State of Wisconsin
Department of Natural Resources

INDEX OF AIR POLLUTION PERMIT APPLICATION FORMS
Form 4530-134 Rev. 12-99

I.ADMINISTRATION	
This application contains the following forms:	☑ Form 4530-100, Facility Identification
	☑ Form 4530-101, Facility Plot Plan
	☑ Forms 4530-102, -102A, and -102B, Source and Site Descriptions

II. EMISSIONS SOURCE DESCRIPTION		Total Number of This Form
This application contains the following forms (one form for each facility boiler, printing operation, etc.):	☑ Form 4530-103, Stack Identification	**12**
	☑ Form 4530-104, Boiler or Furnace Operation	**3**
	☐ Form 4530-105, Storage Tanks	
	☐ Form 4530-106, Incineration	
	☐ Form 4530-107, Printing Operations	
	☐ Form 4530-108, Painting and Coating Operations	
	☑ Form 4530-109, Miscellaneous Processes	**10**

III.AIR POLLUTION CONTROL SYSTEM		Total Number of This Form
This application contains the following forms:	☑ Form 4530-110, Miscellaneous	**1**
	☐ Form 4530-111, Condensers	
	☐ Form 4530-112, Adsorbers	
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IV.COMPLIANCE DEMONSTRATION		Total Number of This Form
This application contains the following forms (one for each facility boiler, printing operation, etc.):	☐ Form 4530-118, Compliance Certification - Monitoring and Reporting	
	☐ Form 4530-119, Continuous Emission Monitoring	
	☐ Form 4530-120, Periodic Emission Monitoring Using Portable Monitors	
	☐ Form 4530-121, Control System Parameters or Operation Parameters of a Process	
	☐ Form 4530-122, Monitoring Maintenance Procedures	
	☐ Form 4530-123, Stack Testing	
	☐ Form 4530-124, Fuel Sampling and Analysis	
	☐ Form 4530-125, Recordkeeping	

V. EMISSION SUMMARY AND COMPLIANCE CERTIFICATION		Total Number of This Form
This application contains the following forms quantifying emissions, certifying compliance with applicable requirements, and developing a compliance plan	☐ Form 4530-126, Emission Unit Hazardous Air Pollutant Summary	**3**
	☑ Form 4530-127, Facility Hazardous Air Pollutant Summary	**1**
	☑ Form 4530-128, Emission Unit Summary	**13**
	☑ Form 4530-129, Facility Emissions Summary	**1**
	☐ Form 4530-130, Current Emissions Requirements and Status of Unit	
	☐ Form 4530-131, Emission Unit Compliance Plan - Commitments and Schedule	
	☐ Form 4530-132, Current Emissions Requirements and Status of Facility	
	☐ Form 4530-133, Facility Requirement Compliance Plan Commitments and Schedule	

VI.SIGNATURE OF RESPONSIBLE OFFICIAL

A.STATEMENT OF COMPLETENESS

I have reviewed this application in its entirety and, based on information and belief formed after reasonable inquiry, I certify that the statements and information contained in this application are true, accurate and complete.

B.FOR RENEWALS ONLY

I have reviewed this application, the original operation permit application dated _____, and operation permit number _____ in their entirety and, based on information and belief formed after reasonable inquiry, I certify that the statements and information contained in this renewal application are true, accurate and complete.

C.CERTIFICATION OF FACILITY COMPLIANCE STATUS (check one box only)
THIS IS NOT A REQUIREMENT OF NON-PART 70 SOURCES.

☑ I certify that the facility described in this air pollution permit application is fully in compliance with all applicable requirements.

☐ I certify that the facility described in this air pollution permit application is fully in compliance with all applicable requirements, except for the following emissions unit(s):

_____ .
(list all non-complying units)

Printed or Typed Name	Title
Scott A. Patulski	**Vice President – Fossil Operations**
Signature: Scott A Patulski	Date Signed: 19 MARCH 2010

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FACILITY IDENTIFICATION
AIR POLLUTION CONTROL PERMIT APPLICATION
Form 4530-100 Rev. 12-99 Information attached? __ (y/n)

1. Facility name and mailing address	Name	**We Energies – Biomass-Fueled Cogeneration Facility**
	Street or Route	**231 W. Michigan**
	City, State, Zip Code	**Milwaukee, WI 53201**
2. Facility location	Street Address	**200 Grand Avenue**
	City, County	**Rothschild, Marathon County**
3. Parent corporation	Name	**We Energies**
	Street or Route	**231 W. Michigan**
	City, State, Zip Code	**Milwaukee, WI 53201**
	Country (if not U.S.)	
4. Responsible official	Name	**Scott A. Patulski**
	Title	**Vice President – Fossil Operations**
	Telephone	**(414) 221-5053**
5. Permit contact person	Name	**Terry Coughlin**
	Title	**Manager, Air Quality**
	Telephone	**(414) 221-2293**

6. SIC code: **4911**

7. Facility identification number: ***New***

8. Primary activity of the operating establishment: **Electric Power Generation**

9. Type of permit

☑ Construction permit

Anticipated start date for construction: **1 / 1 / 2011**

Anticipated start date for operation: **9 / 2013**

This application is requesting an expedited review (see instructions) ☑ Yes ☐ No

☐ Operation Permit OR ☐ Operation Permit Renewal

☐ Part 70 Source Application

☐ Non - Part 70 Source Application

☐ Synthetic Minor, Non - Part 70 Source Application

☐ Elective operation permit

10. If facility is located in an area designated as "nonattainment", indicate the pollutant for the nonattainment designation. **N/A**

11. List all air pollution permits and orders issued to this facility (if a renewal application, just list those issued since the issuance date of your existing operation permit). **No permits – this is a new facility.**

12. If Renewal Application: List all air pollution control permit applications you have submitted on which the Department has not yet taken action. (If no permit number has been assigned yet, indicate the date of the application) N/A

13. If Renewal Application: List all permit exemptions received from the Department since the issuance date of your existing operation permit. (Reference these by the date of the exemption letter or the exemption number if one was assigned.) N/A

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FACILITY PLOT PLAN
AIR POLLUTION CONTROL PERMIT APPLICATION
Form 4530-101 Rev. 12-99

Use of this form is required by the Department for any air pollution control permit application filed pursuant to ss. 285.61, 285.62 or 285.66, Wis Stats. Completion of this form is mandatory. The Department will not consider or act upon your application unless you complete and submit this form. It is not the Department's intention to use any personally identifiable information from this form for any other purpose.

In order for a comprehensive air quality analysis to be accomplished, a facility plot plan MUST be included with the permit application. If the application is for an initial operation permit, submit the elements under #2 below. If the application is for a renewal, answer #1 below first.

1. Have there been changes to the facility plot plan since the previous operation permit application was submitted?

☑ No. The plot plan submitted with the original application can be used for the construction/renewal. The applicant will supply air quality modeling.

☐ Yes. An up-to-date plot plan is attached.

2. If there have been changes to the facility plot plan since the last operation permit application submittal, RESUBMIT an up-to-date plot plan which must include the following or the permit application will be deemed incomplete:

FOR DEPARTMENT USE ONLY

COMPLETE	INCOMPLETE	NOT APPLICABLE	
☐			1. A building layout (blueprint, plan view) including all buildings occupied by or located on the site of the facility.
☐			2. The maximum height of each building (excluding stack height).
☐			3. The location and numerical designation of each stack. Please ensure these designations correspond to the appropriate stacks listed on the other permit forms in this application.
☐			4. The location of fenced property lines (if any).
☐			5. Identify direction "North" on all submittals.
☐			6. All drawings shall be to scale and shall have the scale graphically depicted.
☐			7. An additional regional map depicting the facility location in relation to the surrounding vicinity (roads or other features) shall be included.

Are there any outdoor storage piles on the facility site? ☑ Yes ☐ No

If so, what material does the pile(s) consist of?

N/A

Are there any dirt roads or unpaved parking lots on the facility site? ☐ Yes ☑ No

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SOURCE AND SITE DESCRIPTIONS
AIR POLLUTION CONTROL PERMIT APPLICATION
Form 4530-102 Rev. 12-99 Information attached? __(y/n)

Use of this form is required by the Department for any air pollution control permit application filed pursuant to ss. 285.61, 285.62 or 285.66, Wis Stats. Completion of this form is mandatory. The Department will not consider or act upon your application unless you complete and submit this form. It is not the Department's intention to use any personally identifiable information from this form for any other purpose.

1. Briefly describe the proposed project or existing Unit(s) to be permitted. Attached supplemental forms as needed.

Please refer to the attached permit application project description.

For Renewal Applications: **(not applicable)**

1. Were any new or modified emissions units installed/modified at the facility since the last operation permit issuance date?
   - ☐ No. Proceed to form 4530-102A.
   - ☐ Yes. Answer the following questions:

2. Briefly describe any new/modified emissions units installed at the facility since the last operation permit issuance date and include the following information. Attach supplemental forms as needed.

   a. List the Department issued construction and/or operation permit number as applicable (identifying which units were covered by which permit if multiple permits issued).

      i. If operation permit application forms were submitted for the new emission unit(s) covered by the construction permit mentioned above, reference the date of that application.

      ii. For Part 70 Sources Only: If no operation permit application forms were submitted for the new emissions unit(s) covered by the construction permit mentioned above, complete the appropriate forms 4530-118 through 4530-125.

   b. Include the Department issued construction permit exemption number, if one was assigned, or reference the date of the letter of the exemption.

2. Site Description

The facility is located in Rothschild, Wisconsin directly adjacent to the Domtar Paper Company, 200 Grand Avenue, Rothschild.

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SOURCE DESCRIPTION - SUPPLEMENTAL
AIR POLLUTION CONTROL PERMIT APPLICATION
Form 4530-102A Rev. 12-99 Information attached? _Y_ (y/n)

Use of this form is required by the Department for any air pollution control permit application filed pursuant to ss. 285.61, 285.62 or 285.66, Wis Stats. Completion of this form is mandatory. The Department will not consider or act upon your application unless you complete and submit this form. It is not the Department's intention to use any personally identifiable information from this form for any other purpose.

1. List all significant existing or proposed air pollution units, operations, and activities at the facility. A short narrative of the inventory of air pollution emissions unit (e.g., boiler, printing line, etc.) followed by equipment specifications will suffice. If the facility consists of several individual emission units, present this information in an outline format. (See instruction booklet for an example Unit description.)

Please refer to the permit application for details on each emissions unit.

Stack ID	Process ID	Description
S01	B01	Biomass Fuel-Fired Circulating Fluidized Bed Boiler B01
S02	B02	Natural Gas-Fired Package Boiler B02
S03	B03	Natural Gas-Fired Package Boiler B03
S121	P121	Biomass Fuels Unloading, Screening, Hogging, and Conveying Dust Collector
S122	F122	Self Unloading Truck Biomass Fuels Unloading
S123	F123	Biomass Fuels Storage and Reclaim
S124	P124	Boilerhouse Fuel Storage Silos
S125	F125	Biomass Fuels Delivery Truck Haul Roads
S131	P131	CFB Boiler Bed Material Silo
S132	P132	CFB Boiler Ash Silo
S133	F133	Boiler Ash Haul Roads
S141	P141	Cooling Tower
S151	P151	Emergency Diesel Engine Feed Water Pump

For Renewal Applications: **(not applicable)**

1. If there were any new or modified emissions units installed/modified at the facility since the last operation permit issuance date:

   a. If any of these new/modified units were exempt from construction permit requirements, but are significant emissions units and operation permit application(s) for the new unit(s) were submitted to the Department reference the date of those submittals.

   b. If any of the new/modified units are insignificant emissions units list them on form 4530-102B.

   c. If any of the new/modified emissions units do not fit any of the above categories, fill out the appropriate forms for each emissions unit as follows:

      i. For Part 70 Sources: Fill out the appropriate forms 4530-103 through 4530-133; OR

      ii. For Synthetic Minor Non Part-70 Sources and Non-Part 70 Sources: Fill out the appropriate forms 4530-103 through 4530-117 and 4530-126 through 4530-129.

