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**west virginia** department of environmental protection

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## **ENGINEERING EVALUATION / FACT SHEET**

### BACKGROUND INFORMATION

Application No.: R13-2511D  
Plant ID No.: 083-00114  
Applicant: Hamer Pellet Fuel Company (Hamer)  
Facility Name: Elkins Facility  
Location: Randolph County  
NAICS Code: 321999  
Application Type: Modification  
Received Date: 10/12/2011  
Engineer Assigned: John Legg  
Fee Amount: \$1,000.00  
Date Received: 10/13/2011  
Complete Date:  
Due Date: January 13, 2012  
Applicant Ad Date: 10/13/2011  
Newspaper: *The Inter-Mountain* (Elkins)  
UTM's: Easting: 599.0 km      Northing: 4308.2 km      Zone: 17  
Description: Addition of one (1) new pellet mill (11S), three (3) new hammer mills (2S, 13S, and 15S), one new (1) cooler (4AS), two (2) new cyclones (4AC and 14C) and one (1) new baghouse (13C).

The new pellet mill will be identified as Pellet Mill 3 (11S) and will be controlled by the new cyclone (4AC) and existing baghouse (2C2).

One of the two (2) existing hammer mills (2S) will be moved to a different location and will be identified as Burner Hammer Mill (14S) which will be controlled by a new cyclone (14C) and a new baghouse (13C). One of the three (3) new hammer mills will take the relocated hammer mill's place and Source ID No. (2S) and will be fitted with a bigger 36" wide internal screen (previously only 30" wide). It will use existing cyclone (2C1) and

baghouse (2C2). The second of the three (3) new hammer mills will be identified as the Truck Dump Hammer Mill (13S) and will be controlled by a new baghouse (13C). It will use a 60" wide internal screen. The third and last of the new hammer mills will be identified as the Silo Hammer Mill (15S) and will be fitted with a 60" wide internal screen. It will be controlled by existing baghouse (8C).

The new pellet cooler (4AS) will replace an existing cooler (4S) which will be scrapped, and will be controlled by the existing cyclone (4C) and existing baghouse (2C2).

**SUMMARY**

Hamer hopes to increase wood pellet production (by 5 ton/yr and 24,000 ton/yr, from 10 ton/hr and 48,000 ton/yr to 15 ton/yr and 72,000 ton/yr) at their Elkins, WV facility by adding a new pellet mill (11S) to the two currently permitted (3S and 3S2) and three hammer mills (2S, 13S, and 15S) to the one currently permitted (old 2S to become 14S). These changes are described above (under description).

Hamer worked with Gene Coccarri of WV DAQ’s Small Business Assistance Program to estimate PM emissions resulting from the proposed increase in wood pellet production.

<b>Table 1: Wood Pellet Production Increase Resulting from the Addition of a New Pellet Mill (11S) at Hamer’s Elkins Facility located in Randolph County, WV.</b>			
<b>Equipment</b>		<b>Wood Pellet Production</b>	
		<b>(ton/hr)</b>	<b>(ton/yr)</b>
R13-2511C (Before R13-2511D)	2 Pellet Mills (3S, 3S2)	10	48,000
After R13-2511D	3 Pellet Mills (3S, 3S2, 11S)	15	72,000
Increase in Wood Pellet Production		+5	+24,000

Hamer estimates total PM emissions from the changes described in R13-2511D to increase by the amounts given in Table 2 below:

<b>Table 2: Particulate Matter (PM) Emissions from Changes Proposed by Hamer's in Permit Application R13-2511D.</b>						
<b>Emission Source</b>	<b>Uncontrolled PM Emissions</b>		<b>Controlled PM Emission</b>		<b>Overall % Reduction from Controls</b>	
	<b>(lb/hr)</b>	<b>(ton/yr)</b>	<b>(lb/hr)</b>	<b>(ton/yr)</b>	<b>(lb/hr)</b>	<b>(ton/yr)</b>
New Equipment	+378.5	+824.4	+4.80	+9.11	98.7	98.9
Transfer Points	+42.62	47.75	+20.60	+15.23	51.7	68.1
Total	+421.12	+872.15	+24.40	+24.84	---	---

## PROCESS DESCRIPTION OVERVIEW

The following process description, slightly modified and updated, came from the previous permit (R13-2511C):

Hamer's Elkins, WV facility takes green (wet) sawdust, dries it, and produces wood pellets as a product. The company at one time (before R13-2511C which was approved June 22, 2007) purchased dry sawdust, but due to low availability and high cost, applied for and was approved (under permit R13-2511C) to construct and operate a suspension burner system designed to dry green sawdust.

Green sawdust is brought onto site via truck. The sawdust is dumped to a drag-line conveyor (Drag 1) which feeds another drag-line conveyor (Drag 2) which feeds a belt-line conveyor which feeds to a concrete pad where a bucket loader is used to transfer the sawdust to and from a stockpile. A bucket loader is then used to transfer the sawdust to a hopper, which feeds an auger which in turn feeds the sawdust into the dryer drum where it is dried. A fan pulls the sawdust and heat from the suspension burner through the dryer drum.

The sawdust leaving the dryer drum enters the duct to the multi-clone where sawdust/particulate matter is removed from the exhaust stream and transferred to either:

- the silo hammermill and then to silo or pellet plant storage, or
- the burner hammermill and then to a feed bin which feeds the dryer burner.

Sawdust from silo or pellet plant storage is processed into pellets in the pellet plant.

## PAST PERMITS

Given below is a summary of past permits under which equipment was installed. For each permit, a list of the equipment installed is provided:

**Table 3: Past Permits and the Equipment Installed Under Them.**

<sup>(1)</sup> Permit No.	Emission		Emission Unit Description of Equipment Permitted	Control Device
	Unit	Point		
R13-2511  (Approved 2002)	1S	1E	Walking Bed Hydraulic Pump	1C
	2S <sup>(2)</sup>	2E	<sup>(2)</sup> Hammer Mill (Bliss 4430, internal screen up to 30 inches wide)	2C1 - cyclone 2C2 - baghouse
	3S	3E	1 <sup>st</sup> Pellet Mill 1	3C - cyclone 2C2 - baghouse
	4S <sup>(3)</sup>	4E	<sup>(3)</sup> Pellet Cooler	4C - cyclone
	5S	5E	Screeener	2C2 - baghouse
	6S	6E	Finished Product Storage	6C1 - cyclone 6C2 - baghouse
	7S	7E	Surge Bin for Bagging Station	7C - baghouse
R13-2511A  (Approved 2004)	3S2	3E2	2 <sup>nd</sup> Pellet Mill 2	3C2 - cyclone 2C2 - baghouse
	8S	8E	30' X 72' Silo	8C - baghouse
R13-2511C  (Approved 2007)	9S	9E	Suspension Burner/Dryer	9C - multiclone / cyclone
	--	10E	Material Transfer	10C -baghouse
<p>(1) R13-2511B (approved 2004) installed no new equipment and is not listed in the table. (R13-2511B removed the annual facility operating limit of 4,800 hr/yr.)</p> <p>(2) Original Hammer Mill to be moved and to become: 14S - Burner Hammer Mill.</p> <p>(3) Pellet Cooler(4S) to be replaced with new Pellet Cooler (4AS). Existing cyclone (4C) to be used with the new Pellet Cooler (4AS).</p>				

## CHANGES TO PROCESS

R13-2511D adds one (1) new Pellet Mill (11S), three (3) new Hammer Mills (2S, 13S, and 15S), and one (1) new Pellet Cooler (4AS). Note that an existing hammer mill (2S) is moved to a different location (14S) and one (1) of the new mills, Hammer Mill (2S), will replaces it (Source ID. No. will stay the same: 2S). Also, the new cooler (4AS) replaces the existing cooler (4S) which will be scrapped.

