



Alexandria Arlington Resource Recovery Facility

Fiscal Year 2020
Third Quarter Operations Report

May 2020



Prepared by:
HDR Engineering, Inc.
4830 W. Kennedy Blvd., Suite 400
Tampa, Florida 33609-2548

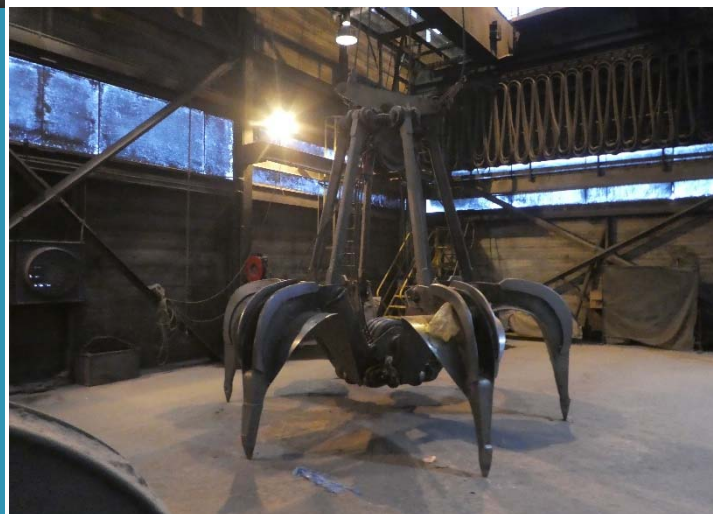


Table of Contents

Section No.	Page No.
1.0 PURPOSE OF REPORT	4
2.0 EXECUTIVE SUMMARY.....	4
3.0 FACILITY INSPECTION AND RECORDS REVIEW.....	5
4.0 FACILITY PERFORMANCE	8
4.1 Utility and Reagent Consumptions.....	20
4.2 Safety & Environmental Training.....	21
5.0 FACILITY MAINTENANCE.....	22
5.1 Availability	24
5.2 Facility Housekeeping.....	25
6.0 ENVIRONMENTAL	26
6.1 Low NO _x Technology Implementation	26
6.2 Nitrogen Oxide Emissions.....	26
6.3 Sulfur Dioxide Emissions	27
6.4 Carbon Monoxide Emissions	27
6.5 Opacity.....	27
6.6 Daily Emissions Data	27
6.7 Ash System Compliance	27
APPENDIX A FACILITY CEMS DATA.....	29
APPENDIX B PHOTOS	32

Front Cover Photos

Top: General Facility Photo from Southwest Corner – Up Eisenhower Avenue

Middle: Boiler No. 1 Grates Cleaned off & Scaffolding Installed – Boiler No. 1 Outage in Progress

Bottom: North Refuse Crane Grapple at North end of Charging Floor during Boiler No. 1 Outage

List of Tables

Table No.	Page No.
Table 1: Summary of Inspection Report Deficiencies	7
Table 2: Quarterly Performance Summaries	14
Table 3: Waste Delivery Classification.....	15
Table 4: Facility Utility and Reagent Consumptions	20
Table 5: Quarterly Facility Unit Availabilities.....	24
Table 6: Boiler Downtime – Q3FY20	24
Table 7: Turbine Generator Downtime – Q3FY20	25
Table 8: Facility Housekeeping Ratings – February 2020	25
Table 9: Unit #1 Monthly Summary for Reportable Emissions Data.....	30
Table 10: Unit #2 Monthly Summary for Reportable Emissions Data.....	31
Table 11: Unit #3 Monthly Summary for Reportable Emissions Data.....	32

List of Charts

Chart No.	Page No.
Chart 1: Tons of Waste Processed.....	8
Chart 2: Tons of Ash Produced per Ton of Waste Processed.....	9
Chart 3: Ferrous Recovery Rate	10
Chart 4: Steam Production.....	10
Chart 5: 12-Month Rolling Steam Production	11
Chart 6: Steam Production Rate	12
Chart 7: Calculated Waste Heating Value	13
Chart 8: Cumulative Total Waste Delivery	16
Chart 9: Gross Electrical Generation	16
Chart 10: Gross Conversion Rate.....	17
Chart 11: Net Conversion Rate.....	18
Chart 12: Net Conversion Rate.....	18
Chart 13: Gross Turbine Generator Conversion Rate	19
Chart 14: Quarterly Ash Test Results	28