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SOURCE DESCRIPTION - SUPPLEMENTAL
AIR POLLUTION CONTROL PERMIT APPLICATION
Form 4530-102B Rev. 12-99 Information attached? __ (y/n)

Use of this form is required by the Department for any air pollution control permit application filed pursuant to ss. 285.61, 285.62 or 285.66, Wis Stats. Completion of this form is mandatory. The Department will not consider or act upon your application unless you complete and submit this form. It is not the Department's intention to use any personally identifiable information from this form for any other purpose.

1. Mark all insignificant existing or proposed air pollution units, operations, and activities at the facility listed below. If not listed, provide a short narrative of the inventory of air pollution emissions unit (e.g., boiler, printing line, etc.) followed by equipment specifications. If the facility consists of several individual emission units, present this information in an outline format. **For Renewal Applications, identify those that are new since the last update to your application.** (See instruction booklet for an example Unit description.)

☑ Maintenance of Grounds, Equipment, and Buildings (lawn care, painting, etc.)

☑ Boiler, Turbine, and HVAC System Maintenance

☑ Pollution Control Equipment Maintenance

☑ Internal Combustion Engines Used for Warehousing and Material Transport

☑ Fire Control Equipment

☑ Janitorial Activities

☑ Office Activities

☑ Convenience Water Heating

☑ Convenience Space Heating (< 5 million BTU/hr Burning Gas, Liquid, or Wood)

☑ Fuel Oil Storage Tanks (< 10,000 gal.)

☐ Stockpiled Contaminated Soils

☑ Demineralization and Oxygen Scavenging of Water for Boilers

☑ Purging of Natural Gas Lines

☑ Sanitary Sewer and Plumbing Venting

☑ Diesel fuel oil storage tanks for the emergency diesel engine feed water pump

☐

☐

☐

☐

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STACK IDENTIFICATION
AIR POLLUTION CONTROL PERMIT APPLICATION
Form 4530-103 11-93 Information attached? Y (y/n)

1. Facility name:	2. Facility identification number:	3. Stack identification number:
We Energies – Biomass Fuels-Fired Cogeneration Facility	**New**	**S01**

4. Exhausting Unit(s), use Unit identification number from appropriate Form(s) 4530-104, 106, 107, 108 and/or 109

4530-104 **B01 .** 4530-106 4530-107 4530-108 4530-109

5. Identify this stack on the plot plan required on Form 4530-101 –

6. Indicate by checking:
☑ This stack has an actual exhaust point. ☐ This stack serves to identify fugitive emissions.

If this stack has an actual exhaust point, then provide the following stack parameters

7. Discharge height above ground level: **250** (feet)

8. Inside dimensions at outlet (check one and complete):

☑ Circular **10.0** (feet) ☐ rectangular ____ length (feet) ____ width (feet)

9. Exhaust flow rate:

Normal **300,000** (ACFM) Maximum **305,000** (ACFM)

10. Exhaust gas temperature (normal): **288** (F)

11. Exhaust gas moisture content: Normal **25** volume percent Maximum **25** volume percent

12. Exhaust gas discharge direction: ☑ Up ☐ Down ☐ Horizontal

13. Is this stack equipped with a rainhat or any obstruction to the free flow of the exhaust gases from the stack? ☐ Yes ☑ No

***** Complete the appropriate Air Permit Application Forms(s) 4530-104, 106, 107, 108 or 109 for each Unit ***** exhausting through this stack.

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BOILER OR FURNACE OPERATION
AIR POLLUTION CONTROL PERMIT APPLICATION
Form 4530-104 11-93 Information attached? _Y_ (y/n)

1. Facility name: **We Energies – Biomass Fuels-Fired Cogeneration Facility**	2. Facility identification number: **New**
3. Stack identification number: **S01**	4. Boiler/furnace number: **B01**

4a. Unit description:

The proposed boiler B01 will be a circulating fluidized bed (CFB) boiler designed to provide up to 550,000 pounds per hour of steam at 1,550 psig and 950 ^{o}F. The boiler will have a maximum design heat input capacity of 800 million Btu per hour. The primary boiler fuels will be wood, bark, wood waste, forest residues, and wastewater treatment plant sludge from the Domtar Paper Mill. The boiler will also be designed to fire natural gas for a startup fuel and for load stabilization and supplemental firing, with a maximum natural gas firing rate of less than 250 mmBtu per hour..

5. Indicate the boiler/furnace control technology status. ☐ Uncontrolled ☑ Controlled

If the boiler/furnace is controlled, enter the control device number(s) from the appropriate forms:

4530-110 C01A 4530-111 ____ 4530-112 ____ 4530-113 ____
4530-114 _____ 4530-115 ____ 4530-116 ____ 4530-117 C01B

6. Furnace type: **Circulating Fluidized Bed (CFB) Boiler**	7. Maximum continuous rating: **800 mmBtu/hr (heat input)**
8. Manufacturer: **metso power**	9. Model number: **n/a**
10. Date of construction or last modification: **NEW**	

11. Fuels and firing conditions:

	Primary fuel	Backup fuel #1 (Startup Fuel)	Backup fuel #2	Backup fuel #3
Fuel name	**Biomass Fuels**	**Natural Gas**	**n/a**	**n/a**
Higher heating value	**4,530 Btu/lb (as received basis)**	**1,050 Btu/scf**		
Maximum sulfur content (Wt.%)	**0.35%**	**0.00%**		
Maximum ash content (Wt.%)	**7%**	**0**		
Excess Combustion Air (%O_2)				
Moisture content (as fired) (%)	**50%**	**0%**		
Maximum hourly consumption	**86 ton/hour**	**22 MMCF**		
Actual yearly consumption	**n/a**	**n/a**		

***** For this emissions unit, identify the method of compliance demonstration by completing Form 4530-118, ***** DESCRIPTION OF METHODS USED FOR DETERMINING COMPLIANCE. Attach Form 4530-118 and its attachment(s) to this form. This is not a requirement of non-Part 70 sources.

***** Please complete the Air Pollution Control Permit Application Forms 4530-126 and 4530-128 for this Unit. *****

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CONTROL EQUIPMENT MISCELLANEOUS
AIR POLLUTION CONTROL PERMIT APPLICATION
Form 4530-110 11-93 Information attached? Y (y/n)

SEE INSTRUCTIONS ON REVERSE SIDE

1. Facility name: **We Energies – Biomass Fuels-Fired Cogeneration Facility**	2. Facility identification number: **New**
3. Stack identification number: **S01**	4. Unit identification number: **B01**
5. Control device number: **C01A**	

6. Manufacturer and model number: **Metso power - Selective Non-Catalytic Reduction (SNCR) System**

7. Date of installation: **New**

8. Describe in detail the device in use. Attach a diagram of the system. Attached? Please refer to the permit application Control technology review.

9. List the pollutants to be controlled by this equipment and the expected control efficiency for each pollutant on the table below.
☑ Documentation is attached?

Pollutant	Inlet pollutant concentration		Hood capture efficiency (%)	Outlet pollutant concentration		Efficiency (%)
	gr/acf	ppmv		gr/acf	ppmv	
Nitrogen oxides (NO_x)		**100**	**100%**		**66**	**33%**

10. Discuss how the collected material will be handled for reuse or disposal. **Not applicable – no collected material.**

11. Prepare a malfunction prevention and abatement plan (if required under s. NR 439.11) for this pollution control system. Please include the following:

a. Identification of the individuals(s), by title, responsible for inspecting, maintaining and repairing this device.
b. Operation variables such as temperature that will be monitored in order to detect a malfunction or breakthrough, the correct operating range of these variables, and a detailed description of monitoring or surveillance procedures that will be used to show compliance.
c. What type of monitoring equipment will be provided (temperature sensors, pressure sensors, CEMs).
d. An inspection schedule and items or conditions that will be inspected.
e. A listing of materials and spare parts that will be maintained in inventory.
f. Is this plan available for review?

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CONTROL EQUIPMENT-BAGHOUSE/FABRIC FILTERS
AIR POLLUTION CONTROL PERMIT APPLICATION
Form 4530-117 11-93 Information attached? Y (y/n)

SEE INSTRUCTIONS ON REVERSE SIDE

Section A

1. Facility name: **We Energies – Biomass Fuels-Fired Cogeneration Facility**	2. Facility identification number: **New**
3. Stack identification number: **S01**	4. Unit identification number: **B01**
5. Control device number: **C01B**	

6. Manufacturer and model number:

7. Date of installation: **New**

8. Describe in detail the control system. Attach a blueprint or diagram of the system. Attached?

Pulse Jet Fabric Filter Baghouse

9. List the pollutants to be controlled by this equipment and the expected control efficiency for each pollutant on the table below.
☐ Documentation is attached

Pollutant	Inlet pollutant concentration		Outlet pollutant concentration		Efficiency (%)
	gr/acf	ppmv	gr/acf	ppmv	
Particulate Matter	**7.5**		**0.011**		**99.85%**

10. Discuss how the collected material will be handled for reuse or disposal.

The ash will be conveyed pneumatically to an ash silo, Process P132. The ash will then be loaded into fully enclosed tanker trucks for shipment offsite.

11. Pressure drop across the filter (inches of H_2O):

12. Prepare a malfunction prevention and abatement plan (if required under s. NR 439.11) for this pollution control system. Please include the following:
    a. Identification of the individuals(s), by title, responsible for inspecting, maintaining and repairing this device.
    b. Bag cleaning techniques and frequency of cleaning or replacement schedule for filters.
    c. Operation variables that will be monitored in order to detect a malfunction or breakthrough, the correct operating range of these variables, and a detailed description of monitoring or surveillance procedures that will be used to show compliance.
    d. An inspection schedule and items or conditions that will be inspected.
    e. A listing of materials and spare parts that will be maintained in inventory.
    f. Is this plan available for review?

Section B

The following questions must be answered by sources installing new equipment or existing Units which cannot document control efficiency of this device by other means.

13. Filter medium or type of fabric material (if fabric, indicate whether felt or woven): **Felt**

14. Maximum inlet gas flow rate (ACFM):	15. Maximum inlet gas temperature (F):
16. Number of bags if applicable:	17. Dimensions of bags/filters:

18. Air to cloth ratio (acfm/ft^2):

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EMISSION UNIT HAZARDOUS AIR POLLUTANT SUMMARY
AIR POLLUTION CONTROL PERMIT APPLICATION
Form 4530-126 11-93

Information attached? Y (y/n)

SEE INSTRUCTIONS ON REVERSE SIDE

1. Facility name: **We Energies – Biomass Fuels-Fired Cogeneration Facility**

2. Facility identification number: **New**

3. Stack identification number: **S01**

4. Unit identification number: **B01**

5. Unit material description: **Biomass Fuels Combustion**

6. Complete the following summary of hazardous air emissions from this unit. Attach sample calculations and emission factor references. Attached?

Please refer to the permit application and the Case-By-Case Maximum Achievable Control Technology (MACT) analysis for detailed hazardous air pollutant emission calculations.

Pollutant CAS	Actual emissions		Maximum theoretical emissions		Potential to emit	
		Units		Units		
						TPY
						TPY
						TPY
						TPY
						TPY
						TPY
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						TPY

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EMISSION UNIT SUMMARY
AIR POLLUTION CONTROL PERMIT APPLICATION
Form 4530-128 11-93 Information attached? Y (y/n)

SEE INSTRUCTIONS ON REVERSE SIDE

1. Facility name: **We Energies – Biomass Fuels-Fired Cogeneration Facility**	2. Facility identification number: **New**
3. Stack identification number: **S01**	4. Unit identification number: **B01**

5. Complete the following emissions summary for the following pollutants. Attach sample calculations and emission factor references. Attached? Yes

Air pollutant	Actual			Maximum theoretical emissions			Potential to emit		Maximum allowable		
		U	TPY		U	TPY				U	TPY
Particulates								TPY			
Sulfur dioxide								TPY			
Organic compounds								TPY			
Carbon monoxide								TPY			
Lead								TPY			
Nitrogen oxides								TPY			
Total reduced sulfur								TPY			
Mercury								TPY			
Asbestos								TPY			
Beryllium								TPY			
Vinyl chloride								TPY			
								TPY			
								TPY			
								TPY			
								TPY			
								TPY			

Please refer to the permit application and the Control Technology Review (BACT) analysis for detailed emission calculations.