**Table 4: Equipment to be Installed Under R13-2511D.**

Permit No.	Emission		Emission Unit Description		Maximum Processing Rate (TPH)	Control Device
	Unit/Source	Point				
R13-2511D (2011)	11S (New)	2E (Existing)	New	3 <sup>rd</sup> Pellet Mill (Bliss Model D3618-141)	5	4AC - cyclone (New) 2C2 - baghouse (existing)
	2S (New)	2E (Existing)	New	<sup>(1)</sup> Hammer Mill (Bliss 4436, internal screen up to 36" wide)	10 - 12	2C1 - cyclone 2C2 - baghouse (Both Existing)
	13S (New)	13E (New)	New	<sup>(2)</sup> Truck Dump Hammer Mill (Bliss 4460, internal screen up to 60" wide)	18 - 20	13C - baghouse (New)
	14S (Existing/ Relocated)	13E (New)	Existing/ Relocated	Burner Hammer Mill (Bliss 4430, internal screen up to 30" wide)  (Existing Hammer Mill, relocated)	8 - 10	14C - cyclone 13C - baghouse (Both New)
	15S (New)	8E (Existing)	New	<sup>(2)</sup> Silo Hammer Mill (Bliss 4460, internal screen up to 60" wide)	18 - 20	8C - baghouse (Existing)
	4AS (New)	2E (Existing)	New	Pellet Cooler (New York Blower/Cooling System)	15	4C - cyclone (Existing)  2C2 - baghouse (Existing)
			New	Various Transfer Points	120,000 Charged	(See Table 3 below)
<p>(1) New/bigger Hammer Mill (2S; screen 36" wide) to replace existing Hammer Mill (14S; screen 30" wide). Original hammer mill relocated to become Burner Hammer Mill (14S).</p> <p>(2) Note that the other two (2) new hammer mills (13S and 15S) have bigger internal screens (each screen 60" wide) than the original hammer mill (14S; 30" wide screen).</p>						

The following information, modified by the writer, is found on page 10 of the permit application and is labeled "Process Description." It describes the equipment/process changes to be made under R13-21511D:

- 1) Addition of a third (3<sup>rd</sup>) pellet mill (11S) to the facility which will vent/feed the new cyclone (4AC) which in turn will feed the new replacement cooler (4AS). Emissions from the cooler are controlled by the cyclone (4C)/Baghouse (2C2) combination which vents through existing emission point 2E. The pellets stay in the cooler for five (5) minutes and are then sent to the storage bin.
- 2) Dust from the silo is routed to the new pellet hammermill (Bliss 4436 model; 36 inch internal screen), which will replace the old pellet hammermill (2S; Bliss 4430 model; 30 inch internal screen). The new hammermill will retain the 2S

Fact Sheet R13-2511D  
Hamer Pellet Fuel Company  
Elkins, Randolph County, WV

designation/Emission Source ID. No. The size of the material exiting the hammermill, which is decreased to less than 3/8" in diameter, will be sent to the storage bin and in turn to the pellet mills.

- 3) A new truck dump hammermill (13S) will be added to the facility at the truck dump. Sawdust is dumped to the walking floor, moved by the front end loader to the drag-line conveyors to the silo for storage then to new hammermill (2S) to storage bin to pellet mills.
- 4) From the multiclone (9C), dry sawdust is routed to the re-located hammermill (formerly 2S), identified now as the burner hammermill (14S), which in turn feeds the cyclone (14C) which feeds the storage bin which feeds sawdust/fuel to the suspension burner/dryer (9S).

The Multiclone (9C) also feeds dry sawdust to the silo hammermill (15S) to the of silo controlled by the existing baghouse (8C) which vents to Emission Point 8E.

The following transfer points were listed in permit application R13-2511D, page 71. Note that the transfer points, however, are not shown in the process diagram which accompanied the application.

<b>Table 5: Transfer Points Resulting from R13-2511C, Hamer Pellet Fuel Company, Elkins Randolph County, WV.</b>						
Transfer Point ID No.	Transfer Point Description	Moisture Content %	Maximum Transfer Rate		Control Device ID Number	Control Efficiency %
			TPH	TPY		
TP10	Truck Dump to Drag	70%	30	120,000	PE	50
TP11	Drag 1 to Drag 2	70%	30	120,000	PE	50
TP12	Drag 2 to Beltline	70%	30	120,000	PE	50
TP13	Beltline to Concrete Pad	70%	30	120,000		
TP14	Concrete Pad to Loader Bucket	70%	30	120,000		
TP15	Loader Bucket to Storage Pile	70%	30	120,000		
TP16	Storage Pile to Feed Hopper	70%	30	120,000	PE	50
TP17	Feed Hopper to Hammermill	70%	30	120,000	FE	80
TP18	Hammermill to Drum Dryer	70%	30	120,000	13C	99
TP19	Drum Dryer to Multiclones	12%	15	60,000	MultiClones	75
TP20	Multiclones to Burner Hammermill	12%	2	8,000	13C	99
TP21	Hammermill Burner to Feed Bin for Burner	12%	2	8,000	13C	99
TP22	Feed Bin to Burner	12%	2	8,000	FE	80

Fact Sheet R13-2511D  
Hamer Pellet Fuel Company  
Elkins, Randolph County, WV

**Table 5: Transfer Points Resulting from R13-2511C, Hamer Pellet Fuel Company, Elkins Randolph County, WV.**

Transfer Point ID No.	Transfer Point Description	Moisture Content %	Maximum Transfer Rate		Control Device ID Number	Control Efficiency %
			TPH	TPY		
TP23	Truck Dump to Drag	70%	30	120,000	PE	50
TP24	Drag 1 to Drag 2	70%	30	120,000	PE	50
TP25	Drag 2 to Belt Line	70%	30	120,000	PE	50
TP26	Beltline to Concrete Pad	70%	30	120,000		
TP27	Concrete Pad to Loader Bucket	70%	30	120,000		
TP28	Loader Bucket to Storage Pile	70%	30	120,000		
TP29	Storage Pile to Bucket	70%	30	120,000		
TP30	Bucket to Feed Hopper	70%	30	120,000	PE	50
TP31	Feed Hopper to Drum Dryer	70%	30	120,000	PE	50
TP33	Drum Dryer to Multiclones	12%	15	60,000	MultiClones	75
TP34	Multiclones to Hammermill "Silo"	12%	15	60,000	BagHouse	99
TP35	Hammermill "Silo" to Silo	12%	15	60,000	Baghouse	99
TP36	Hammermill "Silo" to Dust Shed	12%	15		cyclone	75
TP37	2s Hammer Mill to Feed Silo	12%	15		2C1	99
TP38	Feed Silo to Auger	12%	15		FE	80
TP39	Auger to Pellet Mill	12%	15		FE	80
TP40	Pellet Mill to Bin under Pellet Mill	12%	15		PE	50
TP41	Bin under Pellet Mill to Cooler	6%	15		4C	75

## SITE INSPECTION

The writer did not visit the site in preparation of this evaluation.

The inspector, inspection date and Result Code given in the last evaluation (R13-2511C) were in error. According to the Airtrax database, the facility was last inspected by Richard Poling on October 1, 2007. At that time the facility was given the Result Code of 10 for violation of Rule 7, Section 5.2, failure to maintain dust control of the plant premises and access roads.

The writer contacted Karl Dettinger, the DAQ Enforcement Inspector for the facility, by email on November 18, 2011. Karl responded back on November 21, 2011 that he planned to inspect the facility before the end of the year. The writer advised Karl in an November 22, 2011 email to inspect the facility after the changes described in application R13-2511D were implemented.

Fact Sheet R13-2511D  
Hamer Pellet Fuel Company  
Elkins, Randolph County, WV

Directions to the facility as given the permit application are as follows:

Traveling East on U.S. Route 33 in Elkins, turn right at 11<sup>th</sup> Street. At the first stop sign, turn left onto Industrial Street. Cross railroad tracks and turn right onto West 15<sup>th</sup> Street. Facility entrance is first driveway on left.

### **ESTIMATE OF EMISSIONS BY REVIEWING ENGINEER**

It is this writer's opinion that the PM emissions calculated for this application are at best, engineering estimates. Gene Coccarri of DAQ's Small Business Assistance Program worked with Hamer to make these estimates.

List below in Table 6 is a summary of controlled PM emissions from the changes proposed by Hamer in R13-2511D. Pellet Mill emissions are discussed in the application on pages 63 and 64. Hammer Mill emissions are discussed on pages 64 and 65. The new cooler emissions are discussed on page 65. Transfer point emissions are discussed on pages 70 through 73.

