

Alexandria Arlington Resource Recovery Facility

Fiscal Year 2017
Third Quarter Operations Report

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Definition of Abbreviations & Acronyms

<u>Abbreviation/Acronym</u>	<u>Definition</u>
APC	Air Pollution Control
Apr	April
Aug	August
Avg	Average
Btu	British thermal unit
CAAI	Covanta Alexandria Arlington, Inc.
CEMS	Continuous Emissions Monitoring System
CO	Carbon Monoxide
Dec	December
ECOM	Emergency Communications
Feb	February
FMG	Facility Monitoring Group
FY	Fiscal Year
gal	Gallon
GAT	Guaranteed Annual Tonnage
HCl	Hydrochloric (Hydrogen Chlorides)
HDR	HDR Engineering Inc
HHV	Estimated Waste Heating Value (Btu/lb)
ID	Induced Draft
Jan	January
Jul	July
Jun	June
klbs	Kilo-pounds (1,000 lbs)
kWhr	Kilowatt hours (1,000 watt-hours)
lbs	Pounds
LOA	Letter of Agreement
Mar	March
Max	Maximum
May	May
Min	Minimum
MSW	Municipal Solid Waste
MW hr	Megawatt hours
No	Number
NOV	Notice of Violation
Nov	November
NO _x	Nitrogen Oxide
Oct	October
OSHA	Occupational Safety and Health Administration
PDS	Potomac Disposal Services
ppm	Parts per million
ppmdv	Parts per million dry volume
PSD	Prevention of Significant Deterioration
Q1	First Quarter
Q2	Second Quarter
Q3	Third Quarter
Q4	Fourth Quarter
RE	Reportable Exempt
RNE	Reportable Non-Exempt
SDA	Spray Dryer Absorber
Sep	September
SO ₂	Sulfur Dioxide
TCLP	Toxicity Characteristic Leaching Procedure
VADEQ	Virginia Department of Environmental Quality
WL	Warning Letter
yr	Year
YTD	Year to date

Alexandria/Arlington Waste-to-Energy Facility Third Quarter Operations Report – Fiscal Year 2017

1.0 Purpose of Report

HDR Engineering, Inc. (HDR) was authorized by the Facility Monitoring Group (FMG) to conduct quarterly inspections and provide quarterly reports regarding the operation and maintenance of the Covanta Alexandria/Arlington Waste-to-Energy Facility (Facility) for the 2017 calendar year. This report is prepared for the Third quarter of the 2017 fiscal year and summarizes Facility operations between January 1, 2017 and March 31, 2017. This report identifies the fiscal year beginning on July 1, 2016 as FY17 and the quarter beginning on January 1, 2017 as Q3FY17.

This report is based upon HDR's experience in the waste-to-energy industry, upon site observation visits and previous reports provided by HDR, and upon data provided by Covanta Alexandria / Arlington, Inc. (CAAI), the Facility owner and operator.

2.0 Executive Summary

CAAI operated the Facility in an acceptable manner and in accordance with established waste-to-energy industry practices during Q3FY17. The operation of the Facility, maintenance, safety, and overall cleanliness continue to be above average. Environmental performance was excellent with no reportable environmental excursions throughout the quarter.

During Q3FY17, the Facility experienced two (2) instances of unscheduled downtime for the boilers totaling 32.0 hours, and one (1) instance of unscheduled downtime for turbine generators totaling 11.5 hours. The boilers experienced 512.5 hours of downtime for two (2) scheduled outages, and a scheduled cold iron outage during Q3FY17. The turbine generators experienced 72.0 hours of downtime for one (1) scheduled outage and the scheduled cold iron outage. During the quarter, the boilers experienced 143.5 hours of standby time, and the

turbine generators experienced 343.6 hours of standby time. Note that standby time is not factored into overall availability. A detailed listing of downtime is provided in Section 5.2 of this report.

Average waste processed during the quarter was 914.1 tons per day, or 93.8% of nominal facility capacity. Waste deliveries averaged 897.4 tons per day, which is 1.8% lower than the burn rate. The capacity utilization of 93.8% is comparable to that of mature, well run waste to energy facilities.

Performance trends for various measurements are presented in Section 4. In general, the Facility continues to demonstrate reasonable consistency in month to month performance throughout the most recent three-year period tracked for detailed comparisons.

During the quarter, MSW processed slightly increased (0.2%) from the corresponding quarter in FY16; steam production decreased (2.3%), and electricity generated (gross) decreased (1.0%) from the corresponding quarter in FY16. The decrease in steam generation is attributable to more boiler downtime (126 additional hours), paired with a decrease (0.5%) in calculated waste heating value. The decrease in electricity generated (gross) in Q3FY17, is attributable to lower steam production, and more downtime (139.5 additional hours) experienced by the turbine generators. CAAI continues to throttle back the boiler steam load as necessary to stay below the steam production limit.

3.0 Facility Inspection and Records Review

In February 2017, HDR met with the Facility management and other plant personnel to discuss Facility operations and maintenance, acquire data and reports, perform an independent visual inspection of the operating Facility, photograph areas of interest, and perform a review of recent Facility activity. This visit was coordinated with the scheduled FMG meeting. At the time of the inspection, HDR reviewed CAAI records, discussed performance issues with CAAI staff, and provided a verbal report and performance statistics at the

February 2017 FMG meeting. HDR maintains a running tabulation of the status of corrective actions and plant performance trends. CAAI provides the following documents for each month:

- Facility Monthly Operating Reports
- Monthly Continuous Emissions Monitoring System (CEMS) Reports

Table 1 summarizes maintenance, repair, and plant condition issues reported during this and prior reporting periods. An “A” indicates an issue of the highest priority and worthy of immediate attention. Such items are usually safety or operability issues. A “B” indicates that the issue needs to be dealt with as quickly as possible, but is not urgent. These items will usually result in a process improvement or will help avoid future “urgent” issues. A “C” indicates that the issue should be dealt with at the earliest convenience, but is not a priority issue. This category might include issues related to aesthetics, non-urgent maintenance, or housekeeping improvements which are not safety related.

Note that HDR inspections are generally performed while equipment is operating, and are not intended to address the internal condition, performance or life expectancy of mechanical, electrical and electronic equipment and structures. HDR inspections are only performed quarterly, generally representing findings on the day of the inspection. CAAI is responsible, without limitation, for operations, maintenance, environmental performance and safety and should not rely on HDR observations or inspection reports which are overviews of Facility external conditions only.

Table 1: Summary of Inspection Report Deficiencies

*A is highest priority & demands immediate attention; B needs attention, but is not urgent; C can be addressed at earliest opportunity & is not urgent.

Item No.	Inspection Report Deficiencies	Issue Reported	Priority*	HDR Recommendation	Status	Open / Closed
1	Corrosion on ceiling panels in Turbine Generator Enclosure	August 2014	C	Sand, Prime, Paint and Preserve, and replace deteriorated panels as necessary	HDR observed the corroded/deteriorated sections had been primed, but no panels were replaced. CAAI reports that it plans to replace panels in 1 to 2 years.	Open
2	Corrosion on ceiling panels in Turbine Generator Enclosure (Alternate Location)	August 2014	C	Sand, Prime, Paint and Preserve, and replace deteriorated panels as necessary	HDR observed the corroded/deteriorated sections had been primed, but no panels were replaced. CAAI reports that it plans to replace panels in 1 to 2 years.	Open
3	Deteriorated purlin east wall in Tipping Floor Enclosure	November 2014	C	Replace deteriorated purlin	CAAI reports that it will replace sections of the east wall of the Tipping Floor Enclosure as a 2016 Budget Item.	Open
4	Induced Draft Fan No. 1 Lagging deteriorated, west side of CEMS Enclosure	May 2015	C	Replace deteriorated Induced Draft Fan Lagging	Status Unchanged	Open
5	Pot hole, southeast corner of Ash Trailer Canopy	August 2015	C	Repair road surface	Status Unchanged	Open
6	Chemical storage container deteriorated, north of Main Vibrating Pan, at ground elevation	February 2016	C	Replace storage container	During the August 2016 FMG Meeting, CAAI indicated it planned to purchase a new storage container and dispose of the deteriorated container.	Open
7	Safety Cage on Rotary Sootblower No. 27 detached and gears exposed	August 2016	A	Adjust rotary sootblower cage to shield exposed gears	Complete	Closed

Item No.	Inspection Report Deficiencies	Issue Reported	Priority*	HDR Recommendation	Status	Open / Closed
8	Underside of grating deteriorated, upper elevations of all three economizers	August 2016	C	Replace economizer grating in upper elevations	Status Unchanged	Open
9	Pavement spider-cracking at Tipping Floor Entrance	November 2016	C	Resurface section of pavement at Tipping Floor Entrance	Status Unchanged	Open
10	Concrete slab damaged that Citizen's Drop-off Roll-off is on	November 2016	C	Repair concrete slab	Status Unchanged	Open
11	Pothole where Tipping Floor Exit Road enters Eisenhower Avenue	November 2016	C	Repair pothole	Status Unchanged	Open
12	Multiple Cooling Tower Access Stairs Split	November 2016	A	Replace damaged stairs	Complete	Closed
13	Corrosion on Scale House	November 2016	C	Conduct proper painting preservation measures on corroded spots of Scale House	Status Unchanged	Open
14	Housing Damaged of Self Contained Breathing Apparatus (SCBA) – North Charging Floor Entrance – – See Figure 1 (Appendix B)	February 2017	C	Replace SCBA Enclosure	Status Unchanged	Open
15	Tipping Floor Center Bay concrete apron eroded and rebar exposed — See Figure 2 (Appendix B)	February 2017	C	Resurface eroded section of Tipping Floor near refuse pit	Status Unchanged	Open

4.0 Facility Performance

Monthly operating data provided by CAAI indicates that 82,267 tons of MSW were processed during Q3FY17, and a total of 80,768 tons of MSW including 3,787 tons of Special Handling Waste were received. Total ash production during the quarter was 16,497 tons, which represents 20.1% of the waste processed by weight. The average uncorrected steam production rate for Q3FY17 was 2.93 tons_{steam}/ton_{waste}, which is lower (2.6%) than the corresponding quarter in FY16. The decrease in this metric does not correlate with the 0.5% decrease in the average waste heating value (HHV) calculated by CAAI, and is indicative of poorer boiler performance or some other currently unidentified cause. This trend continues to be unexplained.