Units (U) should be entered as follows:

1 = lb/hr
2 = lb/mmBTU
3 = grains/dscf
4 = lb/ gallon
5 = ppmdv
6 = other (specify)
7 = other (specify)
8 = other (specify)

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STACK IDENTIFICATION
AIR POLLUTION CONTROL PERMIT APPLICATION
Form 4530-103 11-93 Information attached? Y (y/n)

1. Facility name:	2. Facility identification number:	3. Stack identification number:
We Energies – Biomass Fuels-Fired Cogeneration Facility	**New**	**S02 and S03 (identical stacks)**

4. Exhausting Unit(s), use Unit identification number from appropriate Form(s) 4530-104, 106, 107, 108 and/or 109

4530-104 **B02 and B03** 4530-106 4530-107 4530-108 4530-109

5. Identify this stack on the plot plan required on Form 4530-101 –

6. Indicate by checking:
☑ This stack has an actual exhaust point. ☐ This stack serves to identify fugitive emissions.

If this stack has an actual exhaust point, then provide the following stack parameters

7. Discharge height above ground level: **200** (feet)

8. Inside dimensions at outlet (check one and complete):

☑ Circular **6.6** (feet) ☐ rectangular ____ length (feet) ____ width (feet)

9. Exhaust flow rate:

Normal **67,300** (ACFM) Maximum **67,300** (ACFM)

10. Exhaust gas temperature (normal): **365** (F)

11. Exhaust gas moisture content: Normal **18** volume percent Maximum **20** volume percent

12. Exhaust gas discharge direction: ☑ Up ☐ Down ☐ Horizontal

13. Is this stack equipped with a rainhat or any obstruction to the free flow of the exhaust gases from the stack? ☐ Yes ☑ No

***** Complete the appropriate Air Permit Application Forms(s) 4530-104, 106, 107, 108 or 109 for each Unit ***** exhausting through this stack.

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BOILER OR FURNACE OPERATION
AIR POLLUTION CONTROL PERMIT APPLICATION
Form 4530-104 11-93 Information attached? _Y_ (y/n)

1. Facility name: **We Energies – Biomass Fuels-Fired Cogeneration Facility**	2. Facility identification number: **New**
3. Stack identification number: **S02 and S03**	4. Boiler/furnace number: **B02 and B03**

4a. Unit description:

The proposed boilers B02 and B03 will be identical package boilers designed to provide up to 125,000 pounds per hour of steam each. To deliver this steaming capacity, each boiler will have a maximum design heat input capacity of 175 million Btu per hour. The only boiler fuel will be natural gas. Each boiler will be equipped with ultra-low NO_x burners and flue gas recirculation to control emissions of CO, NO_x, PM, PM_{10}, $PM_{2.5}$, and VOCs.

5. Indicate the boiler/furnace control technology status. ☑ Uncontrolled ☐ Controlled

If the boiler/furnace is controlled, enter the control device number(s) from the appropriate forms:

4530-110 _____ 4530-111 ____ 4530-112 ____ 4530-113 ____
4530-114 _____ 4530-115 ____ 4530-116 ____ 4530-117 ____.

6. Furnace type: **Package Boiler**	7. Maximum continuous rating: **175 mmBtu/hr (heat input)**
8. Manufacturer:	9. Model number:
10. Date of construction or last modification: **NEW**	

11. Fuels and firing conditions:

	Primary fuel	Backup fuel #1 (Startup Fuel)	Backup fuel #2	Backup fuel #3
Fuel name	**Natural Gas**	**n/a**	**n/a**	**n/a**
Higher heating value	**1,050 Btu/scf**			
Maximum sulfur content (Wt.%)	**0.00%**			
Maximum ash content (Wt.%)	**0**			
Excess Combustion Air (%O_2)				
Moisture content (as fired) (%)	**0%**			
Maximum hourly consumption	**21 MMCF**			
Actual yearly consumption	**n/a**			

***** For this emissions unit, identify the method of compliance demonstration by completing Form 4530-118, ***** DESCRIPTION OF METHODS USED FOR DETERMINING COMPLIANCE. Attach Form 4530-118 and its attachment(s) to this form. This is not a requirement of non-Part 70 sources.

***** Please complete the Air Pollution Control Permit Application Forms 4530-126 and 4530-128 for this Unit. *****

State of Wisconsin
Department of Natural Resources

EMISSION UNIT HAZARDOUS AIR POLLUTANT SUMMARY
AIR POLLUTION CONTROL PERMIT APPLICATION

Form 4530-126 11-93

Information attached? Y (y/n)

SEE INSTRUCTIONS ON REVERSE SIDE

1. Facility name: **We Energies – Biomass Fuels-Fired Cogeneration Facility**
2. Facility identification number: **New**
3. Stack identification number: **S02 and S03**
4. Unit identification number: **B02 and B03**
5. Unit material description: **Biomass Fuels Combustion**
6. Complete the following summary of hazardous air emissions from this unit. Attach sample calculations and emission factor references. Attached?

Please refer to the permit application and the Case-By-Case Maximum Achievable Control Technology (MACT) analysis for detailed hazardous air pollutant emission calculations.

Pollutant CAS	Actual emissions		Maximum theoretical emissions		Potential to emit	
		Units		Units		
						TPY
						TPY
						TPY
						TPY
						TPY
						TPY
						TPY
						TPY
						TPY
						TPY
						TPY
						TPY
						TPY
						TPY
						TPY
						TPY
						TPY
						TPY
						TPY
						TPY
						TPY
						TPY
						TPY

State of Wisconsin
Department of Natural Resources

EMISSION UNIT SUMMARY
AIR POLLUTION CONTROL PERMIT APPLICATION
Form 4530-128 11-93 Information attached? Y (y/n)

SEE INSTRUCTIONS ON REVERSE SIDE

1. Facility name: **We Energies – Biomass Fuels-Fired Cogeneration Facility**	2. Facility identification number: **New**
3. Stack identification number: **S02 and S03**	4. Unit identification number: **B02 and B03**

5. Complete the following emissions summary for the following pollutants. Attach sample calculations and emission factor references. Attached? Yes

Air pollutant	Actual			Maximum theoretical emissions			Potential to emit		Maximum allowable		
		U	TPY		U	TPY				U	TPY
Particulates								TPY			
Sulfur dioxide								TPY			
Organic compounds								TPY			
Carbon monoxide								TPY			
Lead								TPY			
Nitrogen oxides								TPY			
Total reduced sulfur								TPY			
Mercury								TPY			
Asbestos								TPY			
Beryllium								TPY			
Vinyl chloride								TPY			
								TPY			
								TPY			
								TPY			
								TPY			
								TPY			

Please refer to the permit application and the Control Technology Review (BACT) analysis for detailed emission calculations.

Units (U) should be entered as follows:

1 = lb/hr
2 = lb/mmBTU
3 = grains/dscf
4 = lb/ gallon
5 = ppmdv
6 = other (specify)
7 = other (specify)
8 = other (specify)

State of Wisconsin
Department of Natural Resources

STACK IDENTIFICATION
AIR POLLUTION CONTROL PERMIT APPLICATION
Form 4530-103 11-93 Information attached? Y (y/n)

1. Facility name:	2. Facility identification number:	3. Stack identification number:
We Energies – Biomass Fuels-Fired Cogeneration Facility	**New**	**S121**

4. Exhausting Unit(s), use Unit identification number from appropriate Form(s) 4530-104, 106, 107, 108 and/or 109

4530-104 **P121 .** 4530-106 4530-107 4530-108 4530-109

5. Identify this stack on the plot plan required on Form 4530-101 –

6. Indicate by checking:
☑ This stack has an actual exhaust point. ☐ This stack serves to identify fugitive emissions.

If this stack has an actual exhaust point, then provide the following stack parameters

7. Discharge height above ground level: **100** (feet)

8. Inside dimensions at outlet (check one and complete):

☑ Circular **6.0** (feet) ☐ rectangular ____ length (feet) ____ width (feet)

9. Exhaust flow rate:

Normal **109,300** (ACFM) Maximum **109,300** (ACFM)

10. Exhaust gas temperature (normal): **Ambient** (F)

11. Exhaust gas moisture content: Normal **8** volume percent Maximum **12** volume percent

12. Exhaust gas discharge direction: ☑ Up ☐ Down ☐ Horizontal

13. Is this stack equipped with a rainhat or any obstruction to the free flow of the exhaust gases from the stack? ☐ Yes ☑ No

***** Complete the appropriate Air Permit Application Forms(s) 4530-104, 106, 107, 108 or 109 for each Unit ***** exhausting through this stack.

State of Wisconsin
Department of Natural Resources

MISCELLANEOUS PROCESSES
AIR POLLUTION CONTROL PERMIT APPLICATION
Form 4530-109 11-93 Information attached? Y (y/n)

SEE INSTRUCTIONS ON REVERSE SIDE

1. Facility name: **We Energies – Biomass Fuels-Fired Cogeneration Facility**	2. Facility identification number: **New**
3. Stack identification number: **S121**	4. Unit identification number: **P121**

4a. Unit description: **Biomass Fuels Unloading, Screening, Hogging, and Conveying Dust Collector**

5. Indicate the control technology status. ☐ Uncontrolled ☑ Controlled

If the process is controlled, enter the control device number(s) from the appropriate form(s):

4530-110 ____ 4530-111 ____ 4530-112 ____ 4530-113 ____

4530-114 ____ 4530-115 ____ 4530-116 ____ 4530-117 C121

6. Source Classification Code (SCC):

7. Date of construction or last modification: **New**

8. Normal operating schedule: **24** hrs./day **7** days/wk. **350** days/yr.

9. Describe this process (please attach a flow diagram of the process).	Attached?
This is a dust collector for the biomass fuels unloading screening hogging, and conveying operations. Please refer to the permit application.	**Yes**

10. List the types and amounts of raw materials used in this process:

Material	Storage/material handling process	Average usage	Units	Maximum usage	Units
Biomass Fuels	**Unloading**	**250**	**ton/hr**	**250**	**ton/hr**
Biomass Fuels	**Conveying**	**250**	**ton/hr**	**250**	**ton/hr**
Biomass Fuels	**Hogging**	**250**	**ton/hr**	**250**	**ton/hr**
Biomass Fuels	**Screening**	**250**	**ton/hr**	**250**	**ton/hr**
Other (specify)	**n/a**				

11. List the types and amounts of finished products:

Material	Storage/material handling process	Average amount produced	Units	Maximum amount produced	Units
None					

12. Process fuel usage:

Type of fuel	Maximum heat input to process million BTU/hr.	Average usage	Units	Maximum usage	Units
None					

13. Describe any fugitive emissions associated with this process, such as outdoor storage piles, unpaved roads, open conveyors, etc.: **Please refer to the permit application for a description of this process.**	Attached?

***** For this emissions unit, identify the method(s) of compliance demonstration by completing Form 4530-118, ***** DESCRIPTION OF METHODS USED FOR DETERMINING COMPLIANCE. Attach Form 4530-118 and its attachment(s) to this form. This is not a requirement of non-Part 70 sources.