List of Figures

Figure No.	Page No.
Figure 1: Siding on north side of Baghouse No. 2 Deteriorated – New Deficiency.....	34
Figure 2: Two-way Traffic Sign uprooted on Facility Entrance Road – New Deficiency	34
Figure 3: Light Fixtures (typical of 2) out at Penthouse Elevation of Boiler House – New Deficiency	34
Figure 4: Warning signs on Tipping Floor Columns missing/faded – New Deficiency.....	34
Figure 5: Light fixtures (typical of 2) out, north end of Tipping Floor Enclosure – New Deficiency.....	34
Figure 6: Siding on east side of Tipping Floor Enclosure corroded – New Deficiency	34
Figure 7: Boiler No. 1 Grates Cleaned off and Scaffolding Installed – Boiler No. 1 Outage in Progress.....	35
Figure 8: New Grate Bars Staged for Installation – Boiler No. 1 Outage in Progress	35
Figure 9: Ferrous Drum Magnet – Minimal Gap Between Magnet and Main Vibrating Conveyor.....	35
Figure 10: Baghouse No. 1 Area – Old Screw Conveyor Troughs for disposal – Boiler No. 1 Outage in Progress	35
Figure 11: Baghouse Compartment Aisle – No issues Observed.....	35
Figure 12: Rotary Atomizer Removed for Cleaning and Maintenance – Boiler No. 1 Outage in Progress.....	35
Figure 13: Cooling Tower from SDA Penthouse.....	36
Figure 14: Scale House & Scales from Turbine Generator Enclosure Roof.....	36
Figure 15: New Larger Boiler No. 2 Over Fire Air Fan Fully In Service – Boiler No. 2 LN Technology Upgrade	36
Figure 16: Turbine Generator Deck – Cleaned up following the Turbine Generator Overhaul that occurred last quarter.....	36
Figure 17: Security Camera Panel and Infrared Detection Camera Panel in Control Room	36
Figure 18: New Automatic Voltage Regulator Cabinet Fully In Service – Turbine Generator No. 1 Overhaul Installation.....	36
Figure 19: Control Panel on New Automatic Voltage Regulator Cabinet.....	37
Figure 20: Spare Crane Grapple Tines Stored Next to Cooling Towers.....	37
Figure 21: Scale House and Scales from Tipping Floor Entrance Roadway.....	37
Figure 22: General Facility Photo – Northeast of Facility on Tipping Floor Entrance	37
Figure 23: White Goods Roll-Off.....	37
Figure 24: Citizen's Drop-off Roll-off.....	37
Figure 25: General Facility Photo – East Side from Fire Station Entrance	38
Figure 26: General Facility Photo – Southwest Corner from UPS Entrance	38
Figure 27: Cooling Tower, Stack, SDAs, and Economizers.....	38
Figure 28: Ash & Ferrous Metal Loading Area – No issues observed.....	38
Figure 29: Refuse Pit, Crane Grapple, and Crane Pulpit from North end of Charging Floor.....	38
Figure 30: Induced Draft Fan, SDA, Dolomitic Lime Silo, and Economizer	38

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
Third	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 2020

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 2020 Fiscal Year. This report is prepared for the third quarter of the 2020 fiscal year and summarizes Facility operations between January 1, 2020 and March 31, 2020. This report identifies the fiscal year beginning on July 1, 2019 as FY20 and the quarter beginning on January 1, 2020 as Q3FY20.

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 Q3FY20. The operation of the Facility, maintenance, safety, and overall cleanliness continue to be above average. Environmental performance was excellent with no reportable environmental excursions experienced during the quarter.

During Q3FY20, the boilers experienced three (3) instances of unscheduled downtime totaling 74.3 hours, and the turbine generators experienced no unscheduled downtime. Boiler No. 1 experienced 22.4 hours of downtime for a scheduled cleaning outage. All three (3) boilers experienced scheduled maintenance outages totaling 533.7 hours of downtime and no scheduled downtime was experienced by the turbine generators. The Facility experienced

no standby time during Q3FY20. A detailed listing of downtime is provided in Section 5.2 of this report.

Average waste processed during the quarter was 900.1 tons per day, or 92.3% of nominal facility capacity. Waste deliveries averaged 902.1 tons per day, which is slightly higher (0.2%) than the burn rate.

