



# ECMPS Client Tool

Version 1.0 2017 Q2

## Monitoring Plan Printout Report

July 14, 2017 12:32 PM

**Facility Name:** Gainesville Renewable Energy Center

### Facility Details

Facility ID (ORISPL): 57241  
 Monitoring Plan Location IDs: BFB1  
 State: FL  
 County: Alachua  
 Latitude: 29.7675  
 Longitude: -82.3964

### Reporting Frequency

Monitoring Plan Location IDs	Reporting Frequency	Begin Quarter	End Quarter
BFB1	Q - Quarterly	2013 QTR 4	

### Monitoring Location Attributes

Unit/Stack/Pipe Identifier	Duct Indicator	Ground Elevation	Stack Height	Cross Area Exit	Cross Area Flow	Material Code	Shape Code	Begin Date	End Date
BFB1		187	230	112	112	OTHER	ROUND	08/16/2013	

### Unit Operation Information

Unit Identifier	Non-Load Based Ind	Commence Commercial Operation Date	Commence Operation Date	Boiler/Turbine Type			Max Heat Input		
				Code	Begin Date	End Date	Value (mmBtu)	Begin Date	End Date
BFB1	0	08/16/2013	08/16/2013	BFB	08/16/2013		1358.0	08/16/2013	09/30/2014
		08/16/2013	08/16/2013	BFB	08/16/2013		1573.0	10/01/2014	

**Unit Type Codes:** BFB - Bubbling fluidized bed boiler

### Unit Program Information

Unit Identifier	Program Code	Unit Class	Unit Monitor Certification Begin Date	Unit Monitor Certification Deadline
BFB1	ARP	P2	08/16/2013	02/12/2014
	CAIRNOX	A	08/16/2013	02/12/2014
	CAIROS	A	08/16/2013	02/12/2014
	CAIRSO2	A	08/16/2013	02/12/2014
	CSNOXOS	A	05/01/2015	05/01/2015

**Facility Name:** Gainesville Renewable Energy Center

**Monitoring Plan Printout Report**

**Facility ID (ORISPL):** 57241

July 14, 2017 12:32 PM

**Unit Fuel**

Unit Identifier	Fuel Type	Fuel Indicator	Demonstration Method for GCV	Demonstration Method for Daily Sulfur	Ozone Season Indicator	Begin Date	End Date
BFB1	PNG	I				08/16/2013	
	W	P				08/16/2013	

**Fuel Type Codes:**

W - Wood  
 PNG - Pipeline Natural Gas

**Fuel Indicator Codes:**

P - Primary  
 I - Ignition (Startup)

**Unit Controls**

Unit Identifier	Parameter	Control Equipment	Original Ind	Seasonal Ind	Installation Date	Optimization Date	Retirement Date
BFB1	PART	B	Y				
	SO2	DSI	Y				
	NOX	SCR	Y				

**Control Equipment Descriptions:**

SCR - Selective Catalytic Reduction  
 DSI - Dry Sorbent Injection  
 B - Baghouse

Facility Name: **Gainesville Renewable Energy Center**

Facility ID (ORISPL): **57241**

**Monitoring Plan Printout Report**

July 14, 2017 12:32 PM

**Monitoring Method**

Unit/Stack/Pipe Identifier	Parameter	Methodology	Substitute Data Approach	Bypass Approach Code	Begin Date/Hour	End Date/Hour
BFB1	CO2	CEM	SPTS		11/18/2013 16	
	H2O	MDF			11/18/2013 16	
	HI	CEM	SPTS		11/18/2013 16	
	NOX	CEM	SPTS		11/18/2013 16	12/31/2016 23
	NOXR	CEM	SPTS		11/18/2013 16	
	OP	COM			11/18/2013 16	
	SO2	CEM	SPTS		11/18/2013 16	

**Parameter Codes:**  
 SO2 - SO2 Hourly Mass Rate (lb/hr)  
 OP - Opacity  
 NOXR - NOx Emission Rate (lb/mmBtu)  
 NOX - NOx Hourly Mass Rate (lb/hr)  
 HI - Heat Input Rate (mmBtu/hr)  
 H2O - Moisture Percentage (pct)  
 CO2 - CO2 Hourly Mass Rate (ton/hr)