<b>PM Emission</b>				<b>Control Device</b>			<b><sup>(1)</sup> PM Emissions (Controlled)</b>	
Point	Unit/Source			ID	Description		(lb/hr)	(ton/yr)
	ID No.	Equipment Description						
2E (Pre-existing)	2S (Old)	New	Hammer Mill	2C1	Old	Cyclone	0.72	1.728
			(Old Hammer Mill relocated to 14S)	2C2	Old	Baghouse		
2E (Pre-existing)	11S (New)	New	3 <sup>rd</sup> Pellet Mill	4AC	New	Cyclone	0.01	0.024
				2C2	Old	Baghouse		
13E (New)	13S (New)	New	Truck Dump Hammer Mill	13C	New	Baghouse	1.2	2.88
13E (New)	14S (New)	Relocated	Burner Hammer Mill	14C	New	Cyclone	0.6	1.44
				13C	New	Baghouse		
8E (Pre-existing)	15S (New)	New	Silo Hammer Mill	8C	Old	Baghouse	1.2	2.88
2E (Pre-existing)	4AS (New)	New	Pellet Cooler	4C	Old	Cyclone	0.065	0.156
				2C2	Old	Baghouse		

Fact Sheet R13-2511D  
Hamer Pellet Fuel Company  
Elkins, Randolph County, WV

**Table 6: Controlled Emission Summary Table for Changes Proposed in R13-2511D, Hamer Pellet Fuel Company, Elkins, WV.**

PM Emission				Control Device		<sup>(1)</sup> PM Emissions (Controlled)	
Point	Unit/Source			ID	Description	(lb/hr)	(ton/yr)
	ID No.	Equipment Description					
-----	-----	New	Various Transfer Points	-----	-----	20.6	15.73
Total Emissions						24.40	24.84

(1) PM<sub>10</sub> emissions are calculated by dividing by 2.1 per EPA AP-42.

Pellet Mill Emissions

See pages 63 and 64 of the permit application. Hamer uses the same estimation method used in R13-2511B (installation of a second pellet mill (3S2)) to estimate emissions from a third pellet mill (11s) in R13-2511D. In R13-2511B, for the 48,000 ton/yr of hardwood sawdust processed into pellets in two (2) pellet mills (3S and 3S2):

- Less than 0.1% of the sawdust (48,000 ton/yr \* 0.001 = 48 ton/yr) went to the cyclone/baghouse combination.
- Cyclone/baghouse combination efficiency is estimated to be 99.9%
- 0.048 ton/yr or 96 lb/yr of PM are emitted to the atmosphere.
- Working backwards based on an operating schedule of 50 wk/yr, 6 day/wk and 16 hr/day, the PM **hourly** emission rate from the cyclone/baghouse combination was estimated at 0.02 lb/hr.
- The 24,000 ton/yr increase in hardwood pellet production generated from the third pellet mill (11S) is half the production rate based to two (2) pellet mill operation (R13-2511B; 48,000 ton/yr; pellet mills 3S and 3S2). Given this information, it follows that: Hourly and annual controlled PM emissions from the new mill would equal half the emissions for 2 pellet mill operation, i.e., the PM emission rate from the new pellet mill cyclone would equal 0.01 lb/hr and 0.024 ton/yr. Uncontrolled PM emissions would equal 10.0 lb/hr and 24 ton/yr (based on the 3<sup>rd</sup> Pellet Mill's cyclone/baghouse combination having an efficiency of 99.9%).
- PM<sub>10</sub> emissions are calculated by dividing PM by 2.1 per EPA AP-42.

## Hammer Mill Emissions

See pages 64 and 65 of the permit application. Hamer used the estimated PM emissions from the original hammer mill (installed in R13-2511) to extrapolate/scale up the estimate for the three new, larger hammer mills to be installed under R13-2511D:

Table 5: Hammer Mills and Scale-Up Factors for Hamer's Elkins Facility located in Randolph County, WV.					
Hammer Mills			Bliss Model	Screen Width (inches)	(1) Scale-Up Factor
2S	New	Pellet Mill Hammer Mill (Replaced Original Hammer Mill)	4436	36	1.2
13S	New	New Truck Dump Hammer Mill	4460	60	2
Baseline > 14S (formerly 2S)	Old	Burner Hammer Mill (Original Hammer Mill to be Relocated)	4430	30	1
15S	New	New Silo	4460	60	2
(1) Scale-Up Factor = Width of New Screen / 30 inches (Width of Relocate Hammer Mill Screen).					

The emission calculations for the original permit are based on information sent to Hamer (on September 3, 2002) by the dust collection equipment manufacturer Kice Industries, Inc. (Kice):

According to Kice, the original hammer mill had a design processing rate of 20,000 lb/hr. At that design processing rate, 1% of the particle matter out of the hammer mill passed through a 100 mesh screen and was smaller than 149 micrometers in size.

Kice conservatively designates 100% of this material as being PM<sub>30</sub>, although only a portion of the material would actually be that small. Based on the control efficiencies of the hammer mill's cyclone and baghouse, Kice estimates the amount of material passing through the baghouse as PM<sub>30</sub> to be 0.6 lb/hr.

Based on an operating the hammer mill 16 hr/day, 6 day/week for 50 week/yr, the annual emission rate would equal 1.44 ton/yr of PM. Based on the same operating schedule and assuming emission and same PM control efficiency of 99.9%, uncontrolled emission would be 60 lb/hr and 144 ton/yr.

Fact Sheet R13-2511D  
Hamer Pellet Fuel Company  
Elkins, Randolph County, WV

Using the original hammer mill as a baseline and scaling up based on the width of a hammer mill's screen, the following emission rates were arrived at:

Table 6: Estimated Controlled and Uncontrolled Emissions for Hamer's Three New Hammer Mills.							
Hammer Mills			Scale-Up Factor	<sup>(1)</sup> Particulate Matter (PM) Emissions			
				Uncontrolled		Controlled	
				(lb/hr)	(ton/yr)	(lb/hr)	(ton/yr)
14S (formerly 2S)	Old	Burner Hammer Mill (Original Hammer Mill to be Relocated)	1	60	144	0.6	1.44
2S	New	Pellet Mill Hammer Mill (Replaced Original Hammer Mill)	1.2	72	172.8	0.72	1.73
13S	New	New Truck Dump Hammer Mill	2	120	288	1.2	2.88
15S	New	New Silo	2	120	288	1.2	2.88
Total PM Emissions (Three New Hammer Mills):				372	893	3.72	8.93
(1) PM <sub>10</sub> emissions are calculated by dividing by 2.1 per EPA AP-42.							

#### New Pellet Cooler (4AS) Emissions

See page 65 of the permit application. The original cooler (4S) will not be large enough to handle the original two pellet mills (3S and 3S2) plus the addition of a new pellet mill (11S). For that reason, the original cooler will be replaced by a new, bigger cooler (4AS) which will still use the original cooler's existing cyclone (4C). PM emissions for the new cooler will be estimated by scaling up the emissions from the old cooler. The pellet mill lift system and the cooler vent system are outlined in Sections 3 and 4 of Kice's September 3, 2002 letter (see page 68 of the permit application). Adding the PM emissions from the two systems (2.4 lb/hr and 1.8 lb/hr) yields 4.3 lb/hr PM emissions resulting from the operation of the original cooler which had handling capability of 20,000 lb/hr of wood pellet production. The new pellet mill will increase wood pellet production by an additional 10,000 lb/hr resulting in an estimated PM emission rate for the new Pellet Cooler (4AS) of:

$$\begin{aligned}
 \text{Emission Rate} \\
 \text{New Pellet Cooler (4AS)} &= 4.3 \text{ lb/hr (30,000 lb/hr)/(20,000 lb/hr)} \\
 &= 6.6 \text{ lb/hr}
 \end{aligned}$$

Factoring in the production schedule of 16 hr/day, 6 day/wk, 50 wk/yr yields 31,200 lb/yr or 15.6 ton/yr of PM emissions. Since these emissions are controlled by a baghouse, they are estimated as being:

$$\begin{aligned} \text{Controlled Hourly Emissions} &= 6.5 \text{ lb/hr} \times (1 - 0.99) = 0.065 \text{ lb/hr} \\ \text{Controlled Yearly Emissions} &= 15.6 \text{ ton/yr} \times (1 - 0.99) = 0.156 \text{ ton/yr} \end{aligned}$$

Transfer Point Emissions

See pages 65, and 70 thru 73 of the permit application. Transfer Point emissions associated with the addition of the new/replaced equipment were calculated by Hamer using DAQ's G-40 Material Handling General Permit spreadsheet. Since sawdust has a much higher moisture content than stone, the emissions calculated by the spreadsheet should be higher than actual emissions.