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 was slightly lower (0.5%) compared to the corresponding quarter in FY19; steam production decreased (0.8%), and electricity generated (gross) decreased (2.9%) from the corresponding quarter in FY19. The decrease in steam generation is attributable to the decrease (0.6%) in waste heating value, paired with more boiler downtime (150.2 additional hours), and offset by an additional day of operations in February 2020 due to a Leap Year. The decrease in electricity generated (gross) in Q3FY20, is partly due to lower steam production, offset by less turbine generator downtime (113.7 fewer hours), and an additional day of operations in February 2020 due to a Leap Year.

3.0 Facility Inspection and Records Review

In February 2020, 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 and discussed performance issues with CAAI staff. 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 in due course, 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	Pot hole, southeast corner of Ash Trailer Canopy	August 2015	C	Repair road surface	Status Unchanged	Open
2	Pavement spider-cracking at Tipping Floor Entrance	November 2016	C	Resurface section of pavement at Tipping Floor Entrance	Status Unchanged	Open
3	SDA Penthouse No. 3 Door deteriorated at base	November 2017	C	Patch and Paint Door – Replace if necessary	Status Unchanged	Open
4	Roof Ventilation Fan Not Working above Deaerator	May 2019	C	Repair roof ventilation fan	Status Unchanged	Open
5	Diamond Plate Deck Corroded at Boiler No. 3 Opacity Monitor	May 2019	C	Sand, Prime, Paint, and Preserve	Status Unchanged	Open
6	Hand Railing Posts (Typical of Most) on the Cooling Tower Deck Split with bolt exposed	May 2019	A	Replace or install caps on all posts. Consider annual application of protective coatings to increase longevity.	Complete	Closed
7	Deterioration behind lime slurry piping in SDA Penthouse No. 2	August 2019	C	Replace kick-plate and conduct painting preservation measures	Status Unchanged	Open
8	Siding deteriorated beneath Baghouse No. 3 Hoppers	August 2019	C	Replace siding	Status Unchanged	Open
9	Windows missing/damaged on Tipping Floor	November 2019	C	Replace windows	Complete	Closed
10	Siding on north side of Baghouse No. 2 Deteriorated – See Figure 1 (Appendix B)	February 2020	C	Replace siding and conduct painting preservation measures	Status Unchanged	Open
11	Two-way Traffic Sign uprooted on Facility Entrance Road — See Figure 2 (Appendix B)	February 2020	A	Re-install/secure uprooted traffic sign	CAAI reports that this item is complete pending verification.	Open
12	Light Fixtures (typical of 2) out at Penthouse Elevation of Boiler House — See Figure 3 (Appendix B)	February 2020	C	Replace/Repair light fixtures	CAAI reports that this item is complete pending verification.	Open
13	Warning signs on Tipping Floor Columns missing/faded — See Figure 4 (Appendix B)	February 2020	A	Replace missing signs and pressure wash existing signs for improved visibility	CAAI reports that this item is complete pending verification.	Open
14	Light fixtures (typical of 2) out, north end of Tipping Floor Enclosure — See Figure 5 (Appendix B)	February 2020	C	Replace/Repair light fixtures	Status Unchanged	Open
15	Siding on east side of Tipping Floor Enclosure corroded — See Figure 6 (Appendix B)	February 2020	C	Patch siding and conduct painting preservation measures	Status Unchanged	Open

4.0 Facility Performance

Monthly operating data provided by CAAI indicates that 81,905 tons of MSW were processed during Q3FY20, and a total of 82,091 tons of MSW including 3,447 tons of Special Handling Waste (4.2% by weight) were received. Total ash production during the quarter was 16,780 tons, which represents 20.5% of the waste processed by weight. The average uncorrected steam production rate for Q3FY20 was 3.00 tons_{Steam}/ton_{Waste}, which is lower (0.3%) than the corresponding quarter in FY19. The decrease in this metric is attributable to the 0.6% decrease in the quarterly average waste heating value (HHV) calculated by CAAI.