Chart 1: Tons of Waste Processed

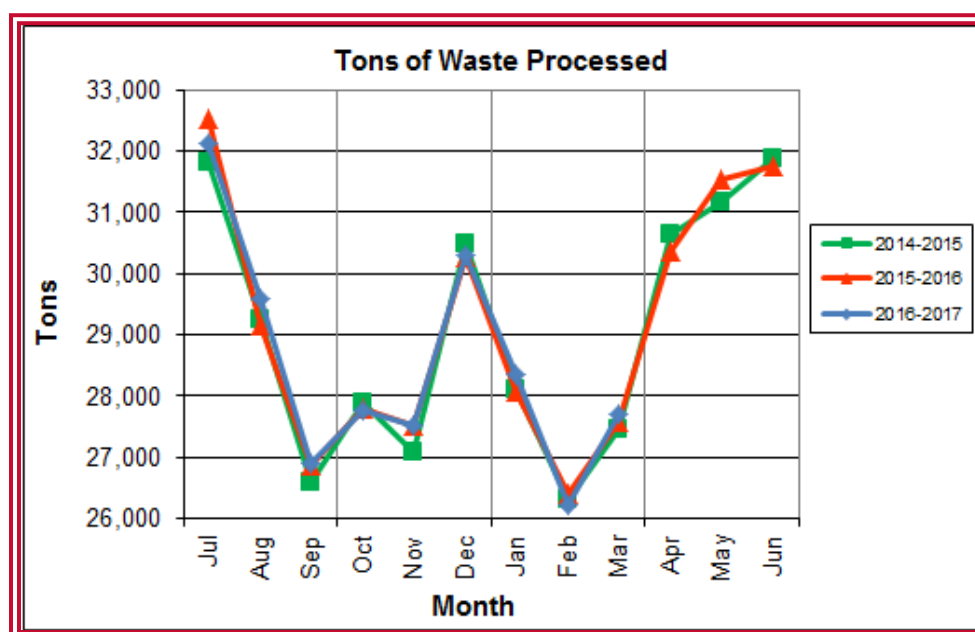


Chart 1 illustrates that Q3FY17 waste processed was slightly higher (0.2%) than the corresponding quarter, Q3FY16.

CAAI reported that 465 tipping floor/MSW internal inspections were conducted during the quarter and seven (7) notices of violation (NOVs) were issued to haulers for the following issues:

- March 2017 – Seven (7) NOVs were issued for not following the rules regarding lining up and blocking the Tipping Floor Entrance.

Chart 2: Tons of Ash Produced per Ton of Waste Processed

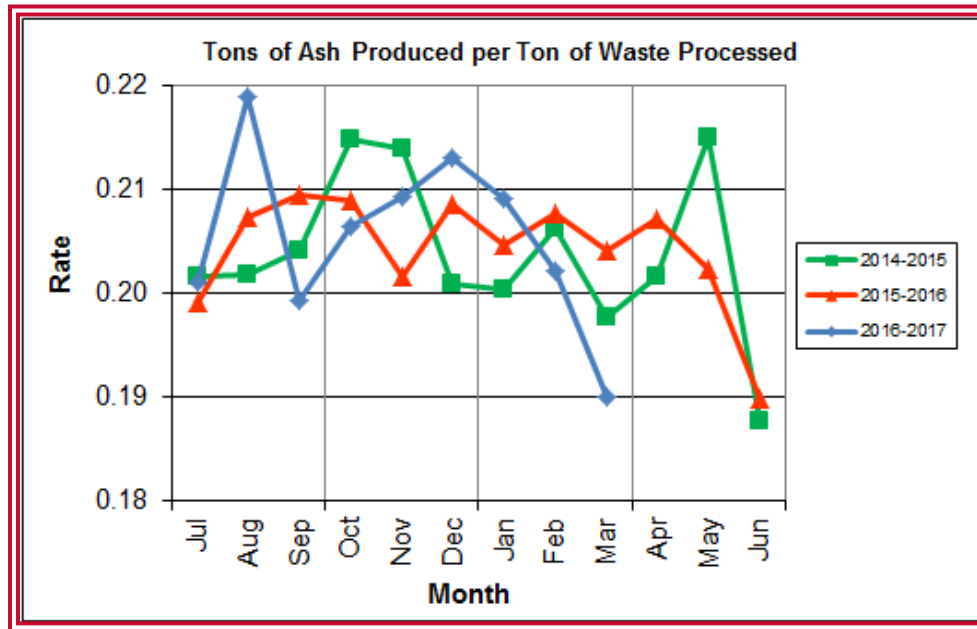


Chart 2 illustrates that the average ash production rate in Q3FY17 was slightly higher (0.1%) at 20.1% of processed waste, compared to the corresponding quarter in FY16 when the rate was 20.0%. Ash production remains in the 20.0% to 21.0% range, as a result of the installation of the “semi-dry” ash discharger spray system in May 2012, and represents less moisture in the ash residue shipped to disposal.

Chart 3: Ferrous Recovery Rate

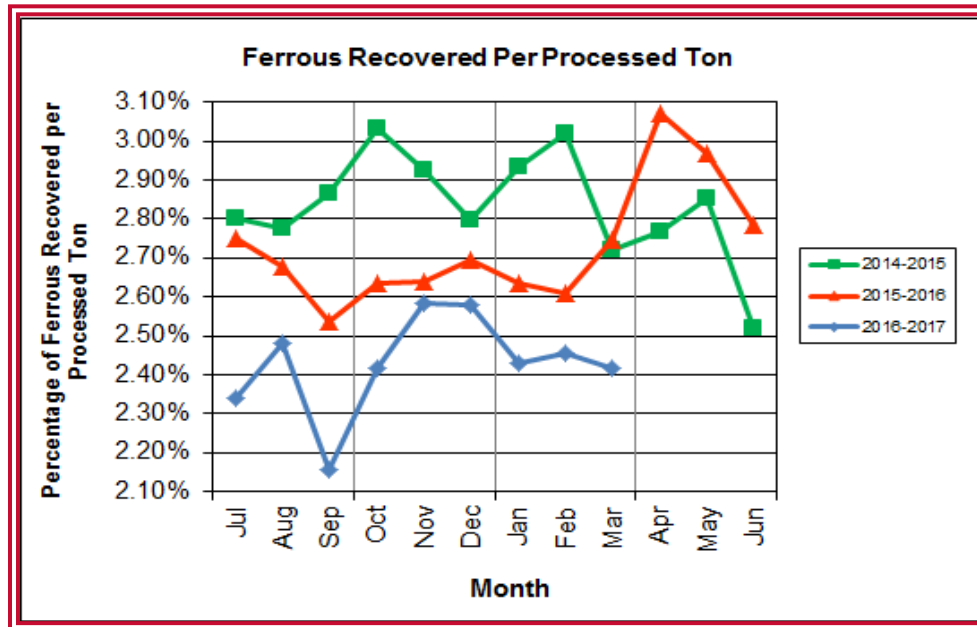
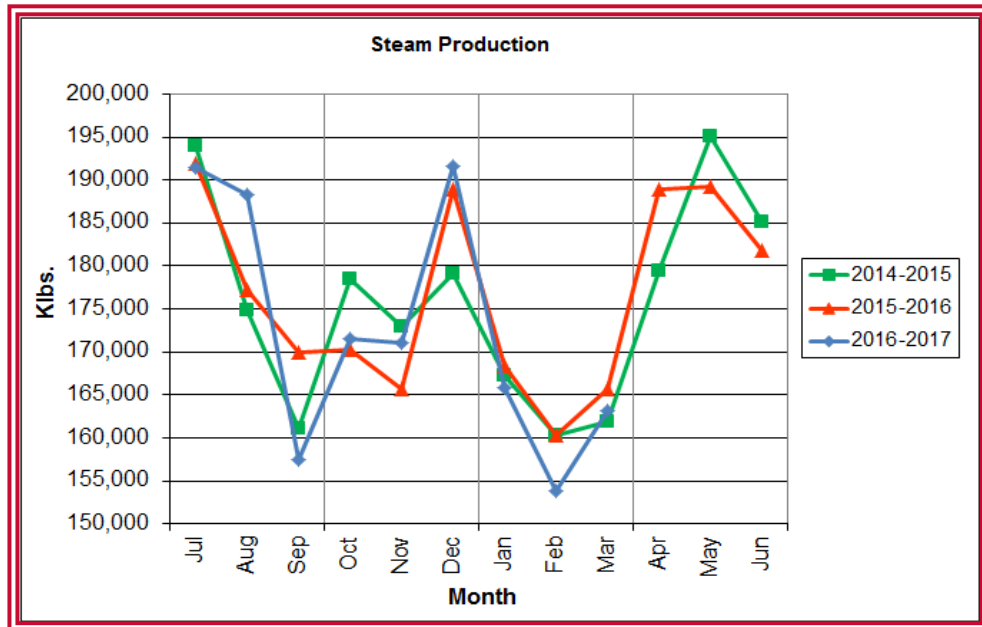


Chart 3 depicts the monthly ferrous metal recovery rate as a percentage of processed MSW tonnage. In Q3FY17, 2,002 tons of ferrous metals were recovered, which is 8.5% lower than the corresponding quarter in FY16 and equivalent to 2.4% of processed waste. Ferrous metal recovery remains significantly below prior results. CAAI attributes the significant decline to an increase in recycling rates resulting in less metal in the MSW. CAAI previously indicated that it replaced an end section of the vibrating pan during Q1FY16 which was worn due to wear from material getting caught between the pan and magnet.

Chart 4: Steam Production



In Chart 4, the total steam production for Q3FY17 was 482,727 klbs., and lower (2.3%) than the corresponding quarter in FY16. The decrease in steam generation is attributable to more downtime (126 additional hours), paired with a decrease (0.5%) in calculated waste heating value, and CAAI throttling the boilers back to stay below the steam production limit.

