

GAINESVILLE RENEWABLE ENERGY CENTER

Operated by **NAES**



April 2015 MONTHLY PERFORMANCE REPORT

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1. SUMMARY

The plant had three brief forced outages in April, caused by a loose connection inside an instrument, which was repaired. After the third of these, GRU placed the plant on standby until the scheduled outage began April 25. The remainder of the month was spent in the outage. There was one safety event, in which a contractor employee suffered a bruised hand.

Operations:

The unit operated for 561.72 hours in the month of April. GREC experienced three Forced Outages, was placed on Reserve Shutdown, and began a Planned Outage this month.

A Siemens Controls Engineer was brought on site to help evaluate the turbine controls communications issue that caused the forced outages. Valmet Automation provided two contracted service visits. Outage planning and execution performed. GADS Quarterly reporting completed.

2. MONTHLY PERFORMANCE DATA

2015																	
PLANT SUMMARY																	
Monthly Performance Data	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec	QTR 1	QTR 2	QTR 3	QTR 4	YTD
Operations																	
Gross Generation (MWh)	49,418	55,357	60,383	32,781	0	0	0	0	0	0	0	0	165,158	32,781	0	0	197,939
Net Generation (MWh)	42,953	48,167	54,434	28,374	0	0	0	0	0	0	0	0	145,554	28,374	0	0	173,928
Solid Fuel Flow (ft3)	REDACTED																
Solid fuel Flow (Tons)	REDACTED																
Natural Gas Usage MMBTU	1,655	0	0	0	0	0	0	0	0	0	0	0	1,655	0	0	0	1,655
Avg Burn rate (Tons/nMWH)	REDACTED																
Operating hours	592	672	744	562	0	0	0	0	0	0	0	0	2,008	562	0	0	2,570
Number of trips	5	0	0	3	0	0	0	0	0	0	0	0	5	3	0	0	8
Safety																	
Lost Time Accidents	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Lost Time Incident Rate	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Recordables	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Recordable Incident Rate	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
First Aid Incidents	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Near Miss Incidents	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Maintenance: WO Summary																	
Start Backlog	130	133	171	158	0	0	0	0	0	0	0	0	434	158	0	0	592
End Backlog	73	90	112	114	0	0	0	0	0	0	0	0	275	114	0	0	389
New Wos/Comp Rec WO's	170	247	186	139	0	0	0	0	0	0	0	0	603	139	0	0	742
Total Completed W.O.s	227	290	245	183	0	0	0	0	0	0	0	0	762	183	0	0	945
Received WO's	234	331	241	191	0	0	0	0	0	0	0	0	806	191	0	0	997

3. PRODUCTION STATISTICS

2015																	
Production Statistics																	
Monthly Performance Data	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec	QTR 1	QTR 2	QTR 3	QTR 4	YTD
Other																	
Ammonia Received (Gallons)	13,008	13,016	6,469	6,475	0	0	0	0	0	0	0	0	32,493	6,475	0	0	38,968
Ammonia Consumed	11,058	12,866	6,169	6,775	0	0	0	0	0	0	0	0	30,093	6,775	0	0	36,868
Sodium Bicarbonate Received (Tons)	24	0	24	23	0	0	0	0	0	0	0	0	48	23	0	0	71
Sodium Bicarbonate Consumed	20	25	17	17	0	0	0	0	0	0	0	0	63	17	0	0	80
Bottom Ash Generated (Tons)	230	259	462	181	0	0	0	0	0	0	0	0	1,131	181	0	0	1,312
Fly Ash Generated (Tons)	981	1,043	1,102	958	0	0	0	0	0	0	0	0	3,126	958	0	0	4,084
Filter Cake (Tons)	78	73	102	47	0	0	0	0	0	0	0	0	300	47	0	0	348
Diesel Fuel																	
Diesel Fuel Received	4,410	4,006	5,087	3,488	0	0	0	0	0	0	0	0	13,503	3,488	0	0	16,991
Diesel Fuel Burned	4,410	4,006	5,087	3,488	0	0	0	0	0	0	0	0	13,503	3,488	0	0	16,991
- Heavy Equipment	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
- Boiler	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Total	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Diesel Fuel Ending Inventory	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Water																	
Process Water Usage	10,479,714	10,113,783	12,700,990	8,701,923	0	0	0	0	0	0	0	0	33,294,487	8,701,923	0	0	41,996,410
Reclaim Water Usage	13,106,824	15,488,745	18,109,532	9,403,562	0	0	0	0	0	0	0	0	46,705,101	9,403,562	0	0	56,108,663

4. SAFETY

NAES Staff

	Month	Hours	First Aid	Recordable	Rec. Rate	LTA	LTA Rate	Near Miss
2014	January	6772.75	0	0	0.0	0	0.0	0
	February	6915.50	0	0	0.0	0	0.0	0
	March	6543.25	0	0	0.0	0	0.0	0
	April	6653.25	0	0	0.0	0	0.0	0
	May		0	0	0.0	0	0.0	0
	June		0	0	0.0	0	0.0	0
	July		0	0	0.0	0	0.0	0
	August		0	0	0.0	0	0.0	0
	September		0	0	0.0	0	0.0	0
	October		0	0	0.0	0	0.0	0
	November		0	0	0.0	0	0.0	0
	December		0	0	0.0	0	0.0	0
Year to Date Total		26,884.76	0.00	0.00	0.00	0.00	0.00	0.00

