2007), except $PM_{2.5}$ based on stack test results showing $PM_{2.5}$ emissions equal to 40.9% of total PM emissions.

TABLE B-5
PLANT ROAD POTENTIAL EMISSIONS
KINGSFORD MANUFACTURING CO. - BERYL, WEST VIRGINIA

Emissions Unit Number	Emissions Point Number	Path	Throughput (tons)	Truck Payload (tons)	Round Trips (#)	Round Trip Distance (miles)	Annual VMT (miles)	Annual Operating Schedule (hours/yr)	Pollutant	Emission Factor (lbs/VMT)[a]	Emission Rate (lb/hr)	Emission Rate (tons/yr)
04	01	Hogfuel - Direct Delivery or Parsons Outbound	224,000	7	32,000	0.102	3,273	8,760	PM	0.664	0.248	1.086
								8,760	PM10	0.133	0.050	0.217
								8,760	PM2.5	0.033	0.012	0.053
		Beryl Outbound	28,000	14	2,000	0.140	280	8,760	PM	0.664	0.021	0.093
								8,760	PM10	0.133	0.004	0.019
								8,760	PM2.5	0.033	0.001	0.005
		Mulch Lower End (Dirty)	22,600	20	1,130	0.106	120	8,760	PM	0.664	0.009	0.040
								8,760	PM10	0.133	0.002	0.008
								8,760	PM2.5	0.033	0.000	0.002
		Mulch Lower End (Clean)	22,600	20	1,130	0.091	103	8,760	PM	0.664	0.008	0.034
								8,760	PM10	0.133	0.002	0.007
								8,760	PM2.5	0.033	0.000	0.002
		Mulch Upper End	11,300	20	565	0.303	171	8,760	PM	0.664	0.013	0.057
								8,760	PM10	0.133	0.003	0.011
								8,760	PM2.5	0.033	0.001	0.003
		Routine Traffic					100	8,760	PM	0.664	0.008	0.033
								8,760	PM10	0.133	0.002	0.007
								8,760	PM2.5	0.033	0.000	0.002
		Total							PM		0.307	1.343
									PM10		0.061	0.269
									PM2.5		0.015	0.066

[a] Emission factor calculated according to AP-42 Chapter 13.2.1 (1/11), Paved Roads using the equation lb/VMT = $k(sL)^{0.91}$ x $(W)^{1.02}$]where k = particle size multiplier, sL = road surface silt loading in g/m2, and W = average vehicle weight in tons,.
For the Beryl Plant, the following data was used:
sL = 2 g/m2, based on worst case silt loading result of road dust sampling conducted a the KMC Parsons plant.
W = 30 tons (average tractor-trailer weight)
k = 0.011 for PM, 0.0022 for PM_{10}, and 0.00054 for $PM_{2.5}$

TABLE B-6
STORAGE TANK POTENTIAL EMISSIONS
KINGSFORD MANUFACTURING CO. - BERYL, WEST VIRGINIA

Emissions Unit Number	Emissions Point Number	Name of Emissions Point	Pollutant	Capacity (gal)	Emission Rate[a] (lb/hr)	(ton/yr)
05	01	Gasoline Tank	VOC	1,000	0.05	0.22
05	02	Diesel Tank	VOC	1,000	Neg.	Neg.
					0.05	0.22

[a]Tank emissions calculated based on EPA Tanks 4.0 program and a throughput of 52,000 gallons per year per tank.

TABLE B-7
EMERGENCY GENERATOR POTENTIAL EMISSIONS
KINGSFORD MANUFACTURING CO. - BERYL, WEST VIRGINIA

Emissions Unit Number	Emissions Point Number	Rated Capacity (MMBtu/hr)[a]	Annual Operating Schedule (hr/yr)	Pollutant	Emissions Factors[b] (lbs/MMBtu)	Emissions (lbs/hr)	Emissions (tons/yr)
06	01	0.53	100	NOx	2.21	1.18	0.06
		0.53	100	CO	3.72	1.98	0.10
		0.53	100	VOC	0.0296	0.0158	0.0008
		0.53	100	$TPM/PM_{10}/PM_{2.5}$[b]	0.0194	0.0103	0.0005
		0.53	100	SO_2	5.88E-04	3.13E-04	1.57E-05
		HAPS					
		0.53	100	1,1,2,2- Tetrachloroethane	2.53E-05	1.35E-05	6.74E-07
		0.53	100	1,1,2-Trichloroethane	1.53E-05	8.15E-06	4.07E-07
		0.53	100	1.3-Butadiene	6.63E-04	3.53E-04	1.77E-05
		0.53	100	1,3-Dichloropropene	1.27E-05	6.76E-06	3.38E-07
		0.53	100	Acetaldehyde	2.79E-03	1.49E-03	7.43E-05
		0.53	100	Acrolein	2.63E-03	1.40E-03	7.00E-05
		0.53	100	Benzene	1.58E-03	8.41E-04	4.21E-05
		0.53	100	Carbon Tetrachloride	1.77E-05	9.42E-06	4.71E-07
		0.53	100	Chlorobenzene	1.29E-05	6.87E-06	3.43E-07
		0.53	100	Chloroform	1.37E-05	7.29E-06	3.65E-07
		0.53	100	Ethylbenzene	2.48E-05	1.32E-05	6.60E-07
		0.53	100	Ethylene Dibromide	2.13E-05	1.13E-05	5.67E-07
		0.53	100	Formaldehyde	2.05E-02	1.09E-02	5.46E-04
		0.53	100	Methanol	3.06E-03	1.63E-03	8.15E-05
		0.53	100	Methylene Chloride	4.12E-05	2.19E-05	1.10E-06
		0.53	100	Napthalene	9.71E-05	5.17E-05	2.58E-06
		0.53	100	PAHs	1.41E-04	7.51E-05	3.75E-06
		0.53	100	Styrene	1.19E-05	6.34E-06	3.17E-07
		0.53	100	Toluene	5.58E-04	2.97E-04	1.49E-05
		0.53	100	Vinyl Chloride	7.18E-06	3.82E-06	1.91E-07
		0.53	100	Xylene	1.95E-04	1.04E-04	5.19E-06
Total HAPS						**1.73E-02**	**8.63E-04**