Chart 5: 12-Month Rolling Steam Production

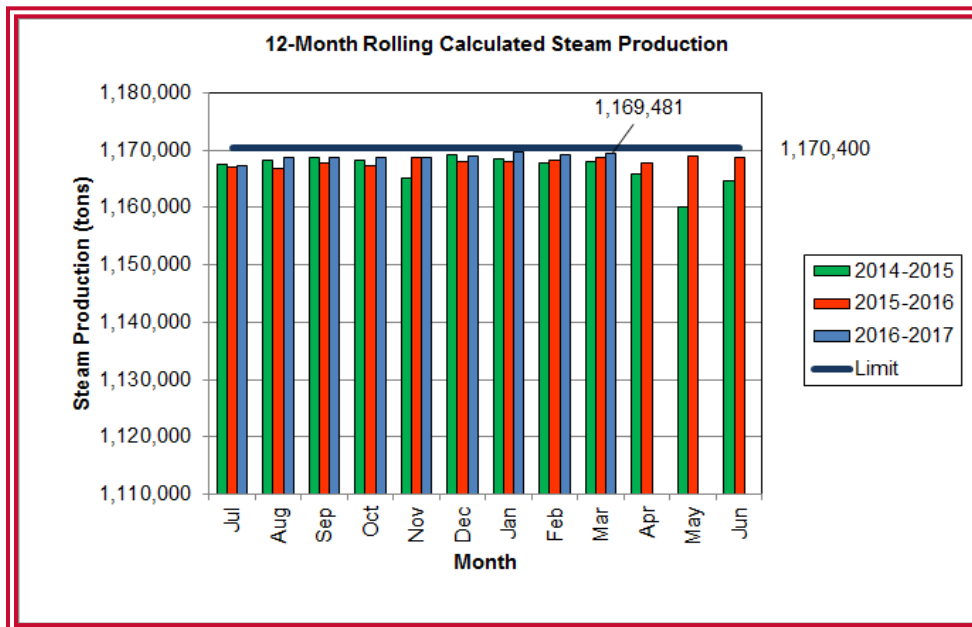
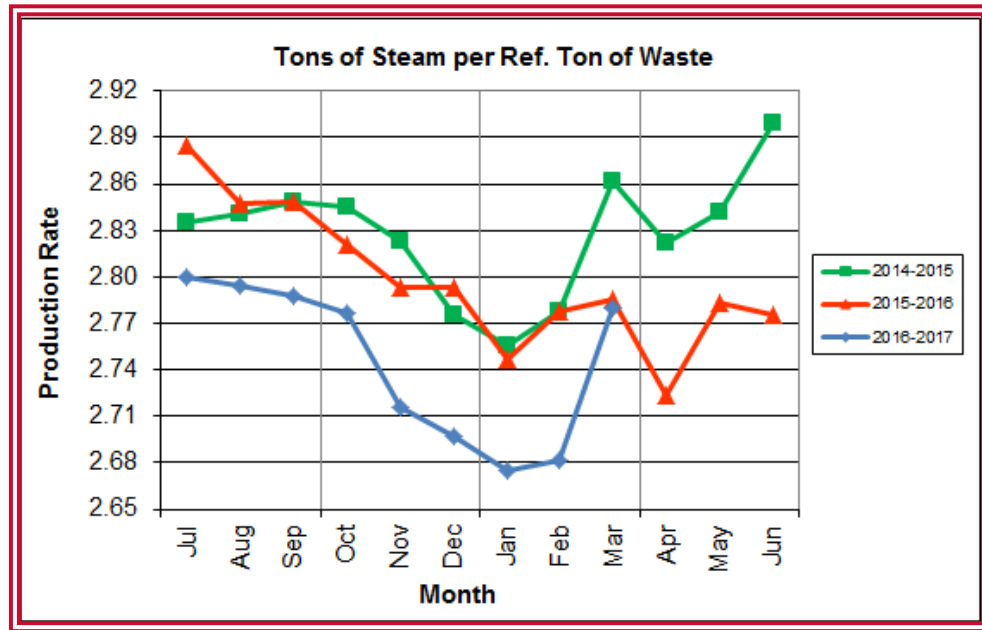


Chart 5 depicts the 12-month rolling steam production total for the period ending in March 2017. According to the Title V permit, the annual steam production for the Facility shall not exceed 1,170,400 tons on the basis of an average value of 3.34 lbs of steam per lb of MSW processed, calculated monthly as the sum of each consecutive 12 month period. The Facility was in compliance with the 12-month rolling steam production total every month in Q3FY17. The 12-month rolling total for steam production ending in March 2017 was 1,169,481 tons which is 99.9% of the limit. Chart 5 clearly shows that Facility throughput, and in turn, steam and electricity production are being throttled to stay ever so slightly below the steam production limit nearly every month.

Chart 6: Steam Production Rate



In Chart 6, the conversion of raw waste tonnages into “reference tons” is another way of analyzing steam production, and helps to determine whether changes are related to boiler performance or to fuel issues. “Reference tons” are adjusted to account for the calculated average fuel heating value, so that lower Btu fuel raw tonnages are adjusted upwards and vice versa. In Q3FY17, this metric tracked lower (2.1%) at 2.7 tons_{steam}/ton_{ref}, compared to the corresponding quarter in FY16. This trend continues to show ongoing deterioration of boiler performance since July of 2016.

Chart 7: Calculated Waste Heating Value

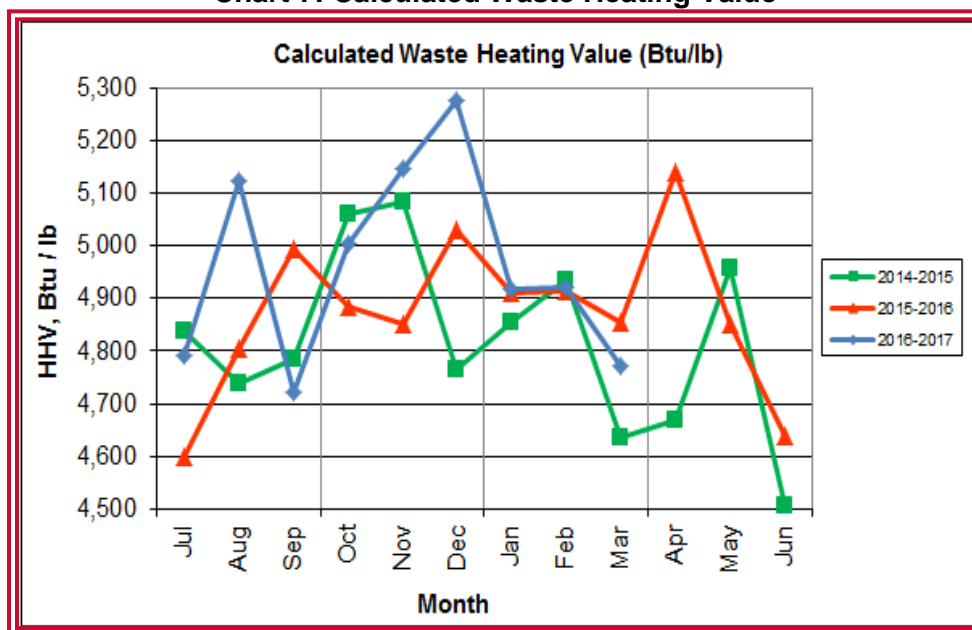


Chart 7 illustrates that Q3FY17 calculated average waste heating value was lower (0.5%) at 4,870 Btu/lb than the corresponding quarter Q3FY16, which averaged 4,893 Btu/lb.

Table 2: Quarterly Performance Summaries

Month		Waste Processed (tons)	Waste Diverted (tons)	Ash Shipped (tons)	Special Handling (Supplemental) (tons)	Ferrous Recovered (tons)	Steam Produced (klbs)	Net Electrical Generation (MWhr)
Q3FY15	Quarterly Totals	81,876	0	16,486	1,012	2,366	489,283	34,193
	January -15	28,114	0	5,632	389	825	167,202	11,777
	February -15	26,301	0	5,426	351	794	160,221	11,322
	March - 15	27,461	0	5,428	272	747	161,860	11,094
Q3FY16	Quarterly Totals	82,085	0	16,867	2,284	2,187	494,295	34,595
	January -16	28,091	0	5,748	642	740	168,391	11,902
	February -16	26,414	0	5,487	850	689	160,228	11,192
	March - 16	27,580	0	5,632	792	758	165,676	11,501
Q3FY17	Quarterly Totals	82,267	0	16,497	3,787	2,002	482,727	34,355
	January -17	28,353	0	5,931	1,083	689	165,770	11,933
	February -17	26,217	0	5,302	1,413	644	153,757	11,067
	March - 17	27,697	0	5,264	1,291	669	163,200	11,355
FY17 YTD Totals		256,492	0	52,757	8,569	6,231	1,553,963	110,310
FY16 Totals		349,881	0	71,401	8,567	9,571	2,118,125	148,529
FY15 Totals		348,686	0	71,019	5,413	9,864	2,109,442	145,085

Table 2 presents the production data provided to HDR by CAAI for Q3FY17 on both a monthly and quarterly basis. For purposes of comparison, data for

Q3FY15 and Q3FY16 are also shown, as well as FY15, FY16 and FY17 YTD totals.

In comparing quarterly totals, the data shows:

- Slightly more waste was processed in Q3FY17 than Q3FY16 and Q3FY15
- Less steam was generated in Q3FY17 than Q3FY16 and Q3FY15
- Slightly Less electricity was generated in Q3FY17 than Q3FY16 and more than in Q3FY15
- Significantly more supplemental waste was received in Q3FY17 than Q3FY16 and Q3FY15.

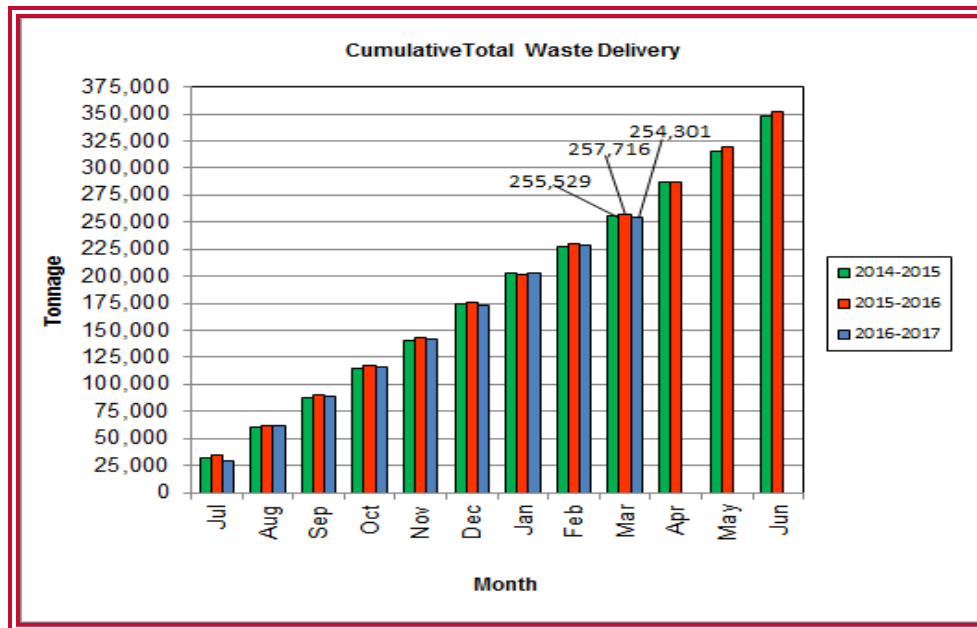
Please note that the total steam generation figures presented in Table 2 do not correlate with the annual steam production limit from the Facility Permit; such limits apply on a rolling average monthly basis, and not a fiscal year basis. It is also worth noting that the quantity of waste processed during Q3FY17 continues to be limited by the steam production permit restrictions (refer to Chart 5).