Contractors

	Month	Hours	First Aid	Recordable	Rec. Rate	LTA	LTA Rate	Near Miss
2014	January	2645	0	0	0.0	0	0.0	0
	February	511	0	0	0.0	0	0.0	0
	March	495	0	0	0.0	0	0.0	0
	April	5822	1	0	0.0	0	0.0	0
	May	0	0	0	#DIV/0!	0	#DIV/0!	0
	June	0	0	0	#DIV/0!	0	#DIV/0!	0
	July	0	0	0	#DIV/0!	0	#DIV/0!	0
	August	0	0	0	#DIV/0!	0	#DIV/0!	0
	September	0	0	0	#DIV/0!	0	#DIV/0!	0
	October	0	0	0	#DIV/0!	0	#DIV/0!	0
	November	0	0	0	#DIV/0!	0	#DIV/0!	0
	December	0	0	0	#DIV/0!	0	#DIV/0!	0
Year to Date Total		9,472.50	1.00	0.00	0.00	0.00	0.00	0.00

Accidents:

There were no employee injuries reported in April. An employee backed into a light pole with the lull, causing damage to the light pole. A contractor injured his hand on conveyor during outage.

Near Miss Reports:

No Near Miss Reports were completed in April.

Training:

35 individuals completed 80 safety courses in April.

5. ENGINEERING & ENVIRONMENTAL

- 4/9: Title V Permit Modification Application – Notice Published
- 4/10: SWPPP/SPCC training complete
- 4/16: FDEP Bottom Ash Re-Use Approval - Florence C&D Landfill
- 4/27: Quarterly Emissions – EER & EDR - Submitted
- 4/30: FDEP Ruling regarding 1/12 NOx – Compliance Without Enforcement (CWOE)

Pending

- Q1 ACEPD Hourly Emissions 5/7
- Title V FDEP Application response to be published ~ 6/1
- Fly Ash & Salt Cake beneficial re-use alternatives
- Stormwater Detention Ponds – Vegetation Removal
- Finalize SMP-4 revisions including WoodYard BMPs
- Mobile vehicular trailer tank notification/disclosure

6. OPERATIONS

A total of 28,374.41 nMW hours of electricity were generated during the month. The monthly Average Burn Rate was **REDACTED**

A total of 1,853 trucks were unloaded with 50,755.48 tons of wood received and **REDACTED**

There were 387 Safe Work, 87 LOTO, and 97 Confined Space permits written.

The Turbine Generator steam inlet control valve position deviation caused three Turbine trips. A Siemens controls engineer was brought in to help troubleshoot. Stripped threads on a transducer wiring connector appear to have caused intermittent loss of valve feedback signal which in turn caused the trips. The connector was replaced. After the third trip, GRU placed us on Reserve Shutdown until our outage began. Valmet Automation provided to site visits. Logic changes to bed ash, Raw and Reclaim water sodium hypo, and automatic Raw Water pump start-up sequence. Work continues to clean-up the alarm page.

7. WATER CHEMISTRY

- **Cooling Tower:** Piping modifications have been made to the cooling tower blowdown line to allow pumping down the basin with a portable pump while the plant is shut down. This is saving station service power usage.
- **Boiler/ Make-Up Water:** Piping modifications have been made to Reverse Osmosis caustic injection allowing for more consistent operation when running two trains simultaneously.
- **Well/Reclaim Water:** Valmet Automation added logic to secure sodium hypochlorite pumps to Raw water and Reclaim water when water flow is secured. Also, the Raw Water pump start sequence has been automated.
- **ZDS:** System mechanical and chemical cleaning began. A clean-out port has been added to the filter press feed line. Crystallizer flash tank liner was found to be damaged. Repairs to be made.
- **Potable water:** Completed and submitted monthly and quarterly samples, including bacteria.

8. FUEL HANDLING

- Began outage in the fuel yard.
- New tires have been received for the remanufactured Wagner chip dozer. They will be mounted during the outage.

9. TRAINING

- GPILearn: 37 individuals completed 135 total courses in April.
- 208 contractors received NAES site safety training in April.

10. MAINTENANCE

- Held daily safety meetings with crews.
- Completed April GPILearn courses.
- Attended SafeStart Training.
- Attended weekly fuel meetings.
- Held April outage meetings - NAES and Valmet.
- Performed safety audits around site for the month.
- Completed all known BOP scaffolding for April Outage.
- Completed removing the turbine room roof panels, beams before April shutdown.
- Completed electrical work for turbine outage.
- Completed instrument airline list for April outage.
- Changed out under pile # 2 drive gearbox. Used under pile # 1 gearbox until replacement arrives.
- IC/E Techs called out on turbine trip, replaced wiring, connector and reset ribbon wiring.
- Replaced flight on auto reclaimer. Found wear plate in poor condition and replaced.
- Unit down early - started all BOP maintenance active items that would not affect start up.
- Prepped for start date of outage, all mechanical and electrical.
- Mechanical crews worked monthly PMs.
- IC/E crews worked monthly PMs.
- Walked all valves on list for outage with vendor.
- Had vendor vacuum out and clean ZDS vault.
- Started Fuel yard outage on 04/18/2015.
- Removed insulation on FWH for inspection and leak repair during outage.

- SKF Summary Report: 250 asset readings total, 1 action item, and no watch items.
- Scheduled work orders: 191 / Completed work orders: 183

11. ADMINISTRATION

Staffing:

There were no positions open as of April 30, 2015.

Temporary Staffing:

There was no temporary labor on site in April.

April Statistics:

- Payroll: 82 Payroll records processed
- Accounts Payable: 210 invoices processed*, 143 payments processed
*April Invoices will continue to be processed through May 15, 2015.
- Procurement: 138 Requisitions reviewed, 135 Purchase Orders generated
- April Overtime: 11.31% of total hours
- 2015 annual overtime: 17.39 % of total hours

Spare Parts Inventory Value: \$ **REDACTED**