

# GAINESVILLE RENEWABLE ENERGY CENTER

Operated by **NAES**



## JULY 2015 MONTHLY PERFORMANCE REPORT

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## 1. SUMMARY

The plant ran well during July. There were no safety or environmental incidents. The Maintenance Planner and Lead Control Room Operator jobs were filled. An Auxiliary Operator job is open and efforts are underway to fill it.

### **Operations:**

The unit operated for 744 hours in the month of July. GREC experienced no forced outages or derates this month.

The ZDS system had experienced serious buildup in the crystallizer flash tank. Its cause has been determined and corrected. The Ultra Filtration units experienced some PVC piping damage caused by a faulty pressure regulator and inlet/outlet valve actuation speeds. The filtration units were bypassed and system operation modified while repairs and modifications were made.

## 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
<b>Operations</b>																	
Gross Generation (MWh)	49,418	55,357	60,383	32,781	45,671	58,655	63,484	0	0	0	0	0	165,158	137,107	63,484	0	365,749
Net Generation (MWh)	42,953	48,167	54,434	28,374	39,642	51,088	55,363	0	0	0	0	0	145,554	119,104	55,363	0	320,021
Solid Fuel Flow (ft3)	REDACTED																
Solid fuel Flow (Tons)	REDACTED																
Natural Gas Usage MMBTU	1,655	0	0	0	1,994	569	0	0	0	0	0	0	1,655	2,563	0	0	4,218
Avg Burn rate (Tons/nMWH)	REDACTED																
Operating hours	592	672	744	562	551	697	744	0	0	0	0	0	2,008	1,809	744	0	4,562
Number of trips	5	0	0	3	0	2	0	0	0	0	0	0	5	5	0	0	10
<b>Safety</b>																	
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
<b>Maintenance: WO Summary</b>																	
Start Backlog	130	133	171	158	162	109	115	0	0	0	0	0	434	429	115	0	978
End Backlog	73	90	112	114	62	76	61	0	0	0	0	0	275	252	61	0	588
New Wos/Comp Rec WO's	170	247	186	139	154	159	171	0	0	0	0	0	603	452	171	0	1,226
Total Completed W.O.s	227	290	245	183	254	192	225	0	0	0	0	0	762	629	225	0	1,616
Received WO's	234	331	241	191	206	203	235	0	0	0	0	0	806	600	235	0	1,641

### 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
<b>Other</b>																	
Ammonia Received (Gallons)	13,008	13,016	13,000	6,475	6,437	12,915	19,336	0	0	0	0	0	39,024	25,827	19,336	0	84,187
Ammonia Consumed	11,058	12,866	12,700	6,775	10,037	12,765	15,436	0	0	0	0	0	36,624	29,577	15,436	0	81,637
Sodium Bicarbonate Received (Tons)	24	0	24	23	24	0	47	0	0	0	0	0	48	47	47	0	142
Sodium Bicarbonate Consumed	20	25	17	17	9	27	20	0	0	0	0	0	63	53	20	0	136
Bottom Ash Generated (Tons)	230	259	462	181	352	245	225	0	0	0	0	0	951	778	225	0	1,953
Fly Ash Generated (Tons)	981	1,043	1,102	958	520	1,077	1,173	0	0	0	0	0	3,126	2,555	1,173	0	6,854
Filter Cake (Tons)	78	73	102	47	60	107	117	0	0	0	0	0	253	215	117	0	585
<b>Diesel Fuel</b>																	
Diesel Fuel Received	4,410	4,006	5,087	3,488	4,822	3,595	2,854	0	0	0	0	0	13,503	11,904	2,854	0	28,261
Diesel Fuel Burned	4,410	4,006	5,087	3,488	4,822	3,595	2,854	0	0	0	0	0	13,503	11,905	2,854	0	28,262
- 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
<b>Water</b>													0	0	0	0	
Process Water Usage	10,479,714	10,113,783	12,700,990	8,701,923	14,153,347	15,224,071	16,485,037	0	0	0	0	0	33,294,487	38,079,341	16,485,037	0	87,858,865
Reclaim Water Usage	13,106,824	15,488,745	18,109,532	9,403,562	11,906,570	18,044,411	17,745,056	0	0	0	0	0	46,705,101	36,534,203	17,745,056	0	100,984,360

## 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	12832.75	0	0	0.0	0	0.0	0
	June	6477	0	0	0.0	0	0.0	0
	July	6368.5	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
<b>Year to Date Total</b>		<b>52,563.01</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>

### 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	655	0	0	0.0	0	0.0	0
	April	6040	1	0	0.0	0	0.0	0
	May	7143	0	0	0.0	0	0.0	0
	June	658	0	0	0.0	0	0.0	0
	July	311	0	0	0.0	0	0.0	0
	August	0	0	0	0.0	0	0.0	0
	September	0	0	0	0.0	0	0.0	0
	October	0	0	0	0.0	0	0.0	0
	November	0	0	0	0.0	0	0.0	0
	December	0	0	0	0.0	0	0.0	0
<b>Year to Date Total</b>		<b>17,962.50</b>	<b>1.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>

**Accidents:**

There were no injuries reported in July.