**Methodology Codes:**  
 MDF - Moisture Default  
 COM - Continuous Opacity or Particulate Matter Monitor  
 CEM - Continuous Emission Monitor

**Substitute Data Codes:**  
 SPTS - Standard Part 75 for Missing Data

**Monitoring System / Analytical Components**

Unit/Stack /Pipe Identifier	System					Component									
	ID	Type	Des	Begin Date/Hour	End Date/Hour	ID	Type	SAM	BAS	Manufacturer	Model or Version	Serial Number	Begin Date/Hour	End Date/Hour	Hg Converter Indicator
BFB1	100	SO2	P	11/18/2013 16		101	SO2	EXT	D	CAI	CAI-600	Z01006	11/18/2013 16		
						900	DAHS			TRACE ENVIRONMENTAL	DAS2000		11/18/2013 16	09/30/2014 23	
						901	PRB			M&C	FSS-H 2	740-01F3008A	11/18/2013 16		
						902	DAHS			VIM TECHNOLOGIES	CEMLINK6		10/01/2014 00		
	101	FLOW	P	11/18/2013 16		104	FLOW	DP	W	TRACE	TRACE 500	11131-1	11/18/2013 16		

Facility Name: Gainesville Renewable Energy Center

Monitoring Plan Printout Report

Facility ID (ORISPL): 57241

July 14, 2017 12:32 PM

Unit/Stack /Pipe Identifier	System					Component									
	ID	Type	Des	Begin Date/Hour	End Date/Hour	ID	Type	SAM	BAS	Manufacturer	Model or Version	Serial Number	Begin Date/Hour	End Date/Hour	Hg Converter Indicator
BFB1	101	FLOW	P	11/18/2013 16		900	DAHS			TRACE ENVIRONMENTAL	DAS2000		11/18/2013 16	09/30/2014 23	
						902	DAHS			VIM TECHNOLOGIES	CEMLINK6		10/01/2014 00		
	102	NOXC	P	11/18/2013 16	12/31/2016 23	102	NOX	EXT	D	CAI	CAI-600	Y08012	11/18/2013 16	12/31/2016 23	
						900	DAHS			TRACE ENVIRONMENTAL	DAS2000		11/18/2013 16	09/30/2014 23	
						901	PRB			M&C	FSS-H 2	740-01F3008A	11/18/2013 16	12/31/2016 23	
						902	DAHS			VIM TECHNOLOGIES	CEMLINK6		10/01/2014 00	12/31/2016 23	
	103	O2	P	11/18/2013 16		103	O2	EXT	D	CAI	CAI 600	Z01007-M	11/18/2013 16		
						900	DAHS			TRACE ENVIRONMENTAL	DAS2000		11/18/2013 16	09/30/2014 23	
						901	PRB			M&C	FSS-H 2	740-01F3008A	11/18/2013 16		
						902	DAHS			VIM TECHNOLOGIES	CEMLINK6		10/01/2014 00		
	104	CO2	P	11/18/2013 16		103	O2	EXT	D	CAI	CAI 600	Z01007-M	11/18/2013 16		
						900	DAHS			TRACE ENVIRONMENTAL	DAS2000		11/18/2013 16	09/30/2014 23	
						901	PRB			M&C	FSS-H 2	740-01F3008A	11/18/2013 16		
						902	DAHS			VIM TECHNOLOGIES	CEMLINK6		10/01/2014 00		
	106	NOX	P	11/18/2013 16		102	NOX	EXT	D	CAI	CAI-600	Y08012	11/18/2013 16		
						103	O2	EXT	D	CAI	CAI 600	Z01007-M	11/18/2013 16		
						900	DAHS			TRACE ENVIRONMENTAL	DAS2000		11/18/2013 16	09/30/2014 23	
						901	PRB			M&C	FSS-H 2	740-01F3008A	11/18/2013 16		
						902	DAHS			VIM TECHNOLOGIES	CEMLINK6		10/01/2014 00		