<b>Table 4: Estimated Particulate Matter (PM) Emissions Resulting from R13-2511D, Hamer Pellet Fuel Company, Elkins, Randolph County, WV.</b>								
Transfer Point ID No.	PM				PM-10			
	Uncontrolled		Controlled		Uncontrolled		Controlled	
	lb/hr	TPY	lb/hr	TPY	lb/hr	TPY	lb/hr	TPY
TP10	0.478	0.957	0.239	0.478	0.226	0.453	0.113	0.226
TP11	0.478	0.957	0.239	0.478	0.226	0.453	0.113	0.226
TP12	0.478	0.957	0.239	0.478	0.226	0.453	0.113	0.226
TP13	0.478	0.957	0.478	0.957	0.226	0.453	0.226	0.453
TP14	0.478	0.957	0.478	0.957	0.226	0.453	0.226	0.453
TP15	0.478	0.957	0.478	0.957	0.226	0.453	0.226	0.453
TP16	0.478	0.957	0.239	0.478	0.226	0.453	0.113	0.226
TP17	0.478	0.957	0.096	0.191	0.226	0.453	0.045	0.091
TP18	0.478	0.957	0.005	0.010	0.226	0.453	0.002	0.005
TP19	2.825	5.650	0.706	1.413	1.336	2.672	0.334	0.668
TP20	0.377	0.753	0.004	0.008	0.178	0.356	0.002	0.004
TP21	0.377	0.753	0.004	0.008	0.178	0.356	0.002	0.004
TP22	0.377	0.753	0.075	0.151	0.178	0.356	0.036	0.071
TP23	0.478	0.957	0.239	0.478	0.226	0.453	0.113	0.226
TP24	0.478	0.957	0.239	0.478	0.226	0.453	0.113	0.226
TP25	0.478	0.957	0.239	0.478	0.226	0.453	0.113	0.226
TP26	0.478	0.957	0.478	0.957	0.226	0.453	0.226	0.453
TP27	0.478	0.957	0.478	0.957	0.226	0.453	0.226	0.453

Fact Sheet R13-2511D  
Hamer Pellet Fuel Company  
Elkins, Randolph County, WV

**Table 4: Estimated Particulate Matter (PM) Emissions Resulting from R13-2511D, Hamer Pellet Fuel Company, Elkins, Randolph County, WV.**

Transfer Point ID No.	PM				PM-10			
	Uncontrolled		Controlled		Uncontrolled		Controlled	
	lb/hr	TPY	lb/hr	TPY	lb/hr	TPY	lb/hr	TPY
TP28	0.478	0.957	0.478	0.957	0.226	0.453	0.226	0.453
TP29	0.478	0.957	0.478	0.957	0.226	0.453	0.226	0.453
TP30	0.478	0.957	0.239	0.478	0.226	0.453	0.113	0.226
TP31	0.478	0.957	0.239	0.478	0.226	0.453	0.113	0.226
TP33	2.825	5.650	0.706	1.413	1.336	2.672	0.334	0.668
TP34	2.825	5.650	0.028	0.057	1.336	2.672	0.013	0.027
TP35	2.825	5.650	0.028	0.057	1.336	2.672	0.013	0.027
TP36	2.825	5.650	0.706	1.413	1.336	2.672	0.334	0.668
TP37	2.825	0.003	2.797	0.003	1.3361	0.001	1.323	0.001
TP38	2.825	0.003	0.565	0.001	1.3361	0.001	0.267	0.000
TP39	2.825	0.003	0.565	0.001	1.3361	0.001	0.267	0.000
TP40	2.825	0.003	1.413	0.001	1.3361	0.001	0.668	0.001
TP41	7.455	0.007	7.399	0.007	3.526	0.003	3.500	0.003
Totals	45.622	47.76	20.599	15.732	20.159	22.584	9.743	7.441

REGULATORY APPLICABILITY

R13-2511D allows PM emissions of PM/sawdust to the air to increase by a maximum of +24.84 ton/yr. Based on information contained in the previous permit (R13-2511C) and given the PM emissions increase in R13-2511D, no new regulatory rules were triggered by the issuance of this permit. The facility remains a minor source and is not subject to 45 CSR30.

The following state and federal regulations are considered applicable to Hamer’s Elkins, WV facility:

State Regulations:

45CSR7 - “To Prevent and Control Particulate Air Pollution from Manufacturing Process Operations”

The wood pelletizing operation is a type “a” manufacturing source, and particulate emissions from this source are subject to 45CSR7. Emission points are all subject to the 20% opacity limit of §45-7-3.1

Fact Sheet R13-2511D  
Hamer Pellet Fuel Company  
Elkins, Randolph County, WV

and the particulate weight emission limits of §45-7-4.1. The facility is subject to the fugitive particulate emission controls of 45-7-5.1 and -5.2.

From R13-2522C: Emission point (9E) is controlled by a multiclone (9C) for the purpose of reducing particulate matter emissions. From Table 45-7A, the maximum allowable particulate emission rate for Emission Point (9E) is 31.4 pounds per hour, based on a process weight rate of 30 tons per hour. The maximum proposed particulate emission rate through Emission Point (9E) is less than 11 pounds per hour. Therefore, the facility should adequately comply with the limits of the rule.

R13-2511D: Total process emissions of PM from the equipment changes proposed in R13-2511D are estimated at +4.8 lb/hr and +9.11 ton/yr.

Total transfer point emissions (fugitive) of PM resulting from changes proposed in R13-2511D are estimated at +20.6 lb/hr and +15.23 ton/yr.

45CSR13 - “Permits for Construction, Modification, Relocation and Operation of Stationary Sources of Air Pollutants, Notification Requirements, Temporary Permits, General Permits, and Procedures for Evaluation”

Changes proposed in R13-2511D are estimated to increase PM emissions (after controls) by +20.6 lb/hr and +15.23 ton/yr. This increase exceeds the modification threshold limits set in Section 2.17 (of six (6) pounds per hour and ten (10) tons per year or more, or more than 144 pounds per calendar day, of any regulated air pollutant) and therefore a modification permit (to R13-2511C) was legally required.

## TOXICITY OF NON-CRITERIA REGULATED POLLUTANTS

R13-2511D increased PM emissions of sawdust to the air. It did not introduce any **new** non-criteria regulated pollutants that were not already allowed in preceding permits R13-2511 through R13-2511C.

Fact Sheet R13-2511D  
Hamer Pellet Fuel Company  
Elkins, Randolph County, WV

## AIR QUALITY IMPACT ANALYSIS

No modeling study was performed for the proposed construction.

## MONITORING OF OPERATIONS

No new monitoring of operations had to be added to the existing permit.

The new cyclones (4AC, 14C) and baghouse (13C), the following items will be monitored:

4.2.2. For purpose of determining compliance with the operating limits set forth in Section 4.1.4. of this permit, the permittee shall monitor the following operating parameters associated with the wood pellet production:

- a. Pellet production rate, and
- b. Hours of operation.

4.4.2. **Record of Maintenance of Air Pollution Control Equipment.** For all pollution control equipment listed in Section 1.0, the permittee shall maintain accurate records of all required pollution control equipment inspection and/or preventative maintenance procedures.

4.4.3. **Record of Malfunctions of Air Pollution Control Equipment.** For all pollution control equipment listed in Section 1.0, the permittee shall maintain records of the occurrence and duration of any malfunction or operational shutdown of the air pollution control equipment during which excess emission occur. For each such case, the following information shall be recorded:

- a. The equipment involved.
- b. Steps taken to minimize emissions during the event.
- c. The duration of the event.
- d. The estimated increase in emissions during the event.

For each such case associated with an equipment malfunction, the additional information shall also be recorded:

- e. The cause of the malfunction.
- f. Steps taken to correct the malfunction.
- g. Any changes or modifications to equipment or procedures that would help prevent future recurrences of the malfunction.

4.4.5. For the purpose of demonstrating compliance with the record keeping requirements set forth in Section 4.2.2. of this permit, the permittee shall maintain monthly record of the operating parameters defined in Section 4.2.2.a. and b. of this permit.

## CHANGES TO PERMIT R13-2511C

A marked-up copy of R13-2511C is attached to this evaluation for reference.

Fact Sheet R13-2511D  
Hamer Pellet Fuel Company  
Elkins, Randolph County, WV

## RECOMMENDATION TO DIRECTOR

Permit application R13-2511D submitted by Hamer Pellet Fuel Company has been reviewed and determined to meet all applicable requirements. It is therefore recommended that the resulting permit be approved.

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John Legg  
Permit Writer

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December 02, 2011

Fact Sheet R13-2511D  
Hamer Pellet Fuel Company  
Elkins, Randolph County, WV

*West Virginia Department of Environmental Protection*

*Division of Air Quality*

*Joe Manchin, III  
Earl Ray Tomblin  
Governor*

*Stephanie R. Timmermeyer  
Randy C. Huffman  
Cabinet Secretary*

# Permit to Modify



**R13-2511C R13-2511D**

*This permit is issued in accordance with the West Virginia Air Pollution Control Act (West Virginia Code §§ 22-5-1 et seq.) and 45 C.S.R. 13 — Permits for Construction, Modification, Relocation and Operation of Stationary Sources of Air Pollutants, Notification Requirements, Temporary Permits, General Permits and Procedures for Evaluation. The permittee identified at the facility listed below is authorized to construct the stationary sources of air pollutants identified herein in accordance with all terms and conditions of this permit.*

Issued to:

**Hamer Pellet Fuel Company**  
Elkins, WV  
083-00114

---

*John A. Benedict  
Director*

Issued: ~~June 22, 2007~~Draft • Effective: ~~June 22, 2007~~ Draft

This permit will supercede and replace Permit R13-2511BC.