Table 3: Waste Delivery Classification

		<u>Jul</u>	<u>Aug</u>	<u>Sep</u>	<u>Oct</u>	<u>Nov</u>	<u>Dec</u>	<u>Jan</u>	<u>Feb</u>	<u>Mar</u>	<u>Apr</u>	<u>May</u>	<u>Jun</u>	<u>Totals</u>	<u>% of Total</u>
FY13	Jurisdiction Waste	19,413	18,357	16,632	17,625	18,838	16,195	-	-	-	-	-	-	107,058	30.76%
	Spot Waste tons	10,516	11,326	10,610	10,317	9,330	9,558	-	-	-	-	-	-	61,656	17.72%
	City Waste	-	-	-	-	-	-	1,683 ⁽¹⁾	1,287	1,444	2,382	2,286	1,919	11,000	3.16%
	County Waste	-	-	-	-	-	-	2,442 ⁽¹⁾	2,100	2,372	3,381	3,932	3,309	17,536	5.04%
	Municipal Solid Waste	-	-	-	-	-	-	25,019 ⁽¹⁾	23,637	21,661	27,066	25,794	24,930	148,107	42.56%
	Supplemental Waste	151	11	80	25	234	405	363	365	76	403	281	271	2,665	0.77%
	MSW Totals	29,928	29,683	27,241	27,942	28,167	25,753	29,507	27,388	25,552	33,231	32,293	30,429	348,022	100.00%
		<u>Jul</u>	<u>Aug</u>	<u>Sep</u>	<u>Oct</u>	<u>Nov</u>	<u>Dec</u>	<u>Jan</u>	<u>Feb</u>	<u>Mar</u>	<u>Apr</u>	<u>May</u>	<u>Jun</u>	<u>Totals</u>	<u>% of Total</u>
FY14	City Waste	2,065	1,693	1,702	1,924	1,566	1,780	1,529	1,231	1,556	2,256	2,203	1,883	21,389	6.11%
	County Waste	3,459	3,079	2,784	3,091	2,707	2,802	2,568	1,957	2,272	3,326	3,987	3,387	35,419	10.12%
	Municipal Solid Waste	26,167	23,604	22,034	23,354	21,879	25,531	23,869	22,523	23,198	25,414	27,206	24,812	289,590	82.75%
	Supplemental Waste	546	676	248	410	188	268	275	192	231	253	151	110	3,548	1.01%
	MSW Totals	32,237	29,053	26,768	28,779	26,340	30,380	28,241	25,903	27,256	31,249	33,546	30,193	349,946	100.00%
		<u>Jul</u>	<u>Aug</u>	<u>Sep</u>	<u>Oct</u>	<u>Nov</u>	<u>Dec</u>	<u>Jan</u>	<u>Feb</u>	<u>Mar</u>	<u>Apr</u>	<u>May</u>	<u>Jun</u>	<u>Totals</u>	<u>% of Total</u>
FY15	City Waste	1,814	1,497	1,699	1,737	1,518	1,770	1,411	1,209	1,648	2,155	2,059	2,045	20,562	5.91%
	County Waste	3,297	2,868	2,973	3,095	2,508	2,852	2,358	1,833	2,411	3,269	3,652	3,572	34,687	9.96%
	Municipal Solid Waste	26,661	24,466	21,887	21,241	21,678	27,906	24,611	20,915	24,094	25,189	23,126	25,667	287,442	82.57%
	Supplemental Waste	141	275	329	521	764	529	389	351	272	613	531	698	5,413	1.55%
	MSW Totals	31,913	29,106	26,888	26,595	26,468	33,057	28,769	24,308	28,424	31,225	29,369	31,982	348,105	100.00%
		<u>Jul</u>	<u>Aug</u>	<u>Sep</u>	<u>Oct</u>	<u>Nov</u>	<u>Dec</u>	<u>Jan</u>	<u>Feb</u>	<u>Mar</u>	<u>Apr</u>	<u>May</u>	<u>Jun</u>	<u>Totals</u>	<u>% of Total</u>
FY16	City Waste	1,960	1,563	1,723	1,645	1,685	1,872	1,147	1,619	1,811	2,024	1,950	2,220	21,219	6.03%
	County Waste	3,627	2,880	2,832	2,869	2,682	2,891	2,025	2,389	2,694	2,406	2,508	2,661	32,465	9.22%
	Municipal Solid Waste	27,933	22,999	22,552	22,850	20,679	26,138	22,632	22,781	22,935	24,388	26,561	27,355	289,801	82.32%
	Supplemental Waste	676	427	771	684	676	787	642	850	792	996	605	661	8,565	2.43%
	MSW Totals	34,196	27,869	27,878	28,047	25,722	31,687	26,446	27,639	28,232	29,814	31,623	32,896	352,049	100.00%
		<u>Jul</u>	<u>Aug</u>	<u>Sep</u>	<u>Oct</u>	<u>Nov</u>	<u>Dec</u>	<u>Jan</u>	<u>Feb</u>	<u>Mar</u>	<u>Apr</u>	<u>May</u>	<u>Jun</u>	<u>YTD Totals</u>	<u>YTD % of Total</u>
FY17	City Waste	1,678	1,836	1,668	1,722	1,817	1,708	1,597	1,452	1,604				15,081	5.93%
	County Waste	2,386	2,469	2,370	2,184	2,321	2,289	2,287	2,016	2,517				20,839	8.19%
	Municipal Solid Waste	24,862	26,976	22,760	22,110	21,598	25,996	24,218	20,888	20,401				209,809	82.50%
	Supplemental Waste	504	642	734	926	941	1,036	1,083	1,413	1,291				8,570	3.37%
	MSW Totals	29,430	31,922	27,532	26,941	26,677	31,030	29,185	25,769	25,814				254,299	100.00%

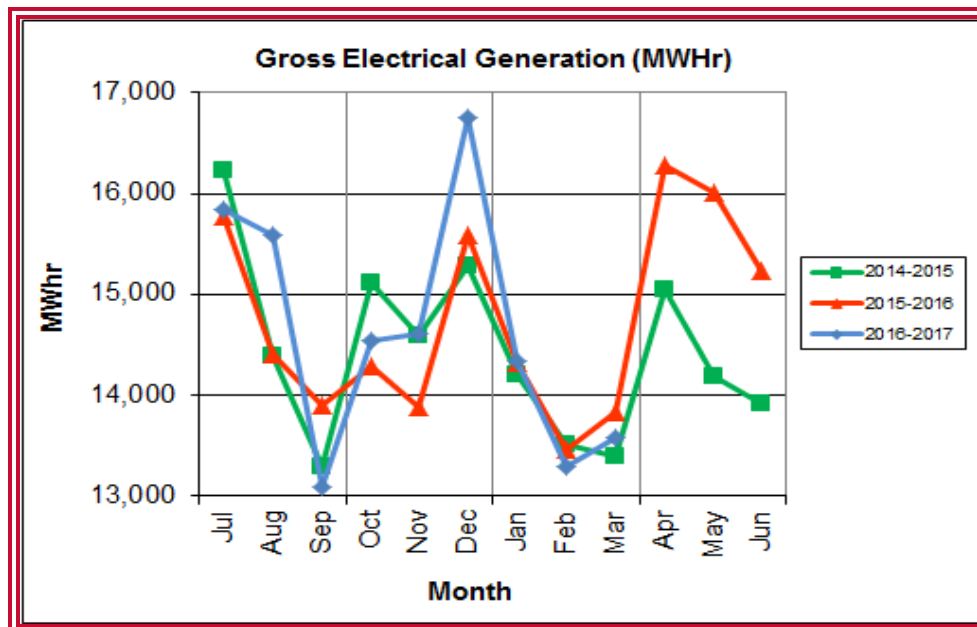
Note (1): Beginning January 2013, the method in which waste was classified was modified as compared to prior periods due to change in contractual obligations and plant ownership

Chart 8: Cumulative Total Waste Delivery



As depicted in Table 3 and Chart 8, for the quarter ending in March 2017; cumulative total waste delivery was 1.3% less compared to the same period in FY16.

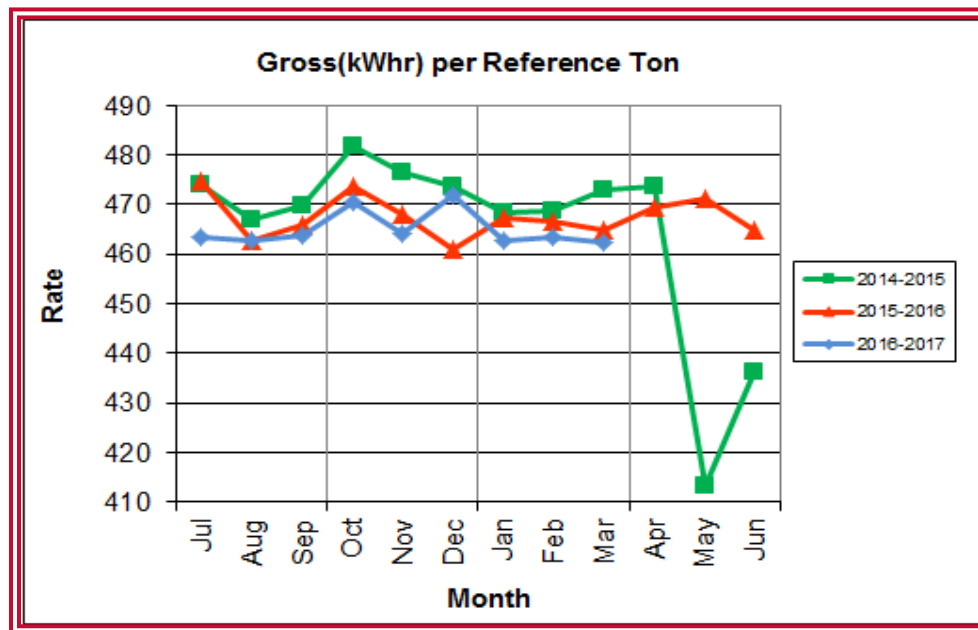
Chart 9: Gross Electrical Generation



During Q3FY17, the Facility generated 41,202 MWhrs (gross) of electricity compared to Q3FY16 generation of 41,606 MWhrs (gross), a 1.0% decrease.

The decrease in electricity generated (gross) in Q3FY17, is attributable to lower steam production, and more downtime (139.5 additional hours) experienced by the turbine generators. Note that the sharp spikes depicted in Chart Nos. 10 through 14 for the months of May and June 2015 are a result of significant downtime (424.7 hours) experienced by Turbine Generator No. 1 to repair an exciter failure.