***** Please complete the Air Pollution Control Permit Application Forms 4530-126 and 4530-128 for this Unit. *****

State of Wisconsin
Department of Natural Resources

CONTROL EQUIPMENT-BAGHOUSE/FABRIC FILTERS
AIR POLLUTION CONTROL PERMIT APPLICATION
Form 4530-117 11-93 Information attached? _Y_ (y/n)

SEE INSTRUCTIONS ON REVERSE SIDE

Section A

1. Facility name: **We Energies – Biomass Fuels-Fired Cogeneration Facility**	2. Facility identification number: **New**
3. Stack identification number: **S121**	4. Unit identification number: **P121**
5. Control device number: **C121**	

6. Manufacturer and model number:

7. Date of installation: **New**

8. Describe in detail the control system. Attach a blueprint or diagram of the system. Attached?

Pulse Jet Fabric Filter Baghouse

9. List the pollutants to be controlled by this equipment and the expected control efficiency for each pollutant on the table below.
☐ Documentation is attached

Pollutant	Inlet pollutant concentration		Outlet pollutant concentration		Efficiency (%)
	gr/acf	ppmv	gr/acf	ppmv	
Particulate Matter	**0.4**		**0.004**		**99%**

10. Discuss how the collected material will be handled for reuse or disposal.

The collected material will either be returned to the Biomass fuels conveying system, or it will be disposed of in a landfill.

11. Pressure drop across the filter (inches of H_2O):

12. Prepare a malfunction prevention and abatement plan (if required under s. NR 439.11) for this pollution control system. Please include the following:
    a. Identification of the individuals(s), by title, responsible for inspecting, maintaining and repairing this device.
    b. Bag cleaning techniques and frequency of cleaning or replacement schedule for filters.
    c. Operation variables that will be monitored in order to detect a malfunction or breakthrough, the correct operating range of these variables, and a detailed description of monitoring or surveillance procedures that will be used to show compliance.
    d. An inspection schedule and items or conditions that will be inspected.
    e. A listing of materials and spare parts that will be maintained in inventory.
    f. Is this plan available for review?

Section B

The following questions must be answered by sources installing new equipment or existing Units which cannot document control efficiency of this device by other means.

13. Filter medium or type of fabric material (if fabric, indicate whether felt or woven): **Felt**

14. Maximum inlet gas flow rate (ACFM):	15. Maximum inlet gas temperature (F):
16. Number of bags if applicable:	17. Dimensions of bags/filters:

18. Air to cloth ratio ($acfm/ft^2$):

State of Wisconsin
Department of Natural Resources

EMISSION UNIT SUMMARY
AIR POLLUTION CONTROL PERMIT APPLICATION
Form 4530-128 11-93 Information attached? Y (y/n)

SEE INSTRUCTIONS ON REVERSE SIDE

1. Facility name: **We Energies – Biomass Fuels-Fired Cogeneration Facility**	2. Facility identification number: **New**
3. Stack identification number: **S121**	4. Unit identification number: **P121**

5. Complete the following emissions summary for the following pollutants. Attach sample calculations and emission factor references. Attached? Yes

Air pollutant	Actual			Maximum theoretical emissions			Potential to emit		Maximum allowable		
		U	TPY		U	TPY				U	TPY
Particulates	**n/a**						**6.76**	TPY			
Sulfur dioxide								TPY			
Organic compounds								TPY			
Carbon monoxide								TPY			
Lead								TPY			
Nitrogen oxides								TPY			
Total reduced sulfur								TPY			
Mercury								TPY			
Asbestos								TPY			
Beryllium								TPY			
Vinyl chloride								TPY			
								TPY			
								TPY			
								TPY			
								TPY			
								TPY			

Units (U) should be entered as follows:

1 = lb/hr
2 = lb/mmBTU
3 = grains/dscf
4 = lb/ gallon
5 = ppmdv
6 = other (specify)
7 = other (specify)
8 = other (specify)

State of Wisconsin
Department of Natural Resources

STACK IDENTIFICATION
AIR POLLUTION CONTROL PERMIT APPLICATION
Form 4530-103 11-93 Information attached? _Y_ (y/n)

1. Facility name:	2. Facility identification number:	3. Stack identification number:
We Energies – Biomass Fuels-Fired Cogeneration Facility	**New**	**S122**

4. Exhausting Unit(s), use Unit identification number from appropriate Form(s) 4530-104, 106, 107, 108 and/or 109

4530-104 **F122 .** 4530-106 4530-107 4530-108 4530-109

5. Identify this stack on the plot plan required on Form 4530-101 –

6. Indicate by checking:
□ This stack has an actual exhaust point. ☑ This stack serves to identify fugitive emissions.

If this stack has an actual exhaust point, then provide the following stack parameters

7. Discharge height above ground level: ____ (feet)

8. Inside dimensions at outlet (check one and complete):

□ Circular____ (feet) □ rectangular ____ length (feet) ____ width (feet)

9. Exhaust flow rate:

Normal _____ (ACFM) Maximum _____ (ACFM)

10. Exhaust gas temperature (normal): _____ (F)

11. Exhaust gas moisture content:	Normal ____ volume percent	Maximum ____ volume percent	
12. Exhaust gas discharge direction:	□ Up	□ Down	□ Horizontal
13. Is this stack equipped with a rainhat or any obstruction to the free flow of the exhaust gases from the stack?		□ Yes	☑ No

***** Complete the appropriate Air Permit Application Forms(s) 4530-104, 106, 107, 108 or 109 for each Unit ***** exhausting through this stack.

State of Wisconsin
Department of Natural Resources

MISCELLANEOUS PROCESSES
AIR POLLUTION CONTROL PERMIT APPLICATION
Form 4530-109 11-93 Information attached? Y (y/n)

SEE INSTRUCTIONS ON REVERSE SIDE

1. Facility name: **We Energies – Biomass Fuels-Fired Cogeneration Facility**	2. Facility identification number: **New**
3. Stack identification number: **S122**	4. Unit identification number: **F122**

4a. Unit description: **Self Unloading Truck Biomass Fuels Unloading**

5. Indicate the control technology status. ☐ Uncontrolled ☑ Controlled

If the process is controlled, enter the control device number(s) from the appropriate form(s):

4530-110 ____ 4530-111 ____ 4530-112 ____ 4530-113 ____

4530-114 ____ 4530-115 ____ 4530-116 ____ 4530-117 ____.

6. Source Classification Code (SCC):

7. Date of construction or last modification: **New**

8. Normal operating schedule: **16** hrs./day **5** days/wk. **250** days/yr.

9. Describe this process (please attach a flow diagram of the process).	Attached?
This is self unloading semi trailer truck unloading drop operation. Please refer to the permit application.	**Yes**

10. List the types and amounts of raw materials used in this process:

Material	Storage/material handling process	Average usage	Units	Maximum usage	Units
Biomass Fuels	**Unloading**	**100**	**ton/hr**	**100**	**ton/hr**
Clean-up solvents	**n/a**				
Other (specify)	**n/a**				

11. List the types and amounts of finished products:

Material	Storage/material handling process	Average amount produced	Units	Maximum amount produced	Units
None					

12. Process fuel usage:

Type of fuel	Maximum heat input to process million BTU/hr.	Average usage	Units	Maximum usage	Units
None					

13. Describe any fugitive emissions associated with this process, such as outdoor storage piles, unpaved roads, open conveyors, etc.: **Please refer to the permit application for a description of this process.**	Attached?

***** For this emissions unit, identify the method(s) of compliance demonstration by completing Form 4530-118, ***** DESCRIPTION OF METHODS USED FOR DETERMINING COMPLIANCE. Attach Form 4530-118 and its attachment(s) to this form. This is not a requirement of non-Part 70 sources.

***** Please complete the Air Pollution Control Permit Application Forms 4530-126 and 4530-128 for this Unit. *****

State of Wisconsin
Department of Natural Resources

EMISSION UNIT SUMMARY
AIR POLLUTION CONTROL PERMIT APPLICATION
Form 4530-128 11-93 Information attached? Y (y/n)

SEE INSTRUCTIONS ON REVERSE SIDE

1. Facility name: **We Energies – Biomass Fuels-Fired Cogeneration Facility**	2. Facility identification number: **New**
3. Stack identification number: **S122**	4. Unit identification number: **F122**

5. Complete the following emissions summary for the following pollutants. Attach sample calculations and emission factor references. Attached? Yes

Air pollutant	Actual			Maximum theoretical emissions			Potential to emit		Maximum allowable		
		U	TPY		U	TPY				U	TPY
Particulates	**n/a**						**0.02**	TPY			
Sulfur dioxide								TPY			
Organic compounds								TPY			
Carbon monoxide								TPY			
Lead								TPY			
Nitrogen oxides								TPY			
Total reduced sulfur								TPY			
Mercury								TPY			
Asbestos								TPY			
Beryllium								TPY			
Vinyl chloride								TPY			
								TPY			
								TPY			
								TPY			
								TPY			
								TPY			

Units (U) should be entered as follows:

1 = lb/hr
2 = lb/mmBTU
3 = grains/dscf
4 = lb/ gallon
5 = ppmdv
6 = other (specify)
7 = other (specify)
8 = other (specify)

State of Wisconsin
Department of Natural Resources

STACK IDENTIFICATION
AIR POLLUTION CONTROL PERMIT APPLICATION
Form 4530-103 11-93 Information attached? _Y_ (y/n)

1. Facility name:	2. Facility identification number:	3. Stack identification number:
We Energies – Biomass Fuels-Fired Cogeneration Facility	**New**	**S123**

4. Exhausting Unit(s), use Unit identification number from appropriate Form(s) 4530-104, 106, 107, 108 and/or 109

4530-104 **F123 .** 4530-106 4530-107 4530-108 4530-109

5. Identify this stack on the plot plan required on Form 4530-101 –

6. Indicate by checking:
□ This stack has an actual exhaust point. ☑ This stack serves to identify fugitive emissions.

If this stack has an actual exhaust point, then provide the following stack parameters

7. Discharge height above ground level: ____ (feet)

8. Inside dimensions at outlet (check one and complete):

□ Circular____ (feet) □ rectangular ____ length (feet) ____ width (feet)

9. Exhaust flow rate:

Normal _____ (ACFM) Maximum _____ (ACFM)

10. Exhaust gas temperature (normal): _____ (F)

11.	Exhaust gas moisture content:	Normal ____ volume percent	Maximum ____ volume percent
12.	Exhaust gas discharge direction:	□ Up □ Down	□ Horizontal
13.	Is this stack equipped with a rainhat or any obstruction to the free flow of the exhaust gases from the stack?	□ Yes	☑ No

***** Complete the appropriate Air Permit Application Forms(s) 4530-104, 106, 107, 108 or 109 for each Unit ***** exhausting through this stack.

State of Wisconsin
Department of Natural Resources

MISCELLANEOUS PROCESSES
AIR POLLUTION CONTROL PERMIT APPLICATION
Form 4530-109 11-93 Information attached? Y (y/n)

SEE INSTRUCTIONS ON REVERSE SIDE

1. Facility name: **We Energies – Biomass Fuels-Fired Cogeneration Facility**	2. Facility identification number: **New**
3. Stack identification number: **S123**	4. Unit identification number: **F123**

4a. Unit description: **Biomass Fuels Storage and Reclaim**

5. Indicate the control technology status. ☐ Uncontrolled ☑ Controlled

If the process is controlled, enter the control device number(s) from the appropriate form(s):

4530-110 ____ 4530-111 ____ 4530-112 ____ 4530-113 ____

4530-114 ____ 4530-115 ____ 4530-116 ____ 4530-117 ____.

6. Source Classification Code (SCC):

7. Date of construction or last modification: **New**

8. Normal operating schedule: **24** hrs./day **7** days/wk. **350** days/yr.

9. Describe this process (please attach a flow diagram of the process).	Attached?
This is the Biomass fuels storage and reclaim processes. Please refer to the permit application.	**Yes**

10. List the types and amounts of raw materials used in this process:

Material	Storage/material handling process	Average usage	Units	Maximum usage	Units
Biomass Fuels	**Storage/Reclaim**	**250**	**ton/hr**	**250**	**ton/hr**
Clean-up solvents	**n/a**				
Other (specify)	**n/a**				

11. List the types and amounts of finished products:

Material	Storage/material handling process	Average amount produced	Units	Maximum amount produced	Units
None					

12. Process fuel usage:

Type of fuel	Maximum heat input to process million BTU/hr.	Average usage	Units	Maximum usage	Units
None					

13. Describe any fugitive emissions associated with this process, such as outdoor storage piles, unpaved roads, open conveyors, etc.: **Please refer to the permit application for a description of this process.**	Attached?