Facility Location: Elkins, Randolph County, West Virginia  
Mailing Address: 46 Tom Waller Drive, Elkins, WV 26241  
Facility Description: Wood pellet fuel manufacturer  
SIC Codes: 2499  
UTM Coordinates: 599.0 km Easting • 4,308.2 km Northing • Zone 17  
Permit Type: Modification  
Description of Change:

~~The permittee has proposed to construct and operate a sawdust drying process that will employ a wood-fired suspension burner and rotary dryer. In addition, material handling systems will be installed for the purpose of transferring and storing dried sawdust.~~

Addition of one (1) new pellet mill (11S), three (3) new hammer mills (2S, 13S, and 15S), one new (1) cooler (4AS), two (2) new cyclones (4AC and 14C) and one (1) new baghouse (13C).

The new pellet mill will be identified as Pellet Mill 3 (11S) and will be controlled by the new cyclone (4AC) and existing baghouse (2C2).

One of the two (2) existing hammer mills (2S) will be moved to a different location and will be identified as Burner Hammer Mill (14S) which will be controlled by a new cyclone (14C) and a new baghouse (13C). One of the three (3) new hammer mills will take the relocated hammer mill's place and Source ID No. (2S) and will be fitted with a bigger 36" wide internal screen (previously only 30" wide). It will use existing cyclone (2C1) and baghouse (2C2). The second of the three (3) new hammer mills will be identified as the Truck Dump Hammer Mill (13S) and will be controlled by a new baghouse (13C). It will use a 60" wide internal screen. The third and last of the new hammer mills will be identified as the Silo Hammer Mill (15S) and will be fitted with a 60" wide internal screen. It will be controlled by existing baghouse (8C).

The new pellet cooler (4AS) will replace an existing cooler (4S) which will be scrapped, and will be controlled by the existing cyclone (4C) and existing baghouse (2C2).

*Any person whose interest may be affected, including, but not necessarily limited to, the applicant and any person who participated in the public comment process, by a permit issued, modified or denied by the Secretary may appeal such action of the Secretary to the Air Quality Board pursuant to article one [§§ 22B-1-1 et seq.], Chapter 22B of the Code of West Virginia. West Virginia Code §22-5-14.*

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*The source is not subject to 45CSR30.*

## Table of Contents

<b>1.0. Emission Units .....</b>	<b>4</b>
<b>2.0. General Conditions .....</b>	<b>5</b>
2.1. Definitions .....	5
2.2. Acronyms .....	5
2.3. Authority .....	6
2.4. Term and Renewal .....	6
2.5. Duty to Comply .....	6
2.6. Duty to Provide Information .....	6
2.7. Duty to Supplement and Correct Information .....	7
2.8. Administrative Permit Update .....	7
2.9. Permit Modification .....	7
2.10. Major Permit Modification .....	7
2.11. Inspection and Entry .....	7
2.12. Emergency .....	7
2.13. Need to Halt or Reduce Activity Not a Defense .....	8
2.14. Suspension of Activities .....	8
2.15. Property Rights .....	8
2.16. Severability .....	9
2.17. Transferability .....	9
2.18. Notification Requirements .....	9
2.19. Credible Evidence .....	9
<b>3.0. Facility-Wide Requirements .....</b>	<b>10</b>
3.1. Limitations and Standards .....	10
3.2. Monitoring Requirements .....	10
3.3. Testing Requirements .....	10
3.4. Recordkeeping Requirements .....	12
3.5. Reporting Requirements .....	12
<b>4.0. Source-Specific Requirements .....</b>	<b>14</b>
4.1. Limitations and Standards .....	14
4.2. Monitoring Requirements .....	17
4.3. Testing Requirements .....	18
4.4. Recordkeeping Requirements .....	18
4.5. Reporting Requirements .....	19
<b>CERTIFICATION OF DATA ACCURACY .....</b>	<b>20</b>

### 1.0 Emission Units

Emission Unit ID	Emission Point ID	Emission Unit Description	Year Installed	Control Device
1S	1E	Walking Bed Hydraulic Pump	2002	1C
2S	2E	New Hammer Mill (Bliss 4436, internal screen up to 36" wide)	2002	2C1 - cyclone 2C2 - baghouse
3S	3E	Pellet Mill 1	2002	3C
3S2	3E2	Pellet Mill 2	2004	3C2
4S	4E	Pellet Cooler	2002	4C
4AS	4E	New Pellet Cooler (New York Blower/Cooling System)	2012	4C -cyclone 2C2 - baghouse
5S	5E	Screener	2002	2C2
6S	6E	Finished Product Storage	2002	6C1, 6C2
7S	7E	Surge Bin for Bagging Station	2002	7C
8S	8E	30' x 72' Silo	2004	8C - baghouse
9S	9E	Suspension Burner/Dryer	2007	9C
---	10E	Material Transfer	2007	10C
11S	2E	New Pellet Mill 3	2012	4AC - cyclone (New)  2C2 - baghouse
13S	13E	Truck Dump Hammer Mill (Bliss 4460, internal screen up to 60" wide)	2012	13C - baghouse (New)
14S	13E	Relocated Burner Hammer Mill (Bliss 4430, internal screen up to 30" wide)	Relocated - 2012  (1 <sup>st</sup> installed - 2002)	14C - cyclone 13C -baghouse (Both New)
15S	8E	New Silo Hammer Mill (Bliss 4460, internal screen up to 60" wide)	2011	8C - baghouse

## 2.0. General Conditions

### 2.1. Definitions

- 2.1.1. All references to the "West Virginia Air Pollution Control Act" or the "Air Pollution Control Act" mean those provisions contained in W.Va. Code §§ 22-5-1 to 22-5-18.
- 2.1.2. The "Clean Air Act" means those provisions contained in 42 U.S.C. §§ 7401 to 7671q, and regulations promulgated thereunder.
- 2.1.3. "Secretary" means the Secretary of the Department of Environmental Protection or such other person to whom the Secretary has delegated authority or duties pursuant to W.Va. Code §§ 22-1-6 or 22-1-8 (45 CSR § 30-2.12.). The Director of the Division of Air Quality is the Secretary's designated representative for the purposes of this permit.

### 2.2. Acronyms

<b>CAAA</b>	Clean Air Act Amendments	<b>NO<sub>x</sub></b>	Nitrogen Oxides
<b>CBI</b>	Confidential Business Information	<b>NSPS</b>	New Source Performance Standards
<b>CEM</b>	Continuous Emission Monitor	<b>PM</b>	Particulate Matter
<b>CES</b>	Certified Emission Statement	<b>PM<sub>2.5</sub></b>	Particulate Matter less than 2.5µm in diameter
<b>C.F.R. or CFR</b>	Code of Federal Regulations	<b>PM<sub>10</sub></b>	Particulate Matter less than 10µm in diameter
<b>CO</b>	Carbon Monoxide	<b>Ppb</b>	Pounds per Batch
<b>C.S.R. or CSR</b>	Codes of State Rules	<b>pph</b>	Pounds per Hour
<b>DAQ</b>	Division of Air Quality	<b>ppm</b>	Parts per Million
<b>DEP</b>	Department of Environmental Protection	<b>Ppmv or ppmv</b>	Parts per million by volume
<b>dscm</b>	Dry Standard Cubic Meter	<b>PSD</b>	Prevention of Significant Deterioration
<b>FOIA</b>	Freedom of Information Act	<b>psi</b>	Pounds per Square Inch
<b>HAP</b>	Hazardous Air Pollutant	<b>SIC</b>	Standard Industrial Classification
<b>HON</b>	Hazardous Organic NESHAP	<b>SIP</b>	State Implementation Plan
<b>HP</b>	Horsepower	<b>SO<sub>2</sub></b>	Sulfur Dioxide
<b>lbs/hr</b>	Pounds per Hour	<b>TAP</b>	Toxic Air Pollutant
<b>LDAR</b>	Leak Detection and Repair	<b>TPY</b>	Tons per Year
<b>M</b>	Thousand	<b>TRS</b>	Total Reduced Sulfur
<b>MACT</b>	Maximum Achievable Control Technology	<b>TSP</b>	Total Suspended Particulate
<b>MDHI</b>	Maximum Design Heat Input	<b>USEPA</b>	United States Environmental Protection Agency
<b>MM</b>	Million	<b>UTM</b>	Universal Transverse Mercator
<b>MMBtu/hr or mmbtu/hr</b>	Million British Thermal Units per Hour	<b>VEE</b>	Visual Emissions Evaluation
<b>MMCF/hr or mmcf/hr</b>	Million Cubic Feet per Hour	<b>VOC</b>	Volatile Organic Compounds
<b>NA</b>	Not Applicable	<b>VOL</b>	Volatile Organic Liquids
<b>NAAQS</b>	National Ambient Air Quality Standards		
<b>NESHAPS</b>	National Emissions Standards for Hazardous Air Pollutants		