Chart 1: Tons of Waste Processed

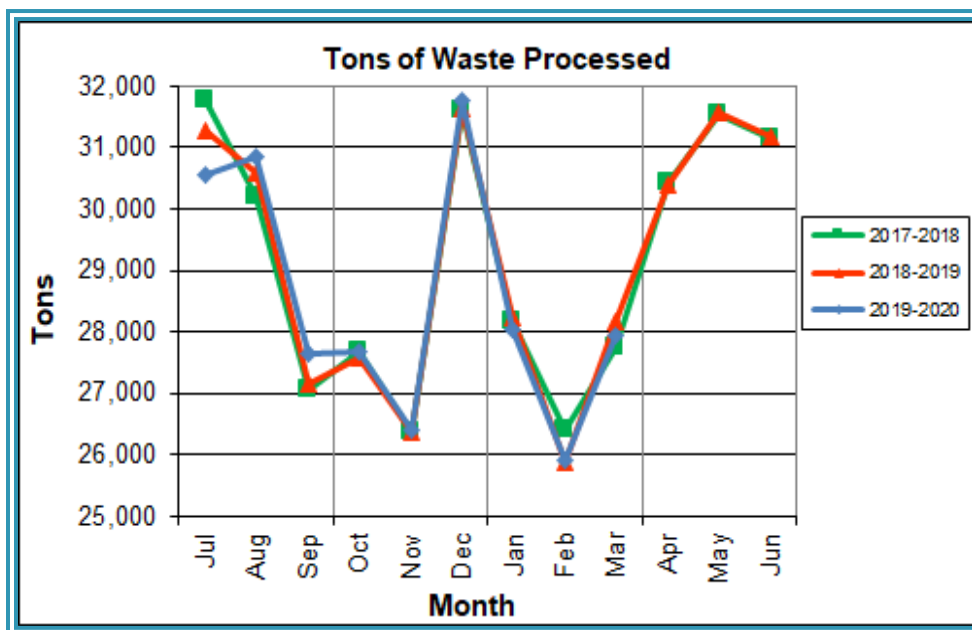


Chart 1 illustrates that Q3FY20 waste processed was slightly lower (0.5%) than the corresponding quarter, Q3FY19. The slight decrease is attributable to more (150.2 additional hours) downtime experienced by the boilers, offset by an additional day of operations in February 2020 due to a Leap Year.

CAAI reported that 414 tipping floor/MSW internal inspections were conducted during the quarter and one (1) notice of violation (NOV) was issued to a hauler in March for a load of steel cable.

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

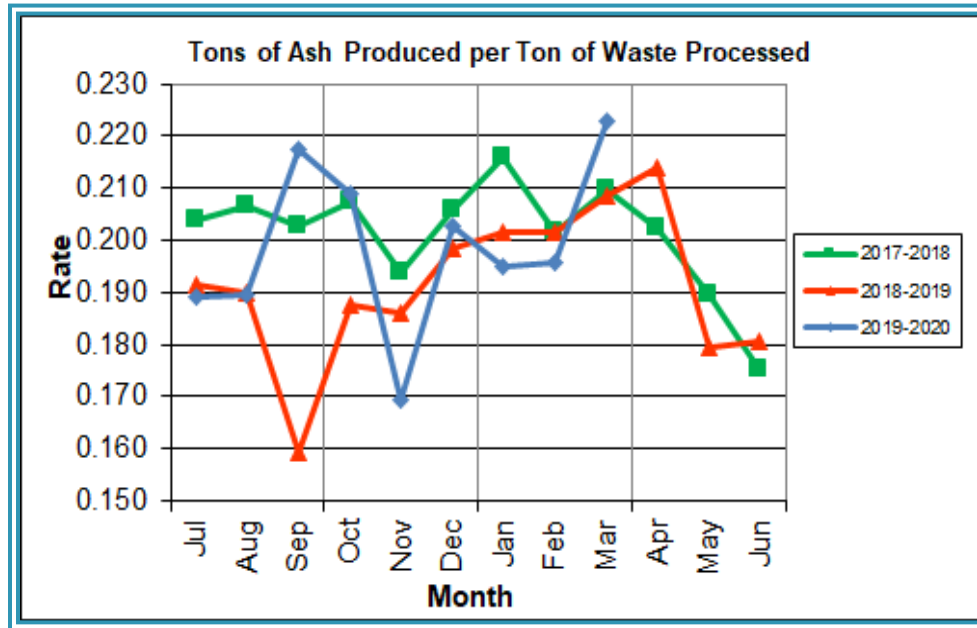


Chart 2 illustrates that the average ash production rate in Q3FY20 was higher (0.1%) at 20.5% of processed waste, compared to the corresponding quarter in FY19 when the rate was 20.4%. The slight increase in this metric is attributable the March 2020 rate which was 22.3% and a 3-year high. CAAI reported that during Q3FY20, it continued processing the recovered metals through a trommel screen to remove some of the residual ash. CAAI indicated that once the ash is removed, it is added back into the monthly ash totals.

Chart 3: Ferrous Recovery Rate