***** For this emissions unit, identify the method(s) of compliance demonstration by completing Form 4530-118, ***** DESCRIPTION OF METHODS USED FOR DETERMINING COMPLIANCE. Attach Form 4530-118 and its attachment(s) to this form. This is not a requirement of non-Part 70 sources.

***** Please complete the Air Pollution Control Permit Application Forms 4530-126 and 4530-128 for this Unit. *****

State of Wisconsin
Department of Natural Resources

EMISSION UNIT SUMMARY
AIR POLLUTION CONTROL PERMIT APPLICATION
Form 4530-128 11-93 Information attached? Y (y/n)

SEE INSTRUCTIONS ON REVERSE SIDE

1. Facility name: **We Energies – Biomass Fuels-Fired Cogeneration Facility**	2. Facility identification number: **New**
3. Stack identification number: **S123**	4. Unit identification number: **F123**

5. Complete the following emissions summary for the following pollutants. Attach sample calculations and emission factor references. Attached? Yes

Air pollutant	Actual			Maximum theoretical emissions			Potential to emit		Maximum allowable		
		U	TPY		U	TPY				U	TPY
Particulates	**n/a**						**0.0007**	TPY			
Sulfur dioxide								TPY			
Organic compounds								TPY			
Carbon monoxide								TPY			
Lead								TPY			
Nitrogen oxides								TPY			
Total reduced sulfur								TPY			
Mercury								TPY			
Asbestos								TPY			
Beryllium								TPY			
Vinyl chloride								TPY			
								TPY			
								TPY			
								TPY			
								TPY			
								TPY			

Units (U) should be entered as follows:

1 = lb/hr
2 = lb/mmBTU
3 = grains/dscf
4 = lb/ gallon
5 = ppmdv
6 = other (specify)
7 = other (specify)
8 = other (specify)

State of Wisconsin
Department of Natural Resources

STACK IDENTIFICATION
AIR POLLUTION CONTROL PERMIT APPLICATION
Form 4530-103 11-93 Information attached? Y (y/n)

1. Facility name:	2. Facility identification number:	3. Stack identification number:
We Energies – Biomass Fuels-Fired Cogeneration Facility	**New**	**S124**

4. Exhausting Unit(s), use Unit identification number from appropriate Form(s) 4530-104, 106, 107, 108 and/or 109

4530-104 **P124 .** 4530-106 4530-107 4530-108 4530-109

5. Identify this stack on the plot plan required on Form 4530-101 –

6. Indicate by checking:
☑ This stack has an actual exhaust point. ☐ This stack serves to identify fugitive emissions.

If this stack has an actual exhaust point, then provide the following stack parameters

7. Discharge height above ground level: **110** (feet)

8. Inside dimensions at outlet (check one and complete):

☑ Circular **1.0** (feet) ☐ rectangular ____ length (feet) ____ width (feet)

9. Exhaust flow rate:

Normal **600** (ACFM) Maximum **600** (ACFM)

10. Exhaust gas temperature (normal): **90** (F)

11. Exhaust gas moisture content: Normal **5** volume percent Maximum **10** volume percent

12. Exhaust gas discharge direction: ☑ Up ☐ Down ☐ Horizontal

13. Is this stack equipped with a rainhat or any obstruction to the free flow of the exhaust gases from the stack? ☐ Yes ☑ No

***** Complete the appropriate Air Permit Application Forms(s) 4530-104, 106, 107, 108 or 109 for each Unit ***** exhausting through this stack.

State of Wisconsin
Department of Natural Resources

MISCELLANEOUS PROCESSES
AIR POLLUTION CONTROL PERMIT APPLICATION
Form 4530-109 11-93 Information attached? Y (y/n)

SEE INSTRUCTIONS ON REVERSE SIDE

1. Facility name: **We Energies – Biomass Fuels-Fired Cogeneration Facility**	2. Facility identification number: **New**
3. Stack identification number: **S124**	4. Unit identification number: **P124**

4a. Unit description: **Boiler B01 Biomass Fuels Day Bin Vents**

5. Indicate the control technology status. ☐ Uncontrolled ☑ Controlled

If the process is controlled, enter the control device number(s) from the appropriate form(s):

4530-110 ____ 4530-111 ____ 4530-112 ____ 4530-113 ____

4530-114 ____ 4530-115 ____ 4530-116 ____ 4530-117 **C124**

6. Source Classification Code (SCC):

7. Date of construction or last modification: **New**

8. Normal operating schedule: **24** hrs./day **7** days/wk. **350** days/yr.

9. Describe this process (please attach a flow diagram of the process).	Attached?
This is bin vents for two (2) the biomass-fired boiler fuel day bins. Please refer to the permit application.	**Yes**

10. List the types and amounts of raw materials used in this process:

Material	Storage/material handling process	Average usage	Units	Maximum usage	Units
Biomass Fuels	**Storage**	**250**	**ton/hr**	**250**	**ton/hr**
Other (specify)	**n/a**				

11. List the types and amounts of finished products:

Material	Storage/material handling process	Average amount produced	Units	Maximum amount produced	Units
None					

12. Process fuel usage:

Type of fuel	Maximum heat input to process million BTU/hr.	Average usage	Units	Maximum usage	Units
None					

13. Describe any fugitive emissions associated with this process, such as outdoor storage piles, unpaved roads, open conveyors, etc.: **Please refer to the permit application for a description of this process.**	Attached?

***** For this emissions unit, identify the method(s) of compliance demonstration by completing Form 4530-118, ***** DESCRIPTION OF METHODS USED FOR DETERMINING COMPLIANCE. Attach Form 4530-118 and its attachment(s) to this form. This is not a requirement of non-Part 70 sources.

***** Please complete the Air Pollution Control Permit Application Forms 4530-126 and 4530-128 for this Unit. *****

State of Wisconsin
Department of Natural Resources

CONTROL EQUIPMENT-BAGHOUSE/FABRIC FILTERS
AIR POLLUTION CONTROL PERMIT APPLICATION
Form 4530-117 11-93 Information attached? _Y_ (y/n)

SEE INSTRUCTIONS ON REVERSE SIDE

Section A

1. Facility name: **We Energies – Biomass Fuels-Fired Cogeneration Facility**	2. Facility identification number: **New**
3. Stack identification number: **S124**	4. Unit identification number: **P124**
5. Control device number: **C124**	

6. Manufacturer and model number:

7. Date of installation: **New**

8. Describe in detail the control system. Attach a blueprint or diagram of the system. Attached?

Fabric Filter Baghouse or cartridge Vent Filter

9. List the pollutants to be controlled by this equipment and the expected control efficiency for each pollutant on the table below.
☐ Documentation is attached

Pollutant	Inlet pollutant concentration		Outlet pollutant concentration		Efficiency (%)
	gr/acf	ppmv	gr/acf	ppmv	
Particulate Matter	**0.4**		**0.004**		**99%**

10. Discuss how the collected material will be handled for reuse or disposal.

The collected material will either be returned to the Biomass fuels day bins, or it will be disposed of in a landfill.

11. Pressure drop across the filter (inches of H_2O):

12. Prepare a malfunction prevention and abatement plan (if required under s. NR 439.11) for this pollution control system. Please include the following:
    a. Identification of the individuals(s), by title, responsible for inspecting, maintaining and repairing this device.
    b. Bag cleaning techniques and frequency of cleaning or replacement schedule for filters.
    c. Operation variables that will be monitored in order to detect a malfunction or breakthrough, the correct operating range of these variables, and a detailed description of monitoring or surveillance procedures that will be used to show compliance.
    d. An inspection schedule and items or conditions that will be inspected.
    e. A listing of materials and spare parts that will be maintained in inventory.
    f. Is this plan available for review?

Section B

The following questions must be answered by sources installing new equipment or existing Units which cannot document control efficiency of this device by other means.

13. Filter medium or type of fabric material (if fabric, indicate whether felt or woven): **Felt**

14. Maximum inlet gas flow rate (ACFM):	15. Maximum inlet gas temperature (F):
16. Number of bags if applicable:	17. Dimensions of bags/filters:

18. Air to cloth ratio (acfm/ft^2):

State of Wisconsin
Department of Natural Resources

EMISSION UNIT SUMMARY
AIR POLLUTION CONTROL PERMIT APPLICATION
Form 4530-128 11-93 Information attached? __ (y/n)

SEE INSTRUCTIONS ON REVERSE SIDE

1. Facility name: **We Energies – Biomass Fuels-Fired Cogeneration Facility**	2. Facility identification number: **New**
3. Stack identification number: **S124**	4. Unit identification number: **P124**

5. Complete the following emissions summary for the following pollutants. Attach sample calculations and emission factor references. Attached? ___Yes

Air pollutant	Actual			Maximum theoretical emissions			Potential to emit		Maximum allowable		
		U	TPY		U	TPY				U	TPY
Particulates	**n/a**						**0.09**	TPY			
Sulfur dioxide								TPY			
Organic compounds								TPY			
Carbon monoxide								TPY			
Lead								TPY			
Nitrogen oxides								TPY			
Total reduced sulfur								TPY			
Mercury								TPY			
Asbestos								TPY			
Beryllium								TPY			
Vinyl chloride								TPY			
								TPY			
								TPY			
								TPY			
								TPY			
								TPY			

Units (U) should be entered as follows:

1 = lb/hr
2 = lb/mmBTU
3 = grains/dscf
4 = lb/ gallon
5 = ppmdv
6 = other (specify)
7 = other (specify)
8 = other (specify)

State of Wisconsin
Department of Natural Resources

STACK IDENTIFICATION
AIR POLLUTION CONTROL PERMIT APPLICATION
Form 4530-103 11-93 Information attached? _Y_ (y/n)

1. Facility name:	2. Facility identification number:	3. Stack identification number:
We Energies – Biomass Fuels-Fired Cogeneration Facility	**New**	**S125**

4. Exhausting Unit(s), use Unit identification number from appropriate Form(s) 4530-104, 106, 107, 108 and/or 109

4530-104 **F125 .** 4530-106 4530-107 4530-108 4530-109

5. Identify this stack on the plot plan required on Form 4530-101 –

6. Indicate by checking:
□ This stack has an actual exhaust point. ☑ This stack serves to identify fugitive emissions.

If this stack has an actual exhaust point, then provide the following stack parameters

7. Discharge height above ground level: ____ (feet)

8. Inside dimensions at outlet (check one and complete):

□ Circular____ (feet) □ rectangular ____ length (feet) ____ width (feet)

9. Exhaust flow rate:

Normal _____ (ACFM) Maximum _____ (ACFM)

10. Exhaust gas temperature (normal): _____ (F)

11. Exhaust gas moisture content:	Normal ____ volume percent	Maximum ____ volume percent	
12. Exhaust gas discharge direction:	□ Up	□ Down	□ Horizontal
13. Is this stack equipped with a rainhat or any obstruction to the free flow of the exhaust gases from the stack?		□ Yes	☑ No

***** Complete the appropriate Air Permit Application Forms(s) 4530-104, 106, 107, 108 or 109 for each Unit ***** exhausting through this stack.

State of Wisconsin
Department of Natural Resources

MISCELLANEOUS PROCESSES
AIR POLLUTION CONTROL PERMIT APPLICATION
Form 4530-109 11-93 Information attached? Y (y/n)

SEE INSTRUCTIONS ON REVERSE SIDE

1. Facility name: **We Energies – Biomass Fuels-Fired Cogeneration Facility**	2. Facility identification number: **New**
3. Stack identification number: **S125**	4. Unit identification number: **F125**

4a. Unit description: **Biomass Fuels Delivery Truck Haul Roads**

5. Indicate the control technology status. ☐ Uncontrolled ☑ Controlled

If the process is controlled, enter the control device number(s) from the appropriate form(s):

4530-110 ____ 4530-111 ____ 4530-112 ____ 4530-113 ____

4530-114 ____ 4530-115 ____ 4530-116 ____ 4530-117 ____.