Chart 10: Gross Conversion Rate



As shown in Chart 10, the average gross electrical generation per reference ton of refuse processed during Q3FY17 was 463kWhr, which is 0.7% lower than the corresponding quarter in FY16, and is attributable to more downtime experienced by the turbine generators during the quarter when compared to the corresponding quarter in FY16. Since this calculated value uses reference or normalized tonnages of waste, it should cancel the effect of MSW heating value (Btu content) variability.

Chart 11: Net Conversion Rate

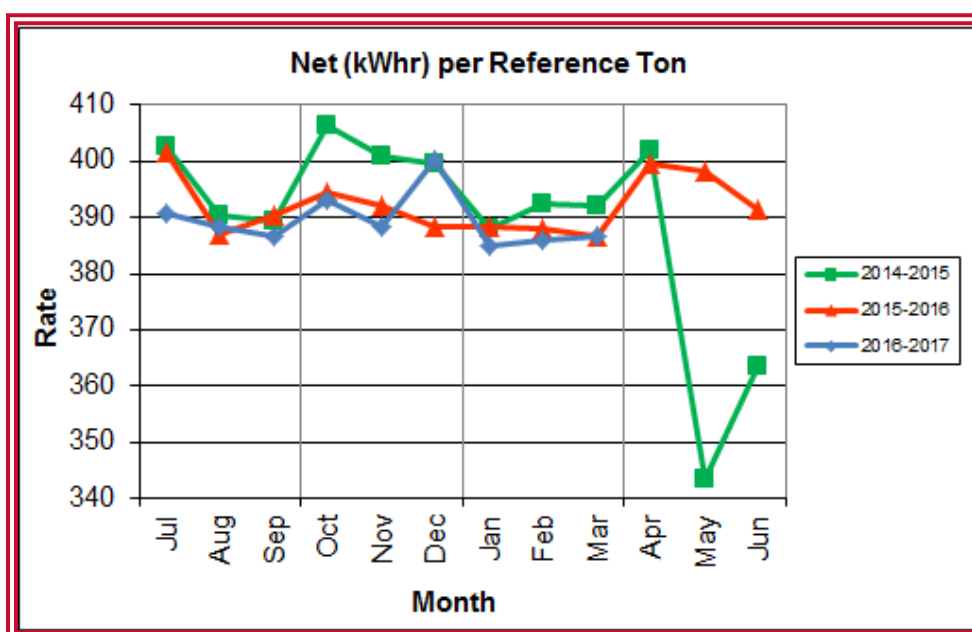


Chart 11 depicts the normalized net power (gross minus in-house usage) generation history. In Q3FY17, the average net electrical generation per reference ton was 386 kWhr, which is 0.4% lower than the corresponding quarter in FY16.

Chart 12: Net Conversion Rate

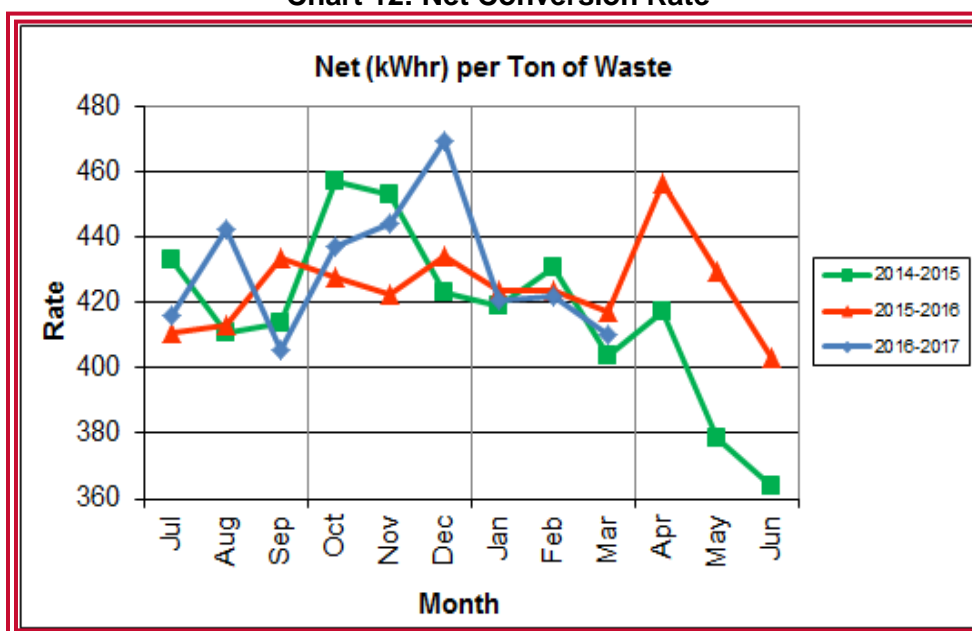
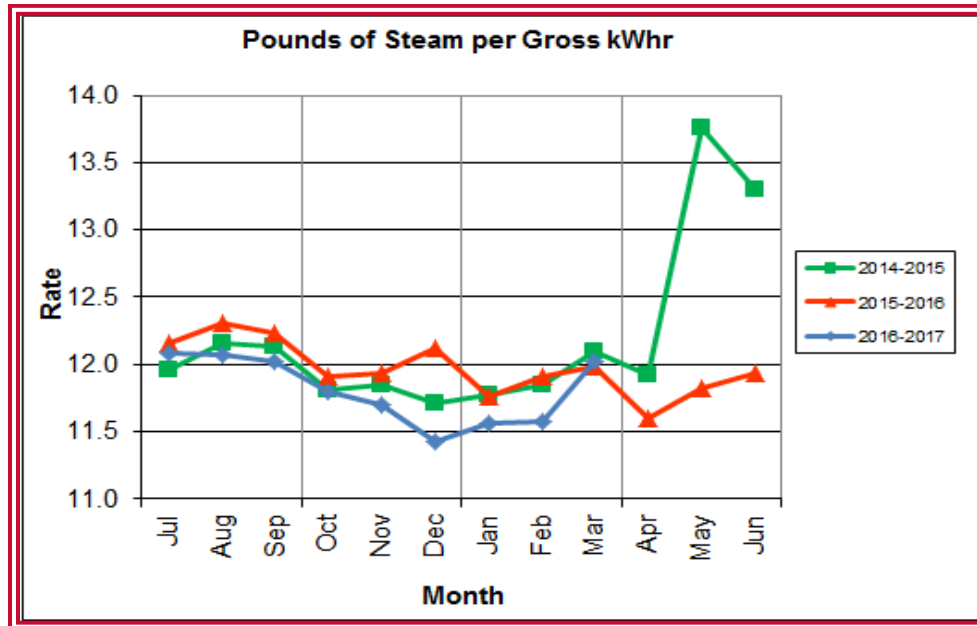


Chart 12 depicts the net power generation per processed ton. The net electrical generation per processed ton in Q3FY17 was 418 kWhr, which is 0.9% lower

than the corresponding quarter in FY16, is attributable to lower steam production, and more downtime (139.5 additional hours) experienced by the turbine generators when compared to the corresponding quarter last fiscal year.

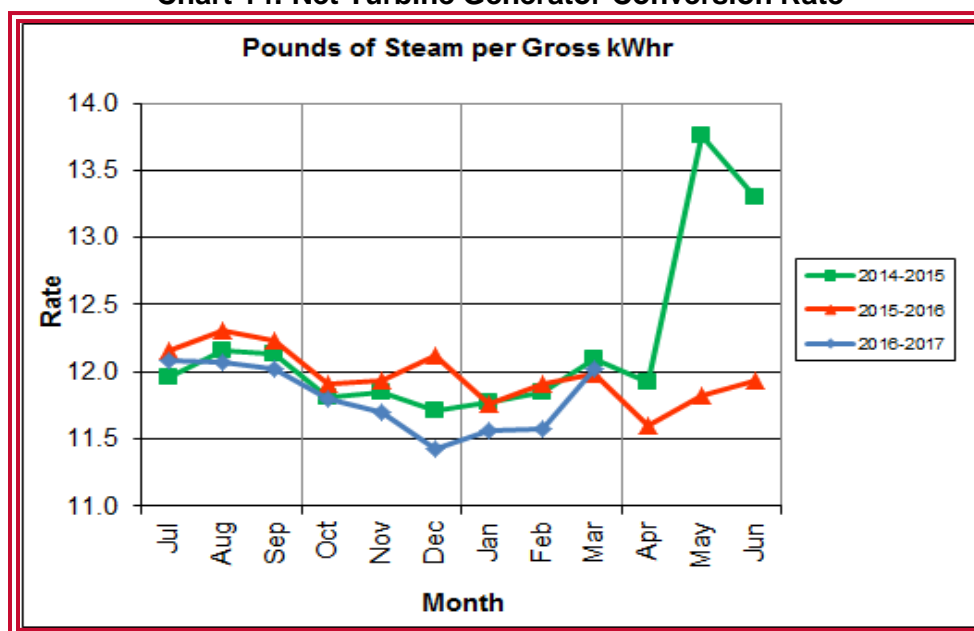
Chart 13: Gross Turbine Generator Conversion Rate



Charts 13 and 14 illustrate the quantities of steam required to generate one (1) kWhr of electricity, gross and net respectively. This measure is a turbine generator performance indicator, where lower steam rates indicate superior performance. For simplification, this calculated rate is based on the average for the two turbine generators. In Q3FY17 the average lbs of steam consumed per gross kWhr generated was 11.7, which is 1.4% lower (improved) than the corresponding quarter Q3FY16. A factor that negatively impacts this metric is Turbine Generator No. 2 continues to operate with its Stage 9 blades removed from the rotor. CAAI reported that during the Turbine Generator No. 2 overhaul in November 2013, some cracking was observed on the Stage 9 blades of the rotor, and the blading in that row was removed as a precautionary measure. CAAI originally indicated that a new set of blades would be manufactured and installed during a Turbine Generator No. 2 Outage in 2016, but advised in May 2015, that the implementation of the replacement blades installation would be delayed, and did not provide a date for repair. The average lbs of steam consumed per net kWhr was 14.1, which is 1.7% lower (improved) than the

corresponding quarter in FY16. The average steam temperature during the quarter was 678.8° F, which is 0.5% higher than the average steam temperature of the corresponding quarter last fiscal year and 21.2° F lower than design temperature of 700° F.