Facility Name: **Gainesville Renewable Energy Center**

**Monitoring Plan Printout Report**

Facility ID (ORISPL): **57241**

July 14, 2017 12:32 PM

Unit/Stack /Pipe Identifier	System					Component									
	ID	Type	Des	Begin Date/Hour	End Date/Hour	ID	Type	SAM	BAS	Manufacturer	Model or Version	Serial Number	Begin Date/Hour	End Date/Hour	Hg Converter Indicator
BFB1	108	OP	P	11/18/2013 16		120	OP	IS		DURAG	DURAG 290	1220055	11/18/2013 16		
						900	DAHS			TRACE ENVIRONMENTAL	DAS2000		11/18/2013 16	09/30/2014 23	
						902	DAHS			VIM TECHNOLOGIES	CEMLINK6		10/01/2014 00		

- System Types Descriptions:** SO2 - SO2 Concentration  
 FLOW - Stack Flow  
 NOXC - NOx Concentration  
 O2 - O2 Concentration  
 CO2 - CO2 Concentration  
 NOX - NOx Emission Rate  
 OP - Opacity
- System Designations Descriptions:** P - Primary
- Sample Acquisition Method (SAM):** IS - In Situ  
 EXT - Dry Extractive  
 DP - Differential Pressure
- Component Types Descriptions:** SO2 - SO2 Concentration  
 DAHS - Data Acquisition and Handling System  
 PRB - Probe  
 FLOW - Stack Flow Analyzer  
 NOX - NOx Concentration  
 O2 - O2 Concentration  
 OP - Opacity Monitor

**Analyzer Range Data**

Unit/Stack/Pipe Identifier	Component Type	Component ID	Range Code	Dual Range Indicator	Begin Date/Hour	End Date/Hour
BFB1	NOX	102	High Range		11/18/2013 16	
	O2	103	High Range		11/18/2013 16	
	SO2	101	High Range		11/18/2013 16	

- Component Types Descriptions:** NOX - NOx Concentration  
 O2 - O2 Concentration  
 SO2 - SO2 Concentration

Facility Name: **Gainesville Renewable Energy Center**

**Monitoring Plan Printout Report**

Facility ID (ORISPL): **57241**

July 14, 2017 12:32 PM

**Emissions Formulas**

Unit/Stack/Pipe Identifier	Parameter	Formula ID	Formula Code	Formula	Begin Date/Hour	End Date/Hour
BFB1	HI	111	F-18		11/18/2013 16	
	NOXR	112	F-5		11/18/2013 16	
	CO2C	113	F-14A		11/18/2013 16	
	CO2	114	F-2		11/18/2013 16	
	SO2	116	F-2		11/18/2013 16	
	NOX	117	F-26B		11/18/2013 16	12/31/2016 23

**Parameter Codes Descriptions:**

- HI - Heat Input Rate (mmBtu/hr)
- NOXR - NOx Emission Rate (lb/mmBtu)
- CO2C - CO2 Concentration (pct)
- CO2 - CO2 Hourly Mass Rate (ton/hr)
- SO2 - SO2 Hourly Mass Rate (lb/hr)
- NOX - NOx Hourly Mass Rate (lb/hr)

**Formula Codes Descriptions:**

- F-5 - NOXR/SO2R (from NOX or SO2 dry, O2 dry, Fd)
- F-26B - NOX (hourly from dry NOXC, flow, H2O)
- F-2 - SO2/CO2 (from SO2 or CO2 dry, flow, H2O)
- F-18 - HI (from dry O2, flow, H2O, Fd)
- F-14A - CO2C (from dry O2, Fd, Fc)

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**Monitoring Plan Printout Report**