### 2.3. Authority

This permit is issued in accordance with West Virginia Air Pollution Control Law W.Va. Code §§22-5-1 et seq. and the following Legislative Rules promulgated thereunder:

- 2.3.1. 45CSR13 – *Permits for Construction, Modification, Relocation and Operation of Stationary Sources of Air Pollutants, Notification Requirements, Temporary Permits, General Permits and Procedures for Evaluation;*

### 2.4. Term and Renewal

- 2.4.1. This permit supercedes and replaces previously issued Permit R13-2511BC. This permit shall remain valid, continuous and in effect unless it is revised, suspended, revoked or otherwise changed under an applicable provision of 45CSR13 or any applicable legislative rule.

### 2.5. Duty to Comply

- 2.5.1. The permitted facility shall be constructed and operated in accordance with the plans and specifications filed in Permit Application R13-2511, R13-2511A, R13-2511B, R13-2511C, and R13-2511ED, and any modifications, administrative updates, or amendments thereto. The Secretary may suspend or revoke a permit if the plans and specifications upon which the approval was based are not adhered to;  
**[45CSR§§13-5.11 and 13-10.3]**
- 2.5.2. The permittee must comply with all conditions of this permit. Any permit noncompliance constitutes a violation of the West Virginia Code and the Clean Air Act and is grounds for enforcement action by the Secretary or USEPA;
- 2.5.3. Violations of any of the conditions contained in this permit, or incorporated herein by reference, may subject the permittee to civil and/or criminal penalties for each violation and further action or remedies as provided by West Virginia Code 22-5-6 and 22-5-7;
- 2.5.4. Approval of this permit does not relieve the permittee herein of the responsibility to apply for and obtain all other permits, licenses and/or approvals from other agencies; i.e., local, state and federal, which may have jurisdiction over the construction and/or operation of the source(s) and/or facility herein permitted.

### 2.6. Duty to Provide Information

The permittee shall furnish to the Secretary within a reasonable time any information the Secretary may request in writing to determine whether cause exists for administratively updating, modifying, revoking or terminating the permit or to determine compliance with the permit. Upon request, the permittee shall also furnish to the Secretary copies of records to be kept by the permittee. For information claimed to be confidential, the permittee shall furnish such records to the Secretary along with a claim of confidentiality in accordance with 45CSR31. If confidential information is to be sent to USEPA, the permittee shall directly provide such information to USEPA along with a claim of confidentiality in accordance with 40 C.F.R. Part 2.

## **2.7. Duty to Supplement and Correct Information**

Upon becoming aware of a failure to submit any relevant facts or a submittal of incorrect information in any permit application, the permittee shall promptly submit to the Secretary such supplemental facts or corrected information.

## **2.8. Administrative Update**

The permittee may request an administrative update to this permit as defined in and according to the procedures specified in 45CSR13.

[45CSR§13-4]

## **2.9. Permit Modification**

The permittee may request a minor modification to this permit as defined in and according to the procedures specified in 45CSR13.

[45CSR§13-5.4.]

## **2.10. Major Permit Modification**

The permittee may request a major modification as defined in and according to the procedures specified in 45CSR14 or 45CSR19, as appropriate.

[45CSR§13-5.1]

## **2.11. Inspection and Entry**

The permittee shall allow any authorized representative of the Secretary, upon the presentation of credentials and other documents as may be required by law, to perform the following:

- a. At all reasonable times (including all times in which the facility is in operation) enter upon the permittee's premises where a source is located or emissions related activity is conducted, or where records must be kept under the conditions of this permit;
- b. Have access to and copy, at reasonable times, any records that must be kept under the conditions of this permit;
- c. Inspect at reasonable times (including all times in which the facility is in operation) any facilities, equipment (including monitoring and air pollution control equipment), practices, or operations regulated or required under the permit;
- d. Sample or monitor at reasonable times substances or parameters to determine compliance with the permit or applicable requirements or ascertain the amounts and types of air pollutants discharged.

## **2.12. Emergency**

- 2.12.1. An "emergency" means any situation arising from sudden and reasonable unforeseeable events beyond the control of the source, including acts of God, which situation requires immediate corrective action to restore normal operation, and that causes the source to exceed a technology-based emission limitation under the permit, due to unavoidable increases in emissions attributable to the emergency.

An emergency shall not include noncompliance to the extent caused by improperly designed equipment, lack of preventative maintenance, careless or improper operation, or operator error.

- 2.12.2. Effect of any emergency. An emergency constitutes an affirmative defense to an action brought for noncompliance with such technology-based emission limitations if the conditions of Section 2.12.3 are not met.
- 2.12.3. The affirmative defense of emergency shall be demonstrated through properly signed, contemporaneous operating logs, or other relevant evidence that:
  - a. An emergency occurred and that the permittee can identify the cause(s) of the emergency;
  - b. The permitted facility was at the time being properly operated;
  - c. During the period of the emergency the permittee took all reasonable steps to minimize levels of emissions that exceeded the emission standards, or other requirements in the permit; and,
  - d. The permittee submitted notice of the emergency to the Secretary within one (1) working day of the time when emission limitations were exceeded due to the emergency and made a request for variance, and as applicable rules provide. This notice must contain a detailed description of the emergency, any steps taken to mitigate emission, and corrective actions taken.
- 2.12.4. In any enforcement proceeding, the permittee seeking to establish the occurrence of an emergency has the burden of proof.
- 2.12.5. The provisions of this section are in addition to any emergency or upset provision contained in any applicable requirement.

### **2.13. Need to Halt or Reduce Activity Not a Defense**

It shall not be a defense for a permittee in an enforcement action that it should have been necessary to halt or reduce the permitted activity in order to maintain compliance with the conditions of this permit. However, nothing in this paragraph shall be construed as precluding consideration of a need to halt or reduce activity as a mitigating factor in determining penalties for noncompliance if the health, safety, or environmental impacts of halting or reducing operations would be more serious than the impacts of continued operations.

### **2.14. Suspension of Activities**

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

### **2.15. Property Rights**

This permit does not convey any property rights of any sort or any exclusive privilege.

### **2.16. Severability**

The provisions of this permit are severable and should any provision(s) be declared by a court of competent

jurisdiction to be invalid or unenforceable, all other provisions shall remain in full force and effect.

**2.17. Transferability**

This permit is transferable in accordance with the requirements outlined in Section 10.1 of 45CSR13.  
**[45CSR§13-10.1]**

**2.18. Notification Requirements**

The permittee shall notify the Secretary, in writing, no later than thirty (30) calendar days after the actual startup of the operations authorized under this permit.

**2.19. Credible Evidence**

Nothing in this permit shall alter or affect the ability of any person to establish compliance with, or a violation of, any applicable requirement through the use of credible evidence to the extent authorized by law. Nothing in this permit shall be construed to waive any defense otherwise available to the permittee including, but not limited to, any challenge to the credible evidence rule in the context of any future proceeding.