[a] Based on maximum fiuel consumption of 522 c.f. and hour at 100% load.
[b] Emission factors from U.S, EPA AP-42 Chapter 3.2, Natural Gas-fired Rich-Burn 4-stroke Reciprocating Engines.
[c] assumes all particulate matter is less than 1 µm as per EPA AP-42 Section 3.2 Table 3.2-3.

TABLE B-8
CHARRING SYSTEM METHANOL EMISSIONS
KINGSFORD MANUFACTURING CO. - BERYL, WEST VIRGINIA

Emissions Unit Number	Emissions Point Number	Source	Pollutant	Maximum Annual Char Production (tons/yr)	Maximum Hourly Char Production (tons/hr)	Emission Factor[a] (lb/ton wood)	ACC Stack Emission Rate (lb/hr)	ACC Stack Emission Rate (ton/yr)
03	01/02	Charring System/Briquet Drying Operations	Methanol	28,000	4.5	0.015	0.07	0.21

[a] Emission factor based on 150 lb methanol per ton of char EPA AP-42 Section 10.7 for uncontrolled batch charcoal kilns with ACC methanol destruction efficiency assumed to be 99.99% based on high ACC residence time and temperatures.

TABLE B-9
FACILITY LEAD EMISSIONS
KINGSFORD MANUFACTURING CO. - BERYL, WEST VIRGINIA

Emissions Unit Number	Emissions Point Number	Source	Maximum Hourly PM Emissions (lb/hr)	Maximum Annual PM Emissions (tons/yr)	Maximum Pb Concentration (ppm)	Emission Factor[a] (lb Pb/lb PM)	Pb Emission Rate (lb/hr)	Pb Emission Rate (ton/yr)	Particulate Matter Characteristics
03	01/02	Charring System/ACC	49	158.2	8.00	8.0E-06	3.92E-04	0.001	All particulate emissions assumed to be char ash
02	09	Char Truck Loadout	0.06	0.26	8.00	8.00E-06	4.80E-07	2.10E-06	
02	01-08	Wood Receipt	0.14	0.59	2.00	2.00E-06	2.71E-07	1.19E-06	All particulate emission assumed to be wood dust
01	01/02	Wood Storage	1.47	6.45	2.00	2.00E-06	2.94E-06	1.29E-05	All particulate emission assumed to be wood dust
		Total					0.0004	0.001	

[a]Emission factors based on following material lead content assumptions:
Wood - 2 ppm, dry wood per University of Missouri study
Char - 8 ppm based on worst-case char yield assumption of 4
Char ash content assumed to be 10%, ACC PM assumed to be char ash

TABLE B-10
FACILITY GREENHOUSE GAS POTENTIAL EMISSIONS
KINGSFORD MANUFACTURING CO. - BERYL, WEST VIRGINIA

Potential

Energy/Fuel/Chemical Usage	Actual Annual Usage	Units of Measurement	Actual Use Conversion Factor	Units of Measurement	Actual Use	Units of Measurement	CO_2 Emission Factors		Annual Metric Tons CO_2	CH_4 Emission Factors		Annual Metric Tons CH_4, CO_2-e	N_2O Emission Factors		Annual Metric Tons N_20, CO_2-e	Annual Metric Tons, CO_2-e	Annual Short Tons, CO_2-e
							Value	Units of Measurement		Value	Units of Measurement		Value	Units of Measurement			
Stationary Sources																	
Natural Gas Combustion	5,606,400	therms	100,000	BTU/therm	5.606E+11	BTU	53.02	metric tons CO_2/ Billion BTU	29,725	0.001	g CH_4/MMBT	11.77	0.0001	g N_2O/MMBT	17.4	**29,754**	**32,798**
Net Wood Combustion[a]	84,000	tons	8,000	BTU/lb	1.344E+12	BTU	*CO_2 Emissions from Wood Combustion are Biogenic (See Below)*			0.032	g CH_4/MMBT	903.17	0.0042	g N_2O/MMBT	1,749.9	**2,653**	**2,924**
Biogenic Emissions																	
CO_2 from Wood Combustion	84,000	tons	8,000	BTU/lb	1.344E+12	BTU	93.8	metric tons CO_2/ Billion BTU[1]	126,067							**126,067**	**138,964**
															Total Reportable (Non-biogenic) CO_2e		**35,723**

[a] "Net Wood Combustion" = dry wood use minus char produced.

Potential Capacities

Burners	Number	Heat Input (MMBtu/hr)	Total Heat Input (MMBtu/hr)
ACC	1	40	40
Retort	6	4	24
Total Worst Case Burners			**64**

Wood/Char Use	Tons/Year	Limit Type
Dry Wood Use	112,000	Calculated
Yield	4.0	
Char Produced	28,000	Permit