Facility ID (ORISPL): **57241**

July 14, 2017 12:32 PM

**Span Values**

Unit/Stack /Pipe Identifier	Comp Type	Scale	Method	MPC/ MPF	MEC	Span Value	Full-Scale Range	Units of Measure	Scale Transition Point	Def. High Range Value	Flow Full Range (SCFH)	Flow Span Value (SCFH)	Begin Date/Hour	End Date/Hour
BFB1	FLOW		F	24274993		500.000	500.000	KSCFM			30000000	30000000	11/18/2013 16	
	NOX	H	ME	88.5	41.3	120.000	120.000	PPM					11/18/2013 16	
	O2	H				25.000	25.000	PCT					11/18/2013 16	
	SO2	H	F	25.0	16.3	40.000	40.000	PPM					11/18/2013 16	

**Component Types Descriptions:** FLOW - Stack Flow Analyzer  
 NOX - NOx Concentration  
 O2 - O2 Concentration  
 SO2 - SO2 Concentration

**Span Method Codes Descriptions:** ME - Manufacturer's Estimate for NOX MPC  
 F - Formula

**Units of Measure Descriptions:** PPM - Parts per Million  
 PCT - Percentage  
 KSCFM - Thousand Standard Cubic Feet of Stack Flow / Minute

**Unit/Stack/Pipe Load or Operating Level Information**

Unit/Stack/Pipe Identifier	Maximum Hourly Load	Units of Measure	Upper Bound of Range of Operation	Lower Bound of Range of Operation	Designated Normal Op. Level	Second Most Frequently Used Op. Level	Second Normal Indicator	Load Analysis Date	Begin Date/Hour	End Date/Hour
BFB1	116	MW	116	81	High	Mid	Yes	08/15/2013	08/16/2013 16	09/30/2014 23
BFB1	116	MW	116	81	Low	High	Yes	10/01/2014	10/01/2014 00	12/31/2016 23
BFB1	116	MW	116	81	Low	Mid	Yes	03/02/2017	01/01/2017 00	

**Units of Measure Descriptions:** MW - Megawatt

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**Monitoring Plan Printout Report**

July 14, 2017 12:32 PM

**Monitoring Defaults**

Unit/Stack/Pipe Identifier	Parameter	Value	Units of Measure	Purpose Code	Fuel Type	Operating Condition	Source of Value	Begin Date/Hour	End Date/Hour
BFB1	CO2X	17.0000	PCT	MD	NFS	A	DATA	11/18/2013 16	
	H2O	16.3000	PCT	PM	PNG	A	APP	11/18/2013 16	09/30/2014 23
	H2O	16.3000	PCT	PM	W	A	APP	11/18/2013 16	09/30/2014 23
	H2O	16.3000	PCT	PM	NFS	A	APP	10/01/2014 00	
	NORX	0.2960	LBMMBTU	MD	NFS	A	DATA	11/18/2013 16	
	O2N	3.0000	PCT	MD	NFS	A	DATA	11/18/2013 16	
	O2X	14.0000	PCT	DC	NFS	A	DEF	11/18/2013 16	

- Parameter Codes Descriptions:**  
 O2X - Maximum O2 Concentration (pct)  
 O2N - Minimum O2 Concentration (pct)  
 NORX - Maximum NOx Emission Rate (lb/mmBtu)  
 H2O - Moisture Percentage (pct)  
 CO2X - CO2 Maximum Concentration (pct)
- Units of Measure Descriptions:**  
 PCT - Percentage  
 LBMMBTU - Pounds / mmBtu
- Purpose Codes Descriptions:**  
 PM - Primary Measurement Methodology  
 MD - Missing Data (or Unmonitored Bypass Stack or Emergency Fuel) Default  
 DC - Diluent Cap
- Fuel Type Codes Descriptions:**  
 W - Wood  
 PNG - Pipeline Natural Gas  
 NFS - Non-Fuel Specific
- Operating Conditions Descriptions:**  
 A - Any Hour
- Source Codes Descriptions:**  
 DEF - Default Value from Part 75  
 DATA - Historical or Other Relevant Data  
 APP - Approved from Petition

**Qualifications**

Unit/Stack/Pipe Identifier	Qualification Type	Begin Date	End Date
BFB1	LOWSULF	08/16/2013	

**Qualification Types Descriptions:** LOWSULF - RATA Exemption for Using Only Very Low Sulfur Fuel