Attachment B
Page 4-4 and Permit Application Forms

The fuel processing building and fly ash silo baghouse emissions are based on the use of the Facility's primary fuel (biomass) which represents the maximum emissions attributable to materials handling. Far more biomass must be handled per plant unit output than fossil fuels because of their respective energy contents per pound. Summaries of maximum hourly emissions (lb/hr) for fugitive emissions (conveyor transfer towers, storage piles, paved roads, and cooling tower) are summarized in Table 4-2. Detailed calculations for the fuel processing buildings, ash silo baghouse, and fugitives are included in Appendix E. With the exception of the cooling tower, fugitive emissions are based on 100 percent biomass firing.

The cooling tower system at the proposed Facility will consist of a multi-cell mechanical draft cooling tower and a non-contact recirculating water system. Based on the proposed configuration, these systems will be emitters of small amounts of particulate matter, as cooling tower drift. The cooling tower emissions were estimated based on U.S. EPA emission factors from *AP-42 Section 13.4*.

It is estimated that the majority (over 95 percent) of the particulate emissions from the cooling tower will be greater than 10 microns in diameter. The majority of the mass-containing particles that are emitted in the cooling tower droplets are larger-diameter particles that, upon evaporation of the water droplets, will fall to the ground in close proximity to the cooling tower. Therefore, for the purpose of this application, all particulate matter emissions from the cooling tower are assumed to be Total Suspended Particulate Matter (TSP). Detailed calculations for the cooling towers are included in Appendix E.

The maximum expected annual emissions from the Facility and the corresponding PSD significant emission rates are as follows:

Pollutant	Maximum Expected Annual Emissions (tons/yr)[a]	PSD Threshold for Major Sources (tons/yr)
NO_X	670	40
CO	2009	100
VOC	134	40
PM-10/PM-2.5[b]	222	15 (PM-10)
SO_2	670	40

[a] Emissions include auxiliary boiler.
[b] All PM from point sources are assumed to be PM-10/PM-2.5.

11. If confidential information is being submitted in this application, were the guidelines followed in the "Procedures for Requesting that Submitted Information be treated as Confidential"?

☐ No ☒ Yes

12. New Facility Emissions Summary

Criteria Pollutant	New Facility	
	Potential (tpy)	Actual (tpy)
Carbon monoxide (CO)	2,009	
Nitrogen oxides (NOx)	670	
Particulate Matter (PM)	--	
PM <10 microns (PM10)	222	
PM <2.5 microns (PM2.5)	222	
Sulfur dioxide (SO_2)	670	
Volatile Organic Compounds (VOC)	134	
Total Hazardous Air Pollutants (HAPs)	231 (Based on biomass firing in FB Boiler)	
Individual HAPs Listed Below:		
See Appendix E of Report		

13. Existing Facility Emissions Summary

Criteria Pollutant	Current Facility		After Modification	
	Potential (tpy)	Actual (tpy)	Potential (tpy)	Actual (tpy)
Carbon monoxide (CO)				
Nitrogen oxides (NOx)				
Particulate Matter (PM)				
PM <10 microns (PM10)				
PM <2.5 microns (PM2.5)				
Sulfur dioxide (SO_2)				
Volatile Organic Compounds (VOC)				
Total Hazardous Air Pollutants (HAPs)				
Individual HAPs Listed Below:				

Facility Name: Yellow Pine Energy Company, LLC **Date of Application:** _____

FORM 4.00 – EMISSION INFORMATION

Emission Unit ID	Air Pollution Control Device ID	Stack ID	Pollutant Emitted	Emission Rates				
				Hourly Actual Emissions (lb/hr)	Hourly Potential Emissions (lb/hr)	Actual Annual Emission (tpy)	Potential Annual Emission (tpy)	Method of Determination
FB	SNCR, DS, BH1	FBS	CO		459		2,010	Engineering Calculation
			NOx		153		670	Engineering Calc.
			SO2		291		670	Material Balance
			VOC		30.6		134	Engineering Calc.
			PM-10/PM-2.5		50.5		221	Material Balance
			HAPs (sum based on biomass firing)		52.7		231	Engineering Calc.
AB	SNCR, DS, BH1	ABS	CO		0.90		0.11	AP-42
			NOx		3.58		0.45	AP-42
			SO2		1.27		0.16	AP-42
			VOC		0.061		0.01	AP-42
			PM-10/PM-2.5		0.43		0.05	AP-42
			HAPs		1E-3		1.25E-4	AP-42
EG	--	EGS	CO		TBD			
			NOx		TBD			
			SO2		TBD			
			VOC		TBD			
			PM-10/PM-2.5		TBD			
			HAPs		TBD			
FW	--	FWS	CO		TBD			
			NOx		TBD			

			SO2		TBD			
			VOC		TBD			
			PM-10/PM-2.5		TBD			
			HAPs		TBD			
FP1	BH2	FP1S	PM-10/PM-2.5		2.3E-3		0.01	Material Balance
FP2	BH3	FP2S	PM-10/PM-2.5		3.5E-3		0.02	Material Balance
SLO	BH4	SLOS	PM-10/PM-2.5		4.1E-3		0.02	Material Balance
FLY	BH5	FLYS	PM-10/PM-2.5		4.4E-7		1.9E-6	Material Balance
DT1	--	DT1S	VOC		32.86		0.02	Tanks 4.09d
DT2	--	DT2S	VOC		2.82		1.4E-3	Tanks 4.09d
DT3	--	DT3S	VOC		0.20		1E-4	Tanks 4.09d
DT4	--	DT4S	VOC		0.10		5E-5	Tanks 4.09d
GT1	--	GT1S	VOC		100.5		0.05	Tanks 4.09d
AT	--	ATS	NH3		Negligible			

Facility Name: Yellow Pine Energy Company, LLC **Date of Application:** _____

FORM 4.00 – EMISSION INFORMATION

Emission Unit ID	Air Pollution Control Device ID	Stack ID	Pollutant Emitted	Emission Rates				
				Hourly Actual Emissions (lb/hr)	Hourly Potential Emissions (lb/hr)	Actual Annual Emission (tpy)	Potential Annual Emission (tpy)	Method of Determination
FB-1	SNCR, DS, BH1	FBS	CO		229		1,005	Engineering Calculation
			NOx		76.5		335	Engineering Calc.
			SO2		145		335	Material Balance
			VOC		30.6		134	Engineering Calc.
			PM-10/PM-2.5		25.2		111	Material Balance
			HAPs (sum based on biomass firing)		26.4		115	Engineering Calc.
FB-2	SNCR, DS, BH1	FBS	CO		229		1,005	Engineering Calculation
			NOx		76.5		335	Engineering Calc.
			SO2		145		335	Material Balance
			VOC		30.6		134	Engineering Calc.
			PM-10/PM-2.5		25.2		111	Material Balance
			HAPs (sum based on biomass firing)		26.4		115	Engineering Calc.