Chart 14: Net Turbine Generator Conversion Rate



4.1 Utility and Reagent Consumptions

Table 4: Facility Utility and Reagent Consumptions

Utility	Units	Q3FY17 Total	Q3FY16 Total	Q3FY17"Per Processed Ton" Consumption	Q3FY16"Per Processed Ton" Consumption	FY17 YTD Total
Purchased Power	MW/hr	5,405	5,554	0.02	0.07	16,715
Fuel Oil	Gal.	13,390	9,960	0.16	0.12	45,450
Boiler Make-up	Gal.	1,642,000	2,205,000	19.96	26.86	5,023,000
Cooling Tower Make-up	Gal.	29,064,732	27,464,971	353.30	334.59	110,695,161
Pebble Lime	Lbs.	1,174,000	1,304,000	14.27	15.89	3,718,000
Ammonia	Lbs.	169,000	147,000	2.05	1.79	519,000
Carbon	Lbs.	94,000	102,000	1.14	1.24	280,000
Dolomitic Lime	Lbs.	154,000	145,800	1.87	1.78	494,000

Fuel oil usage during the quarter represents approximately 0.25% of the total heat input to the boilers, which compares favorably with industry averages, and slightly higher than the percentage of heat input in Q3FY16 which was 0.17%. Fuel oil is used to stabilize combustion of wet fuel, as well as during start-up and shut-down of the boilers for maintenance. Boiler makeup water usage during the

quarter represents 2.8% of steam flow, which is slightly lower than the boiler makeup in Q3FY16 which was 3.7%, and is acceptable. Pebble lime usage, at 1,174,000 lbs. is lower (10.0%) than the corresponding quarter last year, and the quarterly consumption rate of 14.3 lbs/ton is below historical levels (16-18 lbs/ton).

In comparing Q3FY17 to Q3FY16 on a per processed ton consumption basis:

- the purchased power consumption rate was 6.7% lower
- the total fuel oil consumption rate was 34.1% higher
- the boiler make-up water consumption rate was 25.7% lower
- the cooling tower make-up water consumption rate was 5.6% higher
- the total pebble lime consumption rate was 10.2% lower
- the ammonia consumption rate was 14.7% higher
- the carbon consumption rate was 8.1% lower
- the total dolomitic lime consumption rate was 5.4% higher

4.2 Safety & Environmental Training

The Facility experienced no OSHA recordable accidents during the quarter and has operated 193 days without an OSHA recordable accident. During the quarter, Safety and Environmental training was conducted with themes as follows:

January 2017

- Safety:
 - Hazard Recognition
 - Complacency and SHE Communications
 - Medical Emergency
 - Health Policy/Employee Rights and Responsibilities
- Environmental:
 - Environmental Mission Statement
 - Stack Testing Roles and Responsibilities

February 2017

- Safety:

- Respiratory Protection
- Ergonomics
- Personal Protective Equipment (PPE) and Cold Weather Clothing
- Fire Canon and Fire Hose Training
- Environmental:
 - Environmental Metrics and Sustainability at Covanta

March 2017

- Safety:
 - Rigging
 - Line of Fire Accidents and Prevention
 - Hand/Power Tools
- Environmental:
 - Environmental Root Cause Analysis
 - Storm Water

5.0 Facility Maintenance

Throughout the quarter, significant routine and preventative maintenance was performed. HDR considers that the Facility is implementing an effective maintenance regimen, and is performing routine and preventative maintenance, along with selected equipment replacements in a timely manner. CAAI monthly maintenance reports provide a detailed account of maintenance performed.

Beginning January 21, 2017 Boiler No. 1 experienced 152.3 hours of downtime, and beginning January 22, 2017 Turbine Generator No. 1 experienced 24.0 hours of downtime for a scheduled maintenance. Some significant maintenance items completed during the outages are as follows:

- Replacement of six (6) broken grate bars
- Re-plating of the feed chute damper door
- Repair of a leak in the No. 1 Slurry Supply Piping to the SDA
- Change-out of four (4) Sootblower elements on G9B Nos. 3, 4, 11, and 12
- Change-out of the Sootblower bypass valves
- Re-plating of the bottom four (4) feet of the feed chute hopper

- Repair of a leak in the lower feed chute water jacket
- Replacement of the valves on the No. 1 Turbine Exhaust Relief Fill Valve
- Repair of a leak in the coupling on the supply side of the No. 1 Primary Ejector
- Repair of one (1) of the APC stack Test Ports

Beginning February 25, 2017 Boiler No. 2 experienced 168.0 hours of downtime for a scheduled maintenance outage. Some significant maintenance items completed during the outage are as follows:

- Re-plating of the feed chute damper door
- Re-packing of the No. 2 Attenuator Valve
- Repair of a small crack in the superheater hopper above the top double dump valve
- Replacement of the feed chute upper water box and float
- Re-packing of the Under Fire Air Fan Bearings and Coupling
- Replacement of the Over Fire Air Fan Motor and repacking of the bearings and coupling
- Repair of a hole in the E-Cell Baghouse Hopper
- Replacement of all six (6) baghouse screw conveyor troughs, bearings, and seals
- Installation of two (2) new furnace view ports on the fourth floor
- Replacement of three (3) broken grate bars on the run 2 side
- Replacement of eight (8) Sootblower elements (G9B Nos. 2, 3, 4, 6, 7, 8, 11, and 13)
- Replacement of 40 tube shields
- Repair of two (2) test ports on the Induced Draft Fan Inlet Duct
- Replacement of the auxiliary burner slide gate
- Repair of many holes in the upper ash discharger door
- Replacement of one (1) wear plate in the ash discharger
- Replacement of the piping and cam lock fittings for the semi-dry ash nozzles

Beginning March 3, 2017, the Facility experienced a Cold Iron Outage lasting approximately three (3) days for a Scheduled Cold Iron Outage. Some significant maintenance items completed during the outage are as follows:

- Change-out of the lime slurry mixer shaft, blades, gear box, and motor
- Tie in of the new fuel oil pump piping in the ash bay
- Replacement of the cooling tower makeup valve (FCV-851)
- Repair of the cooling tower make-up bypass line
- Replacement of the Fisher Valve (PCV-905)
- Replacement of the inlet valve to PCV-905
- Repacking of LCV-831
- Performed the five year safety valve check on the aqueous ammonia silo safety valve
- Repair of a leak on the No. 2 Boiler Guardian Bypass Valve
- Replacement of the multi-port valve
- Replacement of the Deaerator Tank Safety Valve
- Removal and reposition of the No. 2 Turbine Generator Low Pressure (TGLP) Extraction Manual Isolation Valve
- Repacking of FCV-801 Chain Operated Valve to the dump condenser
- Repacking of the FCV-705 Manual Isolation Valve, and inlet isolation valve
- Replacement of the drain valve on the bottom of FCV-755
- Replacement of the bypass valves around FCV-705 isolation
- Replacement of the front mounting assembly and poured concrete for the ferrous winch cable front pulley mount
- Replacement of the isolimiter transformer for the DCS UPS System
- Installation of a new vertical electrical section to the EMCC for additional power, and meggered the gear
- Completion of magnetic particle testing on all Under Fire Air Fans, Over Fire Air Fans, Induced Draft Fans, Make-up Tank, and Deaerator

- Completion of electrical switchgear testing and cleaning for tech standards compliance
- Inspection of the Continuous Blow-down (CBD) Tank
- Inspection and completion of Ultrasonic Thickness (UT) readings in the slurry tank
- Inspection and completion of UT readings on the Ammonia Tank
- Emptied and cleaned the cooling tower basin
- Power down of the PCU Cabinets, pulled electronic boards, vacuumed out the cabinets, and cleaned the boards with compressed nitrogen
- Replacement of all the fingers on the 13.8 kV Utility tie Breaker PT drawers
- Installation of the new 13.8 kV tie breakers on the utility tie, Nos. 1 and 2 generator breakers, and installation of a new remote racking device
- Replacement of the low-low level trip switch on the Deaerator

Beginning March 5, 2017 Boiler No. 3 experienced 168.0 hours of downtime for a scheduled maintenance outage. Some significant maintenance items completed during the outage are as follows:

- Installation of two (2) new furnace viewports on the fourth floor and replacement of tubes around them
- Replacement of the feed chute upper water box
- Replacement of four (4) broken grate bars
- Replacement of six (6) soot blower elements: G9B Nos. 3, 4, 5, 6, 10, and 12
- Replacement of 20 tube shields
- Replacement of both soot blower bypass valves
- Repair of a leak on the Carbon System and installation of a new eductor
- Replacement of the auxiliary burner slide gate
- Change-out of 3 wear plates in the ash discharger and re-plating of approximately half of the incline roof
- Change-out of both feeder hydraulic cylinders and also the seal tubes

In addition to the scheduled maintenance, CAAI reports that 1,135 preventative maintenance actions were completed during the quarter.

5.1 Availability

Facility availabilities for Q3FY17 are shown in Table 5. According to CAAI reports, the average unit availabilities for Boiler Nos. 1, 2, and 3 for Q3FY17 were 91.4%, 90.9%, and 92.8%, respectively. The three-boiler average availability during the quarter was 91.7%, which was negatively impacted by scheduled maintenance and the cold iron outage experienced by the Facility throughout the quarter.

During Q3FY17, the average availability for Turbine Generator Nos. 1 and 2 was 97.3%, and 98.9%, respectively. The two-turbine generator average availability during the quarter was 98.1%, which is excellent.

Table 5: Quarterly Facility Unit Availabilities

Availability	Q1FY17 Average	Q2FY17 Average	Q3FY17 Average	FY17 YTD Average
Boiler No. 1	97.7%	97.9%	91.4%	95.7%
Boiler No. 2	94.6%	99.6%	90.9%	95.1%
Boiler No. 3	98.7%	94.3%	92.8%	95.3%
Avg.	97.0%	97.3%	91.7%	95.3%
Turbine No. 1	100.0%	100.0%	97.3%	99.1%
Turbine No. 2	100.0%	100.0%	98.9%	99.6%
Avg.	100.0%	100.0%	98.1%	99.4%

5.2 Downtime Summary

Table 6: Boiler Downtime – Q3FY17

Boiler Number	Outage Begin Date	Outage End Date	Hours Unavailable	Downtime Classification	Reason Unavailable
1	1/21/17	1/27/17	152.3	Scheduled	Scheduled Boiler Outage
1	1/28/17	1/28/17	24.0	Standby	Preventative measure taken to avoid exceeding 350,000 ton rolling 12-month process limit
2	2/21/17	2/22/17	29.0	Standby	Preventative measure taken to avoid exceeding 350,000 ton rolling 12-month process limit
2	2/25/17	3/3/17	168.0	Scheduled	Scheduled Boiler Outage
1	3/3/17	3/3/17	4.7	Standby	Cold Iron Outage
3	3/3/17	3/3/17	24.0	Standby	Cold Iron Outage
1	3/4/17	3/4/17	24.0	Scheduled	Cold Iron Outage
2	3/4/17	3/4/17	24.0	Scheduled	Cold Iron Outage
3	3/4/17	3/4/17	24.0	Scheduled	Cold Iron Outage
1	3/5/17	3/5/17	20.8	Standby	Cold Iron Outage
2	3/5/17	3/5/17	24.0	Standby	Cold Iron Outage
3	3/5/17	3/5/17	17.0	Standby	Cold Iron Outage
3	3/5/17	3/10/17	120.2	Scheduled	Scheduled Boiler Outage
1	3/9/17	3/9/17	16.0	Unscheduled	Grate Bar Repairs
3	3/15/17	3/16/17	16.0	Unscheduled	Water Wall Tube Repair
Total Unscheduled Downtime			32.0 Hours		
Total Scheduled Downtime			512.5 Hours		
Total Standby Downtime			143.5 Hours		
Total Downtime			688.0 Hours		