### 3.0. Facility-Wide Requirements

#### 3.1. Limitations and Standards

- 3.1.1. **Open burning.** The open burning of refuse by any person, firm, corporation, association or public agency is prohibited except as noted in 45CSR§6-3.1.  
[45CSR§6-3.1.]
- 3.1.2. **Open burning exemptions.** The exemptions listed in 45CSR§6-3.1 are subject to the following stipulation: Upon notification by the Secretary, no person shall cause, suffer, allow or permit any form of open burning during existing or predicted periods of atmospheric stagnation. Notification shall be made by such means as the Secretary may deem necessary and feasible.  
[45CSR§6-3.2.]
- 3.1.3. **Asbestos.** The permittee is responsible for thoroughly inspecting the facility, or part of the facility, prior to commencement of demolition or renovation for the presence of asbestos and complying with 40 C.F.R. § 61.145, 40 C.F.R. § 61.148, and 40 C.F.R. § 61.150. The permittee, owner, or operator must notify the Secretary at least ten (10) working days prior to the commencement of any asbestos removal on the forms prescribed by the Secretary if the permittee is subject to the notification requirements of 40 C.F.R. § 61.145(b)(3)(i). The USEPA, the Division of Waste Management and the Bureau for Public Health - Environmental Health require a copy of this notice to be sent to them.  
[40CFR§61.145(b) and 45CSR§1534]
- 3.1.4. **Odor.** No person shall cause, suffer, allow or permit the discharge of air pollutants which cause or contribute to an objectionable odor at any location occupied by the public.  
[45CSR§4-3.1 State-Enforceable only.]
- 3.1.5. **Permanent shutdown.** A source which has not operated at least 500 hours in one 12-month period within the previous five (5) year time period may be considered permanently shutdown, unless such source can provide to the Secretary, with reasonable specificity, information to the contrary. All permits may be modified or revoked and/or reapplication or application for new permits may be required for any source determined to be permanently shutdown.  
[45CSR§13-10.5.]
- 3.1.6. **Standby plan for reducing emissions.** When requested by the Secretary, the permittee shall prepare standby plans for reducing the emissions of air pollutants in accordance with the objectives set forth in Tables I, II, and III of 45 C.S.R. 11.  
[45CSR§11-5.2.]

#### 3.2. Monitoring Requirements

*[Reserved]*

#### 3.3. Testing Requirements

- 3.3.1. **Stack testing.** As per provisions set forth in this permit or as otherwise required by the Secretary, in accordance with the West Virginia Code, underlying regulations, permits and orders, the permittee shall conduct test(s) to determine compliance with the emission limitations set forth in this permit and/or established or set forth in underlying documents. The Secretary, or his duly authorized representative, may at his option witness or conduct such test(s). Should the Secretary exercise his

option to conduct such test(s), the operator shall provide all necessary sampling connections and sampling ports to be located in such manner as the Secretary may require, power for test equipment and the required safety equipment, such as scaffolding, railings and ladders, to comply with generally accepted good safety practices. Such tests shall be conducted in accordance with the methods and procedures set forth in this permit or as otherwise approved or specified by the Secretary in accordance with the following:

- a. The Secretary may on a source-specific basis approve or specify additional testing or alternative testing to the test methods specified in the permit for demonstrating compliance with 40 C.F.R. Parts 60, 61, and 63 in accordance with the Secretary's delegated authority and any established equivalency determination methods which are applicable. If a testing method is specified or approved which effectively replaces a test method specified in the permit, the permit may be revised in accordance with 45CSR§13-4 or 45CSR§13-5.4 as applicable.
- b. The Secretary may on a source-specific basis approve or specify additional testing or alternative testing to the test methods specified in the permit for demonstrating compliance with applicable requirements which do not involve federal delegation. In specifying or approving such alternative testing to the test methods, the Secretary, to the extent possible, shall utilize the same equivalency criteria as would be used in approving such changes under Section 3.3.1.a. of this permit. If a testing method is specified or approved which effectively replaces a test method specified in the permit, the permit may be revised in accordance with 45CSR§13-4 or 45CSR§13-5.4 as applicable.
- c. All periodic tests to determine mass emission limits from or air pollutant concentrations in discharge stacks and such other tests as specified in this permit shall be conducted in accordance with an approved test protocol. Unless previously approved, such protocols shall be submitted to the Secretary in writing at least thirty (30) days prior to any testing and shall contain the information set forth by the Secretary. In addition, the permittee shall notify the Secretary at least fifteen (15) days prior to any testing so the Secretary may have the opportunity to observe such tests. This notification shall include the actual date and time during which the test will be conducted and, if appropriate, verification that the tests will fully conform to a referenced protocol previously approved by the Secretary.  
~~[WV Code § 22-5-4(a)(15)]~~
- d. ~~The permittee shall submit a report of the results of the stack test within sixty (60) days of completion of the test. The test report shall provide the information necessary to document the objectives of the test and to determine whether proper procedures were used to accomplish these objectives. The report shall include the following: the certification described in paragraph 3.5.1.; a statement of compliance status, also signed by a responsible official; and, a summary of conditions which form the basis for the compliance status evaluation. The summary of conditions shall include the following:~~
  1. ~~The permit or rule evaluated, with the citation number and language;~~
  2. ~~The result of the test for each permit or rule condition; and,~~
  3. ~~A statement of compliance or noncompliance with each permit or rule condition.~~~~[WV Code § 22-5-4(a)(14-15) and 45CSR13]~~

### 3.4. Recordkeeping Requirements

- 3.4.1. **Retention of records.** The permittee shall maintain records of all information (including monitoring

data, support information, reports and notifications) required by this permit recorded in a form suitable and readily available for expeditious inspection and review. Support information includes all calibration and maintenance records and all original strip-chart recordings for continuous monitoring instrumentation. The files shall be maintained for at least five (5) years following the date of each occurrence, measurement, maintenance, corrective action, report, or record. At a minimum, the most recent two (2) years of data shall be maintained on site. The remaining three (3) years of data may be maintained off site, but must remain accessible within a reasonable time. Where appropriate, the permittee may maintain records electronically (on a computer, on computer floppy disks, CDs, DVDs, or magnetic tape disks), on microfilm, or on microfiche.

- 3.4.2. **Odors.** For the purposes of 45CSR4, the permittee shall maintain a record of all odor complaints received, any investigation performed in response to such a complaint, and any responsive action(s) taken.  
[45CSR§4. *State-Enforceable only.*]

### 3.5. Reporting Requirements

- 3.5.1. **Responsible official.** Any application form, report, or compliance certification required by this permit to be submitted to the DAQ and/or USEPA shall contain a certification by the responsible official that states that, based on information and belief formed after reasonable inquiry, the statements and information in the document are true, accurate and complete.
- 3.5.2. **Confidential information.** A permittee may request confidential treatment for the submission of reporting required by this permit pursuant to the limitations and procedures of W.Va. Code § 22-5-10 and 45CSR31.
- 3.5.3. **Correspondence.** All notices, requests, demands, submissions and other communications required or permitted to be made to the Secretary of DEP and/or USEPA shall be made in writing and shall be deemed to have been duly given when delivered by hand, or mailed first class with postage prepaid to the address(es) set forth below or to such other person or address as the Secretary of the Department of Environmental Protection may designate:

**If to the DAQ:**

Director  
WVDEP  
Division of Air Quality  
601 57th Street, SE  
Charleston, WV 25304-2345

**If to the USEPA:**

Associate Director  
Office of Enforcement and Permits Review  
(3AP12)  
U. S. Environmental Protection Agency  
Region III  
1650 Arch Street  
Philadelphia, PA 19103-2029

3.5.4. **Operating Fee.**

- 3.5.4.1. In accordance with 45CSR22 – Air Quality Management Fee Program, the permittee shall not operate nor cause to operate the permitted facility or other associated facilities on the same or contiguous sites comprising the plant without first obtaining and having in current effect a Certificate to Operate (CTO). Such Certificate to Operate (CTO) shall be renewed annually, shall be maintained on the premises for which the certificate has been issued, and shall be made immediately available for inspection by the Secretary or his/her duly authorized representative.

- 3.5.5. **Emission inventory.** At such time(s) as the Secretary may designate, the permittee herein shall prepare and submit an emission inventory for the previous year, addressing the emissions from the facility and/or process(es) authorized herein, in accordance with the emission inventory submittal requirements of the Division of Air Quality. After the initial submittal, the Secretary may, based upon the type and quantity of the pollutants emitted, establish a frequency other than on an annual basis.

#### 4.0. Source-Specific Requirements

##### 4.1. Limitations and Standards

- 4.1.1. The facility shall employ a wood-fired suspension burner [Source 9S] for the purpose of drying sawdust. The dryer system shall have a maximum fuel consumption rate of 12.5 tons per hour and a maximum annual operating schedule of 4,000 hours per year.
- 4.1.2. Sawdust shall be dried at a maximum rate not to exceed 30 tons per hour and 120,000 tons per year.
- 4.1.3. Emissions released from the dryer system shall be released through emission point 9E and limited to the pollutants and associated emission rates shown in Table 4.1.3.