**Near Miss Reports:**

No Near Miss Reports were completed in July.

**Training:**

38 individuals completed 84 safety courses in July.

## 5. ENGINEERING & ENVIRONMENTAL

- 7/16: Air Construction / Title V FDEP NOI published
- 7/30: Quarterly EER/EDR, Semi-Annual Data Assessment & TV Deviation Reports Submitted
- 7/31: Revised, Final Air Construction Permit Issued; Visible Emissions Certifications (5)

**Pending**

- CEMS DAHS Permit Configuration Updates effective 0000 August 1<sup>st</sup>
- ACEPD 2<sup>nd</sup> Quarter Emissions Detail 8/6
- SPCC/SWPPP Annual Review & Training 8/31
- Procure Ozone Season Allowances 9/30
- Fly Ash & Salt Cake beneficial re-use alternatives s

## 6. OPERATIONS

A total of 55,362.61 nMW hours of electricity were generated during the month. The monthly Average Burn Rate was **REDACTED**

A total of 2,514 trucks were unloaded with 68,820.48 tons of wood received and **REDACTED**. There were 91 Safe Work, 52 LOTO, and 3 Confined Space permits written.

The control valve for Auxiliary Steam to the Crystallizer had new trim installed and a manual bypass installed in order to reduce the pressure drop from the steam header to the crystallizer. The modifications resulted in a significant decrease of Auxiliary Steam use and an increase in DA extraction use.

## 7. WATER CHEMISTRY

- **Cooling Tower:** System running well and chemistry within specifications.
- **Boiler/ Make-Up Water:** The Ultra Filtration unit suffered damage when a faulty supply regulator allowed it to over pressurize, and sticking valves created surges in the system. A new style regulator has been installed and valves have been adjusted. The system is running smoother and we are current investigating replacement valves.
- **Well/Reclaim Water:** We twice lost reclaim water from the city of Alachua. The issues were on their end and were resolved quickly.
- **ZDS:** Crystallizer Flash tank has been developing a calcium build-up. We were performing weekly boil-outs in an effort to remove build-up. A determination was made that the new anti-foam product may be causing the build-up, and the chemical was switched back to the original chemical. The build-up between boil-outs has been significantly reduced.
- **Potable water:** Completed and submitted monthly and quarterly samples, including Bacteria.

## 8. FUEL HANDLING

- Calibrated belt scales on belts 8 and 11. The belt tensions are to be adjusted to help increase accuracy of scales.
- PMs performed on belts and machines.

## 9. TRAINING

- GPILearn: 38 individuals completed 196 total courses in July.
- One contractor received NAES site safety training in July.



## 10. MAINTENANCE

- Crews completed GPILearn training.
- Held daily Safety meetings with maintenance crews.
- Reviewed SMPs # 4 , # 9 and # 27 with crews.
- ZDS - repaired belt press spray header.
- Quoted belts for conveyors.
- IC/E worked scheduled PMs.
- Mechanics worked scheduled PMs.
- Rebuilt ZDS-FCV-1655-30, 21/2 Globe valve and recalibrated.
- Re-Cal # 8 and # 11 belt scales.
- Worked tickets on Re-man Wagner and skid steer.
- Worked UF filters that blew out over weekend.
- Replaced bad regulator in RO plant.
- Replaced bad oil seal on gearbox # 13 conveyor.
- Build and weld in place aux, steam line to ZDS.
- Repair aux steam line flange leak at header.
- Monthly vibrations readings taken.
- Monthly/ Quarterly fire inspections completed.
- Alimak service rep in to service elevator.
- Replaced sight glass on west side of boiler (4 ea.)
- IC/E performed troubleshooting on BC level flow controllers
- IC/E worked the belt scale calibration.
- Built hand rails for all truck tippers and installed.
- Repaired 3 hydraulic lines at truck tippers that have been leaking.
- Ordered nut runners for operations to use on all large hand wheel valves.
- SKF Summary report - 118 total readings, 1 action item, and 3 watch items.
- Scheduled work orders for June - 171. Completed work orders - 225.

## 11. ADMINISTRATION

### Staffing:

There was one LCRO position open as of July 31, 2015.

### Temporary Staffing:

There was no temporary labor on site in July.

### July Statistics:

- Payroll: 81 Payroll records processed
- Accounts Payable: 208 invoices processed\*, 154 payments processed  
\*July Invoices will continue to be processed through August 15, 2015.
- Procurement: 115 Requisitions reviewed, 115 Purchase Orders generated
- July Overtime: 12.77% of total hours
- 2015 annual overtime: 18.44% of total hours

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