6. Source Classification Code (SCC):

7. Date of construction or last modification: **New**

8. Normal operating schedule: **16** hrs./day **5** days/wk. **250** days/yr.

9. Describe this process (please attach a flow diagram of the process).	Attached?
This is the Biomass fuels truck delivery haul roads. Please refer to the permit application.	**Yes**

10. List the types and amounts of raw materials used in this process:

Material	Storage/material handling process	Average usage	Units	Maximum usage	Units
Biomass Fuels	**Delivery**	**250**	**ton/hr**	**250**	**ton/hr**
Clean-up solvents	**n/a**				
Other (specify)	**n/a**				

11. List the types and amounts of finished products:

Material	Storage/material handling process	Average amount produced	Units	Maximum amount produced	Units
None					

12. Process fuel usage:

Type of fuel	Maximum heat input to process million BTU/hr.	Average usage	Units	Maximum usage	Units
None					

13. Describe any fugitive emissions associated with this process, such as outdoor storage piles, unpaved roads, open conveyors, etc.: **Please refer to the permit application for a description of this process.**	Attached?

***** For this emissions unit, identify the method(s) of compliance demonstration by completing Form 4530-118, ***** DESCRIPTION OF METHODS USED FOR DETERMINING COMPLIANCE. Attach Form 4530-118 and its attachment(s) to this form. This is not a requirement of non-Part 70 sources.

***** Please complete the Air Pollution Control Permit Application Forms 4530-126 and 4530-128 for this Unit. *****

State of Wisconsin
Department of Natural Resources

EMISSION UNIT SUMMARY
AIR POLLUTION CONTROL PERMIT APPLICATION
Form 4530-128 11-93 Information attached? Y (y/n)

SEE INSTRUCTIONS ON REVERSE SIDE

1. Facility name: **We Energies – Biomass Fuels-Fired Cogeneration Facility**	2. Facility identification number: **New**
3. Stack identification number: **S125**	4. Unit identification number: **F125**

5. Complete the following emissions summary for the following pollutants. Attach sample calculations and emission factor references. Attached? Yes

Air pollutant	Actual			Maximum theoretical emissions			Potential to emit		Maximum allowable		
		U	TPY		U	TPY				U	TPY
Particulates	**n/a**						**1.4**	TPY			
Sulfur dioxide								TPY			
Organic compounds								TPY			
Carbon monoxide								TPY			
Lead								TPY			
Nitrogen oxides								TPY			
Total reduced sulfur								TPY			
Mercury								TPY			
Asbestos								TPY			
Beryllium								TPY			
Vinyl chloride								TPY			
								TPY			
								TPY			
								TPY			
								TPY			
								TPY			

Units (U) should be entered as follows:

1 = lb/hr
2 = lb/mmBTU
3 = grains/dscf
4 = lb/ gallon
5 = ppmdv
6 = other (specify)
7 = other (specify)
8 = other (specify)

State of Wisconsin
Department of Natural Resources

STACK IDENTIFICATION
AIR POLLUTION CONTROL PERMIT APPLICATION
Form 4530-103 11-93 Information attached? Y (y/n)

1. Facility name:	2. Facility identification number:	3. Stack identification number:
We Energies – Biomass Fuels-Fired Cogeneration Facility	**New**	**S131**

4. Exhausting Unit(s), use Unit identification number from appropriate Form(s) 4530-104, 106, 107, 108 and/or 109

4530-104 **P131 .** 4530-106 4530-107 4530-108 4530-109

5. Identify this stack on the plot plan required on Form 4530-101 –

6. Indicate by checking:
☑ This stack has an actual exhaust point. ☐ This stack serves to identify fugitive emissions.

If this stack has an actual exhaust point, then provide the following stack parameters

7. Discharge height above ground level: **110** (feet)

8. Inside dimensions at outlet (check one and complete):

☑ Circular **2.0** (feet) ☐ rectangular ____ length (feet) ____ width (feet)

9. Exhaust flow rate:

Normal **1,000** (ACFM) Maximum **1,000** (ACFM)

10. Exhaust gas temperature (normal): **Ambient** (F)

11. Exhaust gas moisture content: Normal **5** volume percent Maximum **10** volume percent

12. Exhaust gas discharge direction: ☑ Up ☐ Down ☐ Horizontal

13. Is this stack equipped with a rainhat or any obstruction to the free flow of the exhaust gases from the stack? ☐ Yes ☑ No

***** Complete the appropriate Air Permit Application Forms(s) 4530-104, 106, 107, 108 or 109 for each Unit ***** exhausting through this stack.

State of Wisconsin
Department of Natural Resources

MISCELLANEOUS PROCESSES
AIR POLLUTION CONTROL PERMIT APPLICATION
Form 4530-109 11-93 Information attached? Y (y/n)

SEE INSTRUCTIONS ON REVERSE SIDE

1. Facility name: **We Energies – Biomass Fuels-Fired Cogeneration Facility**	2. Facility identification number: **New**
3. Stack identification number: **S131**	4. Unit identification number: **P131**

4a. Unit description: **CFB Boiler Bed Material Silo Bin Vent**

5. Indicate the control technology status. ☐ Uncontrolled ☑ Controlled

If the process is controlled, enter the control device number(s) from the appropriate form(s):

4530-110 ____ 4530-111 ____ 4530-112 ____ 4530-113 ____

4530-114 ____ 4530-115 ____ 4530-116 ____ 4530-117 **C131**

6. Source Classification Code (SCC):

7. Date of construction or last modification: **New**

8. Normal operating schedule: **24** hrs./day **7** days/wk. **350** days/yr.

9. Describe this process (please attach a flow diagram of the process).	Attached?
This is the CFB Boiler bed material silo bin vents. Please refer to the permit application.	**Yes**

10. List the types and amounts of raw materials used in this process:

Material	Storage/material handling process	Average usage	Units	Maximum usage	Units
Bed Material	**Conveying/Storage**	**100**	**ton/hr**	**100**	**ton/hr**
Other (specify)	**n/a**				

11. List the types and amounts of finished products:

Material	Storage/material handling process	Average amount produced	Units	Maximum amount produced	Units
None					

12. Process fuel usage:

Type of fuel	Maximum heat input to process million BTU/hr.	Average usage	Units	Maximum usage	Units
None					

13. Describe any fugitive emissions associated with this process, such as outdoor storage piles, unpaved roads, open conveyors, etc.: **Please refer to the permit application for a description of this process.**	Attached?

***** For this emissions unit, identify the method(s) of compliance demonstration by completing Form 4530-118, ***** DESCRIPTION OF METHODS USED FOR DETERMINING COMPLIANCE. Attach Form 4530-118 and its attachment(s) to this form. This is not a requirement of non-Part 70 sources.

***** Please complete the Air Pollution Control Permit Application Forms 4530-126 and 4530-128 for this Unit. *****

State of Wisconsin
Department of Natural Resources

CONTROL EQUIPMENT-BAGHOUSE/FABRIC FILTERS
AIR POLLUTION CONTROL PERMIT APPLICATION
Form 4530-117 11-93 Information attached? _Y_ (y/n)

SEE INSTRUCTIONS ON REVERSE SIDE

Section A

1. Facility name: **We Energies – Biomass Fuels-Fired Cogeneration Facility**	2. Facility identification number: **New**
3. Stack identification number: **S131**	4. Unit identification number: **P131**
5. Control device number: **C131**	

6. Manufacturer and model number:

7. Date of installation: **New**

8. Describe in detail the control system. Attach a blueprint or diagram of the system. Attached?

Fabric Filter Baghouse or cartridge Vent Filter

9. List the pollutants to be controlled by this equipment and the expected control efficiency for each pollutant on the table below.
☐ Documentation is attached

Pollutant	Inlet pollutant concentration		Outlet pollutant concentration		Efficiency (%)
	gr/acf	ppmv	gr/acf	ppmv	
Particulate Matter	**0.4**		**0.004**		**99%**

10. Discuss how the collected material will be handled for reuse or disposal.

The collected material will either be returned to the bed material silo, or it will be disposed of in a landfill.

11. Pressure drop across the filter (inches of H_2O):

12. Prepare a malfunction prevention and abatement plan (if required under s. NR 439.11) for this pollution control system. Please include the following:
    a. Identification of the individuals(s), by title, responsible for inspecting, maintaining and repairing this device.
    b. Bag cleaning techniques and frequency of cleaning or replacement schedule for filters.
    c. Operation variables that will be monitored in order to detect a malfunction or breakthrough, the correct operating range of these variables, and a detailed description of monitoring or surveillance procedures that will be used to show compliance.
    d. An inspection schedule and items or conditions that will be inspected.
    e. A listing of materials and spare parts that will be maintained in inventory.
    f. Is this plan available for review?

Section B

The following questions must be answered by sources installing new equipment or existing Units which cannot document control efficiency of this device by other means.

13. Filter medium or type of fabric material (if fabric, indicate whether felt or woven): **Felt**

14. Maximum inlet gas flow rate (ACFM):	15. Maximum inlet gas temperature (F):
16. Number of bags if applicable:	17. Dimensions of bags/filters:

18. Air to cloth ratio (acfm/ft^2):

State of Wisconsin
Department of Natural Resources

EMISSION UNIT SUMMARY
AIR POLLUTION CONTROL PERMIT APPLICATION
Form 4530-128 11-93 Information attached? __ (y/n)

SEE INSTRUCTIONS ON REVERSE SIDE

1. Facility name: **We Energies – Biomass Fuels-Fired Cogeneration Facility**	2. Facility identification number: **New**
3. Stack identification number: **S131**	4. Unit identification number: **P131**

5. Complete the following emissions summary for the following pollutants. Attach sample calculations and emission factor references. Attached? ___Yes

Air pollutant	Actual			Maximum theoretical emissions			Potential to emit		Maximum allowable		
		U	TPY		U	TPY				U	TPY
Particulates	**n/a**						**0.15**	TPY			
Sulfur dioxide								TPY			
Organic compounds								TPY			
Carbon monoxide								TPY			
Lead								TPY			
Nitrogen oxides								TPY			
Total reduced sulfur								TPY			
Mercury								TPY			
Asbestos								TPY			
Beryllium								TPY			
Vinyl chloride								TPY			
								TPY			
								TPY			
								TPY			
								TPY			
								TPY			

Units (U) should be entered as follows:

1 = lb/hr
2 = lb/mmBTU
3 = grains/dscf
4 = lb/ gallon
5 = ppmdv
6 = other (specify)
7 = other (specify)
8 = other (specify)

State of Wisconsin
Department of Natural Resources

STACK IDENTIFICATION
AIR POLLUTION CONTROL PERMIT APPLICATION
Form 4530-103 11-93 Information attached? Y (y/n)

1. Facility name:	2. Facility identification number:	3. Stack identification number:
We Energies – Biomass Fuels-Fired Cogeneration Facility	**New**	**S132**

4. Exhausting Unit(s), use Unit identification number from appropriate Form(s) 4530-104, 106, 107, 108 and/or 109

4530-104 **P132 .** 4530-106 4530-107 4530-108 4530-109

5. Identify this stack on the plot plan required on Form 4530-101 –

6. Indicate by checking:
☑ This stack has an actual exhaust point. ☐ This stack serves to identify fugitive emissions.

If this stack has an actual exhaust point, then provide the following stack parameters

7. Discharge height above ground level: **75** (feet)

8. Inside dimensions at outlet (check one and complete):

☑ Circular **2.0** (feet) ☐ rectangular ____ length (feet) ____ width (feet)

9. Exhaust flow rate:

Normal **1,000** (ACFM) Maximum **1,000** (ACFM)

10. Exhaust gas temperature (normal): **Ambient** (F)

11. Exhaust gas moisture content: Normal **5** volume percent Maximum **10** volume percent

12. Exhaust gas discharge direction: ☑ Up ☐ Down ☐ Horizontal

13. Is this stack equipped with a rainhat or any obstruction to the free flow of the exhaust gases from the stack? ☐ Yes ☑ No

***** Complete the appropriate Air Permit Application Forms(s) 4530-104, 106, 107, 108 or 109 for each Unit ***** exhausting through this stack.