**Table 4.1.3.**

Pollutant	Hourly Emissions (PPH)	Annual Emissions (TPY)
PM <sub>30</sub>	12.0	24
PM <sub>10</sub>	10.8	21.6
NO <sub>x</sub>	19.6	39.2
CO	24.0	48
SO <sub>2</sub>	1.0	2
VOC	26.8	53.6
HCl	0.76	1.52
Acrolein	0.16	0.32
Benzene	0.17	0.34
Styrene	0.08	0.16
Formaldehyde	0.18	0.36

- 4.1.4. The facility shall be limited to a maximum wood pellet production rate of ~~ten (10)~~ fifteen (15) tons per hour and ~~4872,000~~ tons per year.
- 4.1.5. Full enclosures are to be utilized and maintained for all material transfer systems, all wood processing systems, and all product storage and packaging systems.
- 4.1.6. All baghouse filter systems installed on the transfer, process and storage equipment shall be maintained and operated so to meet the minimum performance specifications as shown in Table 4.1.6.

**Table 4.1.6.**

Control Device ID	Baghouse System			Design Specifications				
	Make	Model	Date of Installation	Gas Flow (ACFM)	Cloth Area (ft <sup>3</sup> )	Air-Cloth Ratio (ft/min)	Pressure Drop (inches of H <sub>2</sub> O)	Collection Efficiency (%)
1C	Kice	VS100-10	May 2002	7,000	1,168	5.99	3 - 8	99.9
2C2	Kice	VR96-10	May 2002	5,800	1,104	5.25	3 - 8	99.9
6C2	Kice	VR16-8	May 2002	900	149	6.04	3 - 8	99.9
7C	Kice	VR60-8	May 2002	3,200	558	5.73	3 - 8	99.9
8C	Kice	VR60-8	July 2004	3,200	558	5.73	3 - 8	99.9
13C	Carter-Day	276RF10	2012	6,400	4,254	1.51	2-8	99

4.1.7. All cyclone systems installed on the transfer and process equipment shall be maintained and operated so to meet the minimum performance specifications as shown in Table 4.1.7.

**Table 4.1.7.**

Control Device ID	Cyclone			Design Specifications		
	Make	Model	Date of Installation	Gas Flow (SCFM)	Pressure Drop (inches of H <sub>2</sub> O)	Collection Efficiency (%)
2C1	Kice	CK60	May 2002	5,800	5.6	99.9
3C	Kice	CKS-48	May 2002	3,700	5.3	99.9
3C2	Kice	CKS-48	July 2004	3,700	5.3	99.9
4AC	Kice	CKS-42	2012	2,600	4.5	99.9
4C	Kice	CKS-42	May 2002	2,600	4.5	99.9
6C1	Kice	CK-30	May 2002	975	2.0	99.9
9C	Clean Gas Sys.	4-54	June 2007*	60,000	6.0	80.0
10C	Torit & Day	124RF10	June 2007*	15,790	2.0	99.0
14C	Kice	CKS-42	2012	2,600	4.5	99.9

\*Estimated date of installation and commencement of operation based on anticipated permit issuance.

4.1.8. The permittee shall have readily available access to a water truck and shall utilize same to apply water, or a mixture of water and an environmentally acceptable dust control additive, hereinafter referred to as solution, as often as is necessary in order to minimize the atmospheric entrainment of fugitive particulate emissions that may be generated from haul roads, stockpiles and other work areas where mobile equipment is used.

The spraybar shall be equipped with commercially available spray nozzles, of sufficient size and number, so as to provide adequate coverage to the surface being treated.

The pump delivering the water, or solution shall be of sufficient size and capacity so as to be capable of delivering to the spray nozzle(s) an adequate quantity of water, or solution, and at a sufficient pressure.

- 4.1.9. Compliance with all annual throughput limits shall be determined using a twelve month rolling total. A twelve month rolling total shall mean the sum of the amount of wood pellets produced at any given time during the previous twelve (12) consecutive calendar months.
- 4.1.10. The permitted facility shall comply with all applicable requirements of 45CSR7, provided, however, that compliance with any more stringent requirements under Section 4.0 of this permit shall also be demonstrated. The pertinent sections of 45CSR7 applicable to this facility include, but are not limited to, the following:

§45-7-3.1

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

§45-7-3.7

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

§45-7-4.1

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

§45-7-4.2

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

§45-7-5.1

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

§45-7-5.2

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

§45-7-8.1

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

§45-7-8.2

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

§45-7-9.1

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

- 4.1.11. **Operation and Maintenance of Air Pollution Control Equipment.** The permittee shall, to the extent practicable, install, maintain, and operate all pollution control equipment listed in Section 1.0 and associated monitoring equipment in a manner consistent with safety and good air pollution control practices for minimizing emissions, or comply with any more stringent limits set forth in this permit or as set forth by any State rule, Federal regulation, or alternative control plan approved by the Secretary.

[45CSR§13-5.11.]

## 4.2. Monitoring Requirements

- 4.2.1. For the purpose of determining compliance with the operating limits set forth in Section 4.1.1., 4.1.2., and 4.1.3. of this permit, the permittee shall monitor the following operating parameters associated with the sawdust drying system:
- a. Fuel consumption rate,
  - b. Amount of sawdust dried, and
  - c. Hours of operation.

4.2.2. For the purpose of determining compliance with the operating limits set forth in Section 4.1.4. of this permit, the permittee shall monitor the following operating parameters associated with the wood pellet production:

- a. Pellet production rate, and
- b. Hours of operation.

### 4.3. Testing Requirements

*[Reserved]*

### 4.4. Recordkeeping Requirements

4.4.1. **Record of Monitoring.** The permittee shall keep records of monitoring information that include the following:

- a. The date, place as defined in this permit and time of sampling or measurements;
- b. The date(s) analyses were performed;
- c. The company or entity that performed the analyses;
- d. The analytical techniques or methods used;
- e. The results of the analyses; and
- f. The operating conditions existing at the time of sampling or measurement.

4.4.2. **Record of Maintenance of Air Pollution Control Equipment.** For all pollution control equipment listed in Section 1.0, the permittee shall maintain accurate records of all required pollution control equipment inspection and/or preventative maintenance procedures.

4.4.3. **Record of Malfunctions of Air Pollution Control Equipment.** For all air pollution control equipment listed in Section 1.0, the permittee shall maintain records of the occurrence and duration of any malfunction or operational shutdown of the air pollution control equipment during which excess emissions occur. For each such case, the following information shall be recorded:

- a. The equipment involved.
- b. Steps taken to minimize emissions during the event.
- c. The duration of the event.
- d. The estimated increase in emissions during the event.

For each such case associated with an equipment malfunction, the additional information shall also be recorded:

- e. The cause of the malfunction.

- f. Steps taken to correct the malfunction.
  - g. Any changes or modifications to equipment or procedures that would help prevent future recurrences of the malfunction.
- 4.4.4. For the purpose of demonstrating compliance with the record keeping requirements set forth in Section 4.2.1. of this permit, the permittee shall maintain monthly records of the operating parameters defined in Section 4.2.1.a., b., and c. of this permit.
- 4.4.5. For the purpose of demonstrating compliance with the record keeping requirements set forth in Section 4.2.2. of this permit, the permittee shall maintain monthly records of the operating parameters defined in Section 4.2.2.a and b. of this permit.

#### **4.5. Reporting Requirements**

*[Reserved]*

### CERTIFICATION OF DATA ACCURACY

I, the undersigned, hereby certify that, based on information and belief formed after reasonable inquiry, all information contained in the attached \_\_\_\_\_, representing the period beginning \_\_\_\_\_ and ending \_\_\_\_\_, and any supporting documents appended hereto, is true, accurate, and complete.

Signature<sup>1</sup> \_\_\_\_\_ Date \_\_\_\_\_  
(please use blue ink) Responsible Official or Authorized Representative

Name and Title \_\_\_\_\_ Title \_\_\_\_\_  
(please print or type) Name

Telephone No. \_\_\_\_\_ Fax No. \_\_\_\_\_

- 
- <sup>1</sup> This form shall be signed by a "Responsible Official." "Responsible Official" means one of the following:
- a. For a corporation: The president, secretary, treasurer, or vice-president of the corporation in charge of a principal business function, or any other person who performs similar policy or decision-making functions for the corporation, or a duly authorized representative of such person if the representative is responsible for the overall operation of one or more manufacturing, production, or operating facilities applying for or subject to a permit and either:
    - (I) the facilities employ more than 250 persons or have a gross annual sales or expenditures exceeding \$25 million (in second quarter 1980 dollars), or
    - (ii) the delegation of authority to such representative is approved in advance by the Director;
  - b. For a partnership or sole proprietorship: a general partner or the proprietor, respectively;
  - c. For a municipality, State, Federal, or other public entity: either a principal executive officer or ranking elected official. For the purposes of this part, a principal executive officer of a Federal agency includes the chief executive officer having responsibility for the overall operations of a principal geographic unit of the agency (e.g., a Regional Administrator of USEPA); or
  - d. The designated representative delegated with such authority and approved in advance by the Director.