Table 7: Turbine Generator Downtime – Q3FY17

Turbine Generator Number	Outage Begin Date	Outage End Date	Hours Unavailable	Downtime Classification	Reason Unavailable
1	1/22/17	1/22/17	24.0	Scheduled	Scheduled Turbine Generator Outage
1	1/23/17	1/23/17	24.0	Standby	Preventative measure taken to avoid exceeding 350,000 ton rolling 12-month process limit
2	1/24/17	1/28/17	115.9	Standby	Preventative measure taken to avoid exceeding 350,000 ton rolling 12-month process limit
2	2/26/16	3/3/17	135.0	Standby	Preventative measure taken to avoid exceeding 350,000 ton rolling 12-month process limit
1	3/3/17	3/3/17	4.7	Standby	Cold Iron Outage
1	3/4/17	3/4/17	24.0	Scheduled	Cold Iron Outage
2	3/4/17	3/4/17	24.0	Scheduled	Cold Iron Outage
1	3/5/17	3/6/17	32.7	Standby	Cold Iron Outage
2	3/5/17	3/6/17	31.3	Standby	Cold Iron Outage
1	3/16/17	3/16/17	11.5	Unscheduled	Condenser Tube Failure
Total Unscheduled Downtime			11.5 Hours		
Total Scheduled Downtime			72.0 Hours		
Total Standby Downtime			343.6 Hours		
Total Downtime			427.1 Hours		

5.3 Facility Housekeeping

CAAI is performing Facility housekeeping and maintaining plant cleanliness in accordance with acceptable industry practices. A site inspection was conducted in February 2017. At the time of the inspection, new deficiencies were recorded and prior deficiencies were given a status update. Photos of interest from the inspection are depicted in Appendix B. The Facility housekeeping ratings from the February 2017 inspection are presented in Table 8.

Table 8: Facility Housekeeping Ratings – February 2017

Facility Area	Acceptable	Needs Improvement	Unacceptable
Tipping Floor	√		
Citizen's Drop-off Area	√		
Tipping Floor Truck Exit	√		
Front Parking Lot	√		
Rear Parking Lot	√		
Boiler House Pump Room	√		
Lime Slurry Pump Room	√		
Switchgear Area	√		
Ash Load-out Area	√		
Vibrating Conveyor Area	√		
Ash Discharger Area	√		
Cooling Tower Area	√		
Truck Scale Area	√		
SDA/FF Conveyor Area	√		
SDA Penthouses	√		
Lime Preparation Area	√		
Boiler Drum Levels	√		
Turbine Room	√		
Electrical Room	√		

6.0 Environmental

The air pollution control equipment maintained emission concentrations well within the established regulations. Average Continuous Emission Monitoring System (CEMS) data collected for each monthly period during Q3FY17 are summarized in Appendix A. No permit deviations were reported by the Facility during Q3FY17.

On August 8, 2014, CAAI sent a letter to the Virginia Department of Environmental Quality (VADEQ) requesting relief from the steam permit limit requirements in the Facility's Title V and PSD permits. These requested changes relate to the permit values established for the calculated steam-to-waste ratio, which has resulted in a reduction of MSW throughput. In recent discussions, CAAI indicated that it is re-evaluating options to the proposed permit changes, and will provide further updates on this issue.

6.1 Nitrogen Oxide Emissions

During Q3FY17, the monthly emission concentrations of nitrogen oxides (NO_x) averaged 164.7 ppmdv, 160.7 ppmdv and 160.3 ppmdv for Boiler Nos. 1, 2, and 3, respectively. CAAI continues to operate the units at the lower (160 ppmdv) set-points, except immediately following a scheduled outage and associated boiler cleaning.

6.2 Sulfur Dioxide Emissions

During Q3FY17 the monthly emission concentration of stack sulfur dioxide (SO₂) averaged 1.3 ppmdv, 1.0 ppmdv, and 1.0 ppmdv for Boiler Nos. 1, 2, and 3, respectively. All of these stack SO₂ concentrations are significantly below the 40 CFR Subpart Cb requirement of 29 ppmdv @ 7% O₂.

6.3 Carbon Monoxide Emissions

During Q3FY17, the average CO emission concentrations on Boiler Nos. 1, 2, and 3 were 36.7 ppmdv, 32.3 ppmdv, and 31.0 ppmdv, respectively, and all are

well within permit limits (100 ppm_{dv}, hourly average). However, as reported by HDR during the May 2016 FMG Meeting, and continuing through Q3FY17, CO averages have been trending higher over the past year of operations on all three boilers, and CAAI has been requested to investigate and mitigate this uptrend. While not a permit issue, it is indicative of poorer boiler performance and combustion efficiency.

6.4 Opacity

During Q3FY17, the average opacity for Boiler Nos. 1, 2, and 3 was 0.7%, 0.7%, and 0.1% respectively. All of these averages are significantly below the 10% (6-minute) average permit limit.

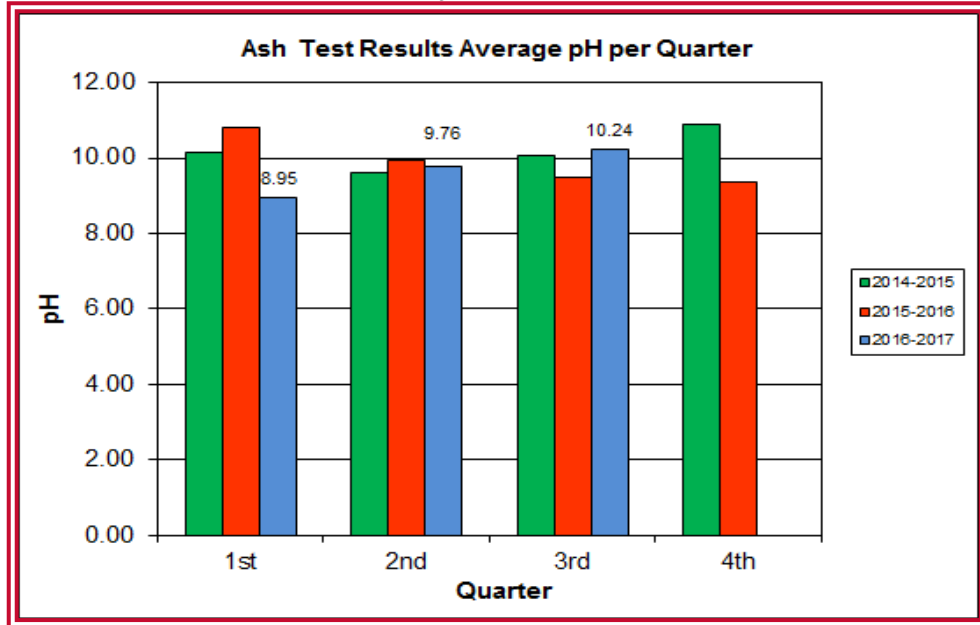
6.5 Daily Emissions Data

Appendix A, Tables 9, 10, and 11 tabulate the monthly average, maximum, and minimum emissions data for each unit during Q3FY17. Excursions, if any, would appear in bold print. It should be noted that these tabulations of monthly averages, reported here for informational purposes, are based on tabulations of daily averages. These averages do not correlate with official reports to the regulatory agencies because of differences in averaging times and other technical differences required by agency report formats.

6.6 Ash System Compliance

The dolomitic lime feed rate is adjusted periodically in order to maintain a desired ash pH level in the range of 8.0 to 11.0. Since initial startup, the feed rate has varied from between 1 to 9 lbs per ton each month. Ash Toxicity (TCLP) tests were not performed during Q3FY17. CAAI samples ash monthly in-house and documents pH reading to adjust dolomitic lime feed rate. The results for the ash pH tests are found below in Chart 15 where each quarter is represented by the average of the respective monthly readings. During Q3FY17, the average ash pH for in-house tests was 10.2.

Chart 15: Quarterly Ash Test Results



APPENDIX A FACILITY CEMS DATA

Table 9: Unit #1 Monthly Summary for Reportable Emissions Data

Group#-Channel#		G8-C35	G8-C28	G8-C8	G8-C4	G8-C12	G8-C34	G8-C37	G8-C40	G8-C39
Long Descrip.		U-1 Steam	U-1 Econ	U-1 Stack	U-1 Stack	U-1 Stack	U-1 Opaci	U-1 FF In	U-1 Carbo	U-1 Lime
Short Descrip.		SteamFI	SO ₂ ec	SO ₂ sc	COsc	NO _x sc	Opacity	FF InTemp	Carblnj	LimeFlow
Units		K#/Hr	ppmc	ppm	ppmc	ppmc	%	deg F	#/hr	gpm
Range		0-100	0-2000	0-500	0-4000	0-1000	0-100	100-500	0-50	0-20
Jan - 17	AVG	78.0	19.0	0.0	35.0	164.0	1.3	297.0	16.2	3.1
	Max	82.4	84.0	2.0	48.0	184.0	2.0	300.0	17.0	3.9
	Min	70.7	6.0	0.0	26.0	159.0	0.1	295.0	16.1	2.9
Feb - 17	AVG	85.2	43.0	2.0	40.0	167.0	0.2	300.0	16.2	3.4
	Max	86.9	97.0	8.0	61.0	177.0	0.6	301.0	16.4	4.4
	Min	81.8	20.0	0.0	32.0	157.0	0.0	300.0	16.1	3.0
Mar - 17	AVG	85.1	38.0	2.0	35.0	163.0	0.5	300.0	16.0	3.3
	Max	90.4	94.0	10.0	45.0	171.0	1.3	304.0	16.2	4.1
	Min	68.7	17.0	0.0	17.0	149.0	0.1	291.0	15.0	2.6
Quarter Average		82.8	33.3	1.3	36.7	164.7	0.7	299.0	16.1	3.3
Quarter Max Value		90.4	97.0	10.0	61.0	184.0	2.0	304.0	17.0	4.4
Quarter Min Value		68.7	6.0	0.0	17.0	149.0	0.0	291.0	15.0	2.6
Limits:		98	NA	29	100	205	10	333	16(a)	

(a) Carbon flow limit is a minimum value

* Note: The data reported herein represent 24 hour average data for all parameters. Emissions excursions that are measured on shorter time intervals (i.e., 4-hour block averages for CO) do not correlate with the 24 hour average data reported above.