State of Wisconsin
Department of Natural Resources

MISCELLANEOUS PROCESSES
AIR POLLUTION CONTROL PERMIT APPLICATION
Form 4530-109 11-93 Information attached? Y (y/n)

SEE INSTRUCTIONS ON REVERSE SIDE

1. Facility name: **We Energies – Biomass Fuels-Fired Cogeneration Facility**	2. Facility identification number: **New**
3. Stack identification number: **S132**	4. Unit identification number: **P132**

4a. Unit description: **CFB Boiler Ash Silo**

5. Indicate the control technology status. ☐ Uncontrolled ☑ Controlled

If the process is controlled, enter the control device number(s) from the appropriate form(s):

4530-110 ____ 4530-111 ____ 4530-112 ____ 4530-113 ____

4530-114 ____ 4530-115 ____ 4530-116 ____ 4530-117 **C132**

6. Source Classification Code (SCC):

7. Date of construction or last modification: **New**

8. Normal operating schedule: **24** hrs./day **7** days/wk. **350** days/yr.

9. Describe this process (please attach a flow diagram of the process).	Attached?
This is the CFB boiler ash silo bin vents. Please refer to the permit application.	**Yes**

10. List the types and amounts of raw materials used in this process:

Material	Storage/material handling process	Average usage	Units	Maximum usage	Units
Biomass Fuels Ash	**Conveying/Storage**	**50**	**ton/hr**	**50**	**ton/hr**
Other (specify)	**n/a**				

11. List the types and amounts of finished products:

Material	Storage/material handling process	Average amount produced	Units	Maximum amount produced	Units
None					

12. Process fuel usage:

Type of fuel	Maximum heat input to process million BTU/hr.	Average usage	Units	Maximum usage	Units
None					

13. Describe any fugitive emissions associated with this process, such as outdoor storage piles, unpaved roads, open conveyors, etc.: **Please refer to the permit application for a description of this process.**	Attached?

***** For this emissions unit, identify the method(s) of compliance demonstration by completing Form 4530-118, ***** DESCRIPTION OF METHODS USED FOR DETERMINING COMPLIANCE. Attach Form 4530-118 and its attachment(s) to this form. This is not a requirement of non-Part 70 sources.

***** Please complete the Air Pollution Control Permit Application Forms 4530-126 and 4530-128 for this Unit. *****

State of Wisconsin
Department of Natural Resources

CONTROL EQUIPMENT-BAGHOUSE/FABRIC FILTERS
AIR POLLUTION CONTROL PERMIT APPLICATION
Form 4530-117 11-93 Information attached? _Y_ (y/n)

SEE INSTRUCTIONS ON REVERSE SIDE

Section A

1. Facility name: **We Energies – Biomass Fuels-Fired Cogeneration Facility**	2. Facility identification number: **New**
3. Stack identification number: **S132**	4. Unit identification number: **P132**
5. Control device number: **C132**	

6. Manufacturer and model number:

7. Date of installation: **New**

8. Describe in detail the control system. Attach a blueprint or diagram of the system. Attached?

Fabric Filter Baghouse or cartridge Vent Filter

9. List the pollutants to be controlled by this equipment and the expected control efficiency for each pollutant on the table below.
☐ Documentation is attached

Pollutant	Inlet pollutant concentration		Outlet pollutant concentration		Efficiency (%)
	gr/acf	ppmv	gr/acf	ppmv	
Particulate Matter	**0.4**		**0.004**		**99%**

10. Discuss how the collected material will be handled for reuse or disposal.

The collected material will either be returned to the ash silo, or it will be disposed of in a landfill.

11. Pressure drop across the filter (inches of H_2O):

12. Prepare a malfunction prevention and abatement plan (if required under s. NR 439.11) for this pollution control system. Please include the following:
    a. Identification of the individuals(s), by title, responsible for inspecting, maintaining and repairing this device.
    b. Bag cleaning techniques and frequency of cleaning or replacement schedule for filters.
    c. Operation variables that will be monitored in order to detect a malfunction or breakthrough, the correct operating range of these variables, and a detailed description of monitoring or surveillance procedures that will be used to show compliance.
    d. An inspection schedule and items or conditions that will be inspected.
    e. A listing of materials and spare parts that will be maintained in inventory.
    f. Is this plan available for review?

Section B

The following questions must be answered by sources installing new equipment or existing Units which cannot document control efficiency of this device by other means.

13. Filter medium or type of fabric material (if fabric, indicate whether felt or woven): **Felt**

14. Maximum inlet gas flow rate (ACFM):	15. Maximum inlet gas temperature (F):
16. Number of bags if applicable:	17. Dimensions of bags/filters:

18. Air to cloth ratio (acfm/ft^2):

State of Wisconsin
Department of Natural Resources

EMISSION UNIT SUMMARY
AIR POLLUTION CONTROL PERMIT APPLICATION
Form 4530-128 11-93 Information attached? __ (y/n)

SEE INSTRUCTIONS ON REVERSE SIDE

1. Facility name: **We Energies – Biomass Fuels-Fired Cogeneration Facility**	2. Facility identification number: **New**
3. Stack identification number: **S132**	4. Unit identification number: **P132**

5. Complete the following emissions summary for the following pollutants. Attach sample calculations and emission factor references. Attached? ___Yes

Air pollutant	Actual			Maximum theoretical emissions			Potential to emit		Maximum allowable		
		U	TPY		U	TPY				U	TPY
Particulates	**n/a**						**0.15**	TPY			
Sulfur dioxide								TPY			
Organic compounds								TPY			
Carbon monoxide								TPY			
Lead								TPY			
Nitrogen oxides								TPY			
Total reduced sulfur								TPY			
Mercury								TPY			
Asbestos								TPY			
Beryllium								TPY			
Vinyl chloride								TPY			
								TPY			
								TPY			
								TPY			
								TPY			
								TPY			

Units (U) should be entered as follows:

1 = lb/hr
2 = lb/mmBTU
3 = grains/dscf
4 = lb/ gallon
5 = ppmdv
6 = other (specify)
7 = other (specify)
8 = other (specify)

State of Wisconsin
Department of Natural Resources

STACK IDENTIFICATION
AIR POLLUTION CONTROL PERMIT APPLICATION
Form 4530-103 11-93 Information attached? _Y_ (y/n)

1. Facility name:	2. Facility identification number:	3. Stack identification number:
We Energies – Biomass Fuels-Fired Cogeneration Facility	**New**	**S133**

4. Exhausting Unit(s), use Unit identification number from appropriate Form(s) 4530-104, 106, 107, 108 and/or 109

4530-104 **F133 .** 4530-106 4530-107 4530-108 4530-109

5. Identify this stack on the plot plan required on Form 4530-101 –

6. Indicate by checking:
□ This stack has an actual exhaust point. ☑ This stack serves to identify fugitive emissions.

If this stack has an actual exhaust point, then provide the following stack parameters

7. Discharge height above ground level: ____ (feet)

8. Inside dimensions at outlet (check one and complete):

□ Circular____ (feet) □ rectangular ____ length (feet) ____ width (feet)

9. Exhaust flow rate:

Normal _____ (ACFM) Maximum _____ (ACFM)

10. Exhaust gas temperature (normal): _____ (F)

11. Exhaust gas moisture content:	Normal ____ volume percent	Maximum ____ volume percent	
12. Exhaust gas discharge direction:	□ Up	□ Down	□ Horizontal
13. Is this stack equipped with a rainhat or any obstruction to the free flow of the exhaust gases from the stack?		□ Yes	☑ No

***** Complete the appropriate Air Permit Application Forms(s) 4530-104, 106, 107, 108 or 109 for each Unit ***** exhausting through this stack.

State of Wisconsin
Department of Natural Resources

MISCELLANEOUS PROCESSES
AIR POLLUTION CONTROL PERMIT APPLICATION
Form 4530-109 11-93 Information attached? Y (y/n)

SEE INSTRUCTIONS ON REVERSE SIDE

1. Facility name: **We Energies – Biomass Fuels-Fired Cogeneration Facility**	2. Facility identification number: **New**
3. Stack identification number: **S133**	4. Unit identification number: **F133**

4a. Unit description: **Boiler Ash Truck Haul Roads**

5. Indicate the control technology status. ☐ Uncontrolled ☑ Controlled

If the process is controlled, enter the control device number(s) from the appropriate form(s):

4530-110 ____ 4530-111 ____ 4530-112 ____ 4530-113 ____

4530-114 ____ 4530-115 ____ 4530-116 ____ 4530-117 ____.

6. Source Classification Code (SCC):

7. Date of construction or last modification: **New**

8. Normal operating schedule: **16** hrs./day **5** days/wk. **250** days/yr.

9. Describe this process (please attach a flow diagram of the process).	Attached?
This is CFB boiler ash truck haul roads. Please refer to the permit application.	**Yes**

10. List the types and amounts of raw materials used in this process:

Material	Storage/material handling process	Average usage	Units	Maximum usage	Units
CFB Boiler Ash	**Hauling**	**50**	**ton/hr**	**50**	**ton/hr**
Clean-up solvents	**n/a**				
Other (specify)	**n/a**				

11. List the types and amounts of finished products:

Material	Storage/material handling process	Average amount produced	Units	Maximum amount produced	Units
None					

12. Process fuel usage:

Type of fuel	Maximum heat input to process million BTU/hr.	Average usage	Units	Maximum usage	Units
None					

13. Describe any fugitive emissions associated with this process, such as outdoor storage piles, unpaved roads, open conveyors, etc.: **Please refer to the permit application for a description of this process.**	Attached?

***** For this emissions unit, identify the method(s) of compliance demonstration by completing Form 4530-118, ***** DESCRIPTION OF METHODS USED FOR DETERMINING COMPLIANCE. Attach Form 4530-118 and its attachment(s) to this form. This is not a requirement of non-Part 70 sources.

***** Please complete the Air Pollution Control Permit Application Forms 4530-126 and 4530-128 for this Unit. *****

State of Wisconsin
Department of Natural Resources

EMISSION UNIT SUMMARY
AIR POLLUTION CONTROL PERMIT APPLICATION
Form 4530-128 11-93 Information attached? Y (y/n)

SEE INSTRUCTIONS ON REVERSE SIDE

1. Facility name: **We Energies – Biomass Fuels-Fired Cogeneration Facility**	2. Facility identification number: **New**
3. Stack identification number: **S133**	4. Unit identification number: **F133**

5. Complete the following emissions summary for the following pollutants. Attach sample calculations and emission factor references. Attached? Yes

Air pollutant	Actual			Maximum theoretical emissions			Potential to emit		Maximum allowable		
		U	TPY		U	TPY				U	TPY
Particulates	**n/a**						**0.05**	TPY			
Sulfur dioxide								TPY			
Organic compounds								TPY			
Carbon monoxide								TPY			
Lead								TPY			
Nitrogen oxides								TPY			
Total reduced sulfur								TPY			
Mercury								TPY			
Asbestos								TPY			
Beryllium								TPY			
Vinyl chloride								TPY			
								TPY			
								TPY			
								TPY			
								TPY			
								TPY			

Units (U) should be entered as follows:

1 = lb/hr
2 = lb/mmBTU
3 = grains/dscf
4 = lb/ gallon
5 = ppmdv
6 = other (specify)
7 = other (specify)
8 = other (specify)

State of Wisconsin
Department of Natural Resources

STACK IDENTIFICATION
AIR POLLUTION CONTROL PERMIT APPLICATION
Form 4530-103 11-93 Information attached? Y (y/n)

1. Facility name:	2. Facility identification number:	3. Stack identification number:
We Energies – Biomass Fuels-Fired Cogeneration Facility	**New**	**S141**

4. Exhausting Unit(s), use Unit identification number from appropriate Form(s) 4530-104, 106, 107, 108 and/or 109

4530-104 **P141 .** 4530-106 4530-107 4530-108 4530-109

5. Identify this stack on the plot plan required on Form 4530-101 –

6. Indicate by checking:
☑ This stack has an actual exhaust point. □ This stack serves to identify fugitive emissions.

If this stack has an actual exhaust point, then provide the following stack parameters

7. Discharge height above ground level: **70** (feet)

8. Inside dimensions at outlet (check one and complete):

☑ Circular **25** (feet) □ rectangular ____ length (feet) ____ width (feet)

This is the exit for the proposed new cooling tower. This cooling tower will have 6 cells.

9. Exhaust flow rate:

Normal **736,000** (ACFM) Maximum **736,000** (ACFM)

10. Exhaust gas temperature (normal): **50** (F)

11. Exhaust gas moisture content: Normal **10** volume percent Maximum **15** volume percent

12. Exhaust gas discharge direction: ☑ Up □ Down □ Horizontal

13. Is this stack equipped with a rainhat or any obstruction to the free flow of the exhaust gases from the stack? □ Yes ☑ No

***** Complete the appropriate Air Permit Application Forms(s) 4530-104, 106, 107, 108 or 109 for each Unit ***** exhausting through this stack.

State of Wisconsin
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MISCELLANEOUS PROCESSES
AIR POLLUTION CONTROL PERMIT APPLICATION
Form 4530-109 11-93 Information attached? Y (y/n)

SEE INSTRUCTIONS ON REVERSE SIDE

1. Facility name: **We Energies – Biomass Fuels-Fired Cogeneration Facility**	2. Facility identification number: **New**
3. Stack identification number: **S141**	4. Unit identification number: **P141**

4a. Unit description: **Mechanical Draft Cooling Tower**

5. Indicate the control technology status. ☐ Uncontrolled ☑ Controlled

If the process is controlled, enter the control device number(s) from the appropriate form(s):

4530-110 ____ 4530-111 ____ 4530-112 ____ 4530-113 ____

4530-114 ____ 4530-115 ____ 4530-116 ____ 4530-117 ____.

6. Source Classification Code (SCC):

7. Date of construction or last modification: **New**

8. Normal operating schedule: **24** hrs./day **7** days/wk. **350** days/yr.

9. Describe this process (please attach a flow diagram of the process).	Attached?
Mechanical Draft Cooling Tower. Please refer to the permit application.	**Yes**

10. List the types and amounts of raw materials used in this process:

Material	Storage/material handling process	Average usage	Units	Maximum usage	Units
Circulating Water		**22,000**	**gal/min**	**22,000**	**gal/min**
Clean-up solvents	**n/a**				
Other (specify)	**n/a**				

11. List the types and amounts of finished products:

Material	Storage/material handling process	Average amount produced	Units	Maximum amount produced	Units
None					

12. Process fuel usage:

Type of fuel	Maximum heat input to process million BTU/hr.	Average usage	Units	Maximum usage	Units
None					

13. Describe any fugitive emissions associated with this process, such as outdoor storage piles, unpaved roads, open conveyors, etc.: **Please refer to the permit application for a description of this process.**	Attached?

***** For this emissions unit, identify the method(s) of compliance demonstration by completing Form 4530-118, ***** DESCRIPTION OF METHODS USED FOR DETERMINING COMPLIANCE. Attach Form 4530-118 and its attachment(s) to this form. This is not a requirement of non-Part 70 sources.

***** Please complete the Air Pollution Control Permit Application Forms 4530-126 and 4530-128 for this Unit. *****

State of Wisconsin
Department of Natural Resources

EMISSION UNIT SUMMARY
AIR POLLUTION CONTROL PERMIT APPLICATION
Form 4530-128 11-93 Information attached? Y (y/n)

SEE INSTRUCTIONS ON REVERSE SIDE

1. Facility name: **We Energies – Biomass Fuels-Fired Cogeneration Facility**	2. Facility identification number: **New**
3. Stack identification number: **S141**	4. Unit identification number: **P141**

5. Complete the following emissions summary for the following pollutants. Attach sample calculations and emission factor references. Attached? Yes

Air pollutant	Actual			Maximum theoretical emissions			Potential to emit		Maximum allowable		
		U	TPY		U	TPY				U	TPY
Particulates	**n/a**						**0.39**	TPY			
Sulfur dioxide								TPY			
Organic compounds								TPY			
Carbon monoxide								TPY			
Lead								TPY			
Nitrogen oxides								TPY			
Total reduced sulfur								TPY			
Mercury								TPY			
Asbestos								TPY			
Beryllium								TPY			
Vinyl chloride								TPY			
								TPY			
								TPY			
								TPY			
								TPY			
								TPY			

Units (U) should be entered as follows:

1 = lb/hr
2 = lb/mmBTU
3 = grains/dscf
4 = lb/ gallon
5 = ppmdv
6 = other (specify)
7 = other (specify)
8 = other (specify)

State of Wisconsin
Department of Natural Resources

STACK IDENTIFICATION
AIR POLLUTION CONTROL PERMIT APPLICATION
Form 4530-103 11-93 Information attached? Y (y/n)

1. Facility name:	2. Facility identification number:	3. Stack identification number:
We Energies – Biomass Fuels-Fired Cogeneration Facility	**New**	**S151**

4. Exhausting Unit(s), use Unit identification number from appropriate Form(s) 4530-104, 106, 107, 108 and/or 109

4530-104 **P151 .** 4530-106 4530-107 4530-108 4530-109

5. Identify this stack on the plot plan required on Form 4530-101 –

6. Indicate by checking:
☑ This stack has an actual exhaust point. □ This stack serves to identify fugitive emissions.

If this stack has an actual exhaust point, then provide the following stack parameters

7. Discharge height above ground level: **195** (feet)

8. Inside dimensions at outlet (check one and complete):

☑ Circular **0.7** (feet) □ rectangular ____ length (feet) ____ width (feet)

9. Exhaust flow rate:

Normal **3,000** (ACFM) Maximum **3,000** (ACFM)

10. Exhaust gas temperature (normal): **800** (F)

11. Exhaust gas moisture content: Normal **10** volume percent Maximum **15** volume percent

12. Exhaust gas discharge direction: ☑ Up □ Down □ Horizontal

13. Is this stack equipped with a rainhat or any obstruction to the free flow of the exhaust gases from the stack? □ Yes ☑ No

***** Complete the appropriate Air Permit Application Forms(s) 4530-104, 106, 107, 108 or 109 for each Unit ***** exhausting through this stack.

State of Wisconsin
Department of Natural Resources

MISCELLANEOUS PROCESSES
AIR POLLUTION CONTROL PERMIT APPLICATION
Form 4530-109 11-93 Information attached? Y (y/n)

SEE INSTRUCTIONS ON REVERSE SIDE

1. Facility name: **We Energies – Biomass Fuels-Fired Cogeneration Facility**	2. Facility identification number: **New**
3. Stack identification number: **S151**	4. Unit identification number: **P151**

4a. Unit description: **Emergency Diesel Engine Feed Water Pump**

5. Indicate the control technology status. ☐ Uncontrolled ☑ Controlled

If the process is controlled, enter the control device number(s) from the appropriate form(s):

4530-110 ____ 4530-111 ____ 4530-112 ____ 4530-113 ____

4530-114 ____ 4530-115 ____ 4530-116 ____ 4530-117 ____.

6. Source Classification Code (SCC):

7. Date of construction or last modification: **New**

8. Normal operating schedule: **1** hrs./day **1** days/wk. **12** days/yr. ***(Normal operation is for testing only.)***

9. Describe this process (please attach a flow diagram of the process).	Attached?
400 hp Diesel Engine Driven Emergency Feed Water Pump. Please refer to the permit application.	**Yes**

10. List the types and amounts of raw materials used in this process:

Material	Storage/material handling process	Average usage	Units	Maximum usage	Units
Demineralized Water	**Pumping**	**200**	**gal/min**	**200**	**gal/min**
Clean-up solvents	**n/a**				
Other (specify)	**n/a**				

11. List the types and amounts of finished products:

Material	Storage/material handling process	Average amount produced	Units	Maximum amount produced	Units

12. Process fuel usage:

Type of fuel	Maximum heat input to process million BTU/hr.	Average usage	Units	Maximum usage	Units
Diesel Fuel	**3.4**	**24**	**gal/hr**	**24**	**gal/hr**

13. Describe any fugitive emissions associated with this process, such as outdoor storage piles, unpaved roads, open conveyors, etc.: **Please refer to the permit application for a description of this process.**	Attached?

***** For this emissions unit, identify the method(s) of compliance demonstration by completing Form 4530-118, ***** DESCRIPTION OF METHODS USED FOR DETERMINING COMPLIANCE. Attach Form 4530-118 and its attachment(s) to this form. This is not a requirement of non-Part 70 sources.

***** Please complete the Air Pollution Control Permit Application Forms 4530-126 and 4530-128 for this Unit. *****

State of Wisconsin
Department of Natural Resources

EMISSION UNIT SUMMARY
AIR POLLUTION CONTROL PERMIT APPLICATION
Form 4530-128 11-93 Information attached? Y (y/n)

SEE INSTRUCTIONS ON REVERSE SIDE

1. Facility name: **We Energies – Biomass Fuels-Fired Cogeneration Facility**	2. Facility identification number: **New**
3. Stack identification number: **S151**	4. Unit identification number: **P151**

5. Complete the following emissions summary for the following pollutants. Attach sample calculations and emission factor references. Attached? Yes

Air pollutant	Actual			Maximum theoretical emissions			Potential to emit		Maximum allowable		
		U	TPY		U	TPY				U	TPY
Particulates								TPY			
Sulfur dioxide								TPY			
Organic compounds								TPY			
Carbon monoxide								TPY			
Lead								TPY			
Nitrogen oxides								TPY			
Total reduced sulfur								TPY			
Mercury								TPY			
Asbestos								TPY			
Beryllium								TPY			
Vinyl chloride								TPY			
								TPY			
								TPY			
								TPY			
								TPY			
								TPY			

Please refer to the permit application and balance of plant control technology review for detailed air pollutant emission calculations.

Units (U) should be entered as follows:

1 = lb/hr
2 = lb/mmBTU
3 = grains/dscf
4 = lb/ gallon
5 = ppmdv
6 = other (specify)
7 = other (specify)
8 = other (specify)

State of Wisconsin
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FACILITY HAZARDOUS AIR POLLUTANT SUMMARY
AIR POLLUTION CONTROL PERMIT APPLICATION
Form 4530-127   11-93

Information attached? Y (y/n)

SEE INSTRUCTIONS ON REVERSE SIDE

1. Facility name: **We Energies – Biomass Fuels-Fired Cogeneration Facility**	2. Facility identification number: **New**

3. Complete the following emissions summary for all hazardous air emissions at this facility (as defined in ch. NR 445, Wis Adm. Code, and sec. 112, 1990 Clean Air Act Amendments):

Please refer to the permit application and the Case-By-Case Maximum Achievable Control Technology (MACT) analysis for detailed hazardous air pollutant emission calculations.

Pollutant CAS	Actual emissions		Maximum theoretical emissions		Potential to emit	
		Units		Units		
						TPY
						TPY
						TPY
						TPY
						TPY
						TPY
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FACILITY EMISSIONS SUMMARY
AIR POLLUTION CONTROL PERMIT APPLICATION
Form 4530-129 11-93 Information attached? Y (y/n)

1. Facility name: **We Energies – Biomass Fuels-Fired Cogeneration Facility**	2. Facility identification number: **New**

3. Complete the following emissions summary for the listed emissions at this facility.

Air pollutant	Actual	Maximum theoretical emissions	Potential to emit	Maximum allowable
	TPY	TPY	TPY	TPY
Carbon Monoxide	**n/a**		**766**	
Nitrogen Oxides	**n/a**		**372**	
Particulate Matter (PM/PM_{10})	**n/a**		**131**	
Particulate Matter ($PM_{2.5}$)	**n/a**		**97**	
Sulfur Dioxide	**n/a**		**316**	
Volatile Organic Cmpds	**n/a**		**66**	
Lead	**n/a**		**0.11**	
Mercury	**n/a**		**0.010**	
Fluorides (as HF)	**n/a**		**4.2**	
Sulfuric Acid Mist	**n/a**		**3.2**	
Hydrogen Chloride (HCl)	**n/a**		**63.1**	