Table 10: Unit #2 Monthly Summary for Reportable Emissions Data

Group#-Channel#		G8-C35	G8-C28	G8-C8	G8-C4	G8-C12	G8-C34	G8-C37	G8-C40	G8-C39
Long Descrip.		U-2 Steam	U-2 Econ	U-2 Stack	U-2 Stack	U-2 Stack	U-2 Opaci	U-2 FF In	U-2 Carbo	U-2 Lime
Short Descrip.		SteamFI	SO ₂ ec	SO ₂ sc	COsc	NO _x sc	Opacity	FF InTemp	Carblnj	LimeFlow
Units		K#/Hr	ppmc	ppm	ppmc	ppmc	%	deg F	#/hr	gpm
Range		0-100	0-2000	0-500	0-4000	0-1000	0-100	100-500	0-50	0-20
Jan - 17	AVG	80.8	19.0	0.0	39.0	159.0	0.5	300.0	16.1	3.2
	Max	88.0	40.0	4.0	54.0	172.0	1.2	301.0	16.2	3.4
	Min	72.1	9.0	0.0	28.0	155.0	0.1	299.0	15.8	3.0
Feb - 17	AVG	75.2	30.0	1.0	28.0	158.0	0.5	300.0	16.1	3.2
	Max	86.7	95.0	5.0	42.0	161.0	0.9	301.0	17.6	4.3
	Min	54.8	13.0	0.0	9.0	156.0	0.2	299.0	15.9	3.0
Mar - 17	AVG	91.1	54.0	2.0	30.0	165.0	1.1	298.0	15.9	3.3
	Max	93.3	80.0	10.0	42.0	178.0	1.7	300.0	16.2	4.4
	Min	87.2	37.0	0.0	23.0	157.0	0.5	298.0	14.8	3.0
Quarter Average		82.4	34.3	1.0	32.3	160.7	0.7	299.3	16.0	3.2
Quarter Max Value		93.3	95.0	10.0	54.0	178.0	1.7	301.0	17.6	4.4
Quarter Min Value		54.8	9.0	0.0	9.0	155.0	0.1	298.0	14.8	3.0
Limits:		96	NA	29	100	205	10	330	16(a)	

(a) Carbon flow limit is a minimum value

* Note: The data reported herein represent 24 hour average data for all parameters. Emissions excursions that are measured on shorter time intervals (i.e., 4-hour block averages for CO) do not correlate with the 24 hour average data reported above.

Table 11: Unit #3 Monthly Summary for Reportable Emissions Data

Group#-Channel#		G8-C35	G8-C28	G8-C8	G8-C4	G8-C12	G8-C34	G8-C37	G8-C40	G8-C39
Long Descrip.		U-3 Steam	U-3 Econ	U-3 Stack	U-3 Stack	U-3 Stack	U-3 Opaci	U-3 FF In	U-3 Carbo	U-3 Lime
Short Descrip.		SteamFI	SO ₂ ec	SO ₂ sc	COsc	NO _x sc	Opacity	FF InTemp	CarbInj	LimeFlow
Units		K#/Hr	ppmc	ppm	ppmc	ppmc	%	deg F	#/hr	gpm
Range		0-100	0-2000	0-500	0-4000	0-1000	0-100	100-500	0-50	0-20
Jan - 17	AVG	82.4	23.0	1.0	33.0	159.0	0.0	298.0	16.1	3.2
	Max	90.1	58.0	13.0	44.0	162.0	0.0	298.0	16.6	3.8
	Min	74.4	12.0	0.0	24.0	158.0	0.0	297.0	16.0	2.9
Feb - 17	AVG	80.0	23.0	0.0	29.0	159.0	0.0	298.0	16.1	3.1
	Max	84.7	49.0	3.0	36.0	161.0	0.0	301.0	16.3	3.2
	Min	75.0	10.0	0.0	21.0	158.0	0.0	296.0	16.1	3.0
Mar - 17	AVG	89.4	58.0	2.0	31.0	163.0	0.2	298.0	16.0	3.3
	Max	93.7	92.0	8.0	40.0	173.0	0.7	299.0	16.4	4.2
	Min	78.7	30.0	0.0	17.0	156.0	0.0	297.0	15.0	3.0
Quarter Average		83.9	34.7	1.0	31.0	160.3	0.1	298.0	16.1	3.2
Quarter Max Value		93.7	92.0	13.0	44.0	173.0	0.7	301.0	16.6	4.2
Quarter Min Value		74.4	10.0	0.0	17.0	156.0	0.0	296.0	15.0	2.9
Limits:		98	NA	29	100	205	10	327	16(a)	

(a) Carbon flow limit is a minimum value

* Note: The data reported herein represent 24 hour average data for all parameters. Emissions excursions that are measured on shorter time intervals (i.e., 4-hour block averages for CO) do not correlate with the 24 hour average data reported above.

APPENDIX B

SITE PHOTOS – FEBRUARY 2017



Figure 1: Housing Damaged of Self Contained Breathing Apparatus (SCBA) – North Charging Floor Entrance – New Deficiency



Figure 2: Tipping Floor Center Bay concrete apron eroded and rebar exposed – New Deficiency



Figure 3: New refuse pit warning laser lights – red line projected near refuse pit edge



Figure 4: Ceiling mounted laser projector for refuse pit warning laser system – multiple units installed all the way across Tipping Enclosure Roof



Figure 5: General Facility Photo – Northeast Corner



Figure 6: General Facility Photo



Figure 7: Ash Trailer Canopy



Figure 8: Ammonia Storage Tank



Figure 9: Administration Office Space Renovations – In Progress



Figure 10: First floor restrooms completely renovated



Figure 11: Administration Office 1st Floor Lobby Renovations – In Progress



Figure 12: New Covanta Sign – Freshly painted



Figure 13: Outage materials staged throughout Barn Door Elevation – awaiting Spring Outages



Figure 14: General Photo – Economizer Area

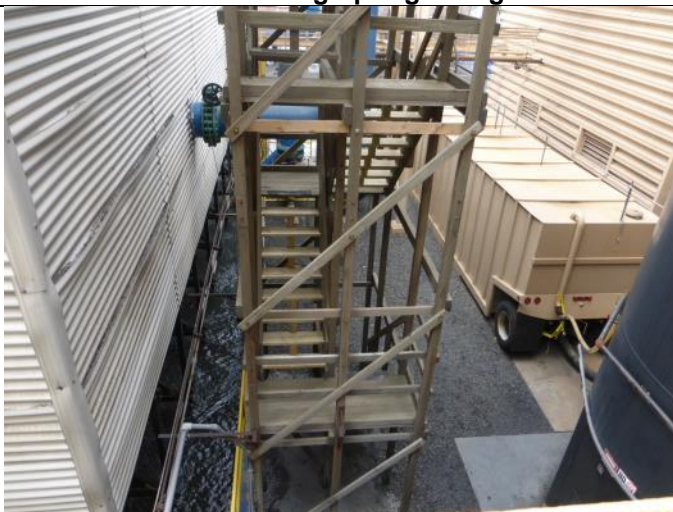


Figure 15: Multiple Cooling Tower Access Stairs replaced with new pressure treated wood – Satisfies Deficiency Item 12 – Reported in November 2016



Figure 16: Grate bars awaiting installation during Spring Outages



Figure 17: Circulating Water Pumps – east side of Cooling Tower



Figure 18: Tipping Floor – General Photo



Figure 19: Metal Roll-Off



Figure 20: Citizen's Drop – Roll-off



Figure 21: Firing Aisle

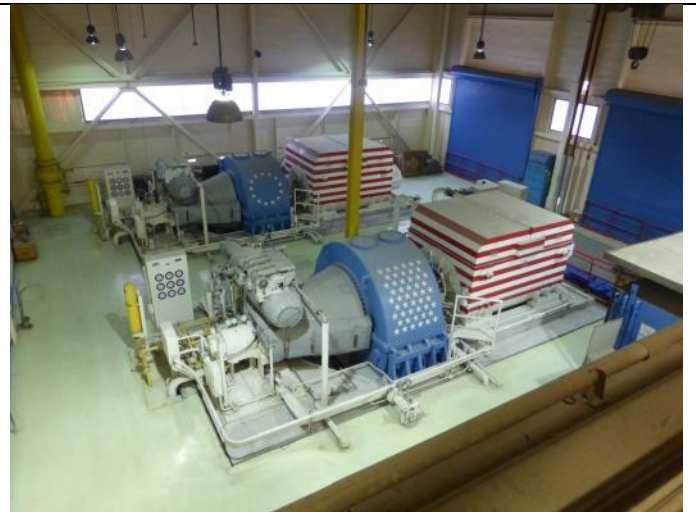


Figure 22: Turbine Generator Enclosure



Figure 23: Cooling Towers from SDA Penthouse



Figure 24: Deaerator



Figure 25: SCBA at north Charging Floor Entrance



Figure 26: Fire House at east Tipping Enclosure Wall – No Issues Observed



Figure 27: Charging Floor Fire Cannon on West side of Refuse Pit Parapet – No Issues Observed



Figure 28: Charging Floor Fire Cannon, north end of Charging Floor - No Issues Observed



Figure 29: Fire Hose north end of Charging Floor – No Issues Observed

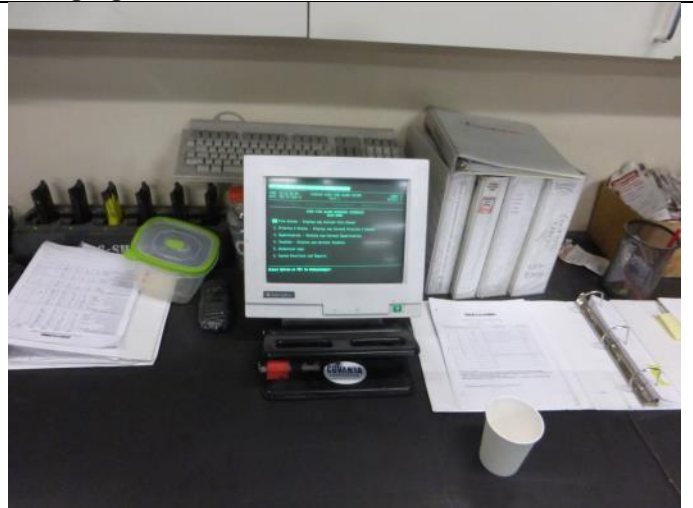


Figure 30: Fire Alarm Operator Interface in Control Room - CAAI 2017 Budget Item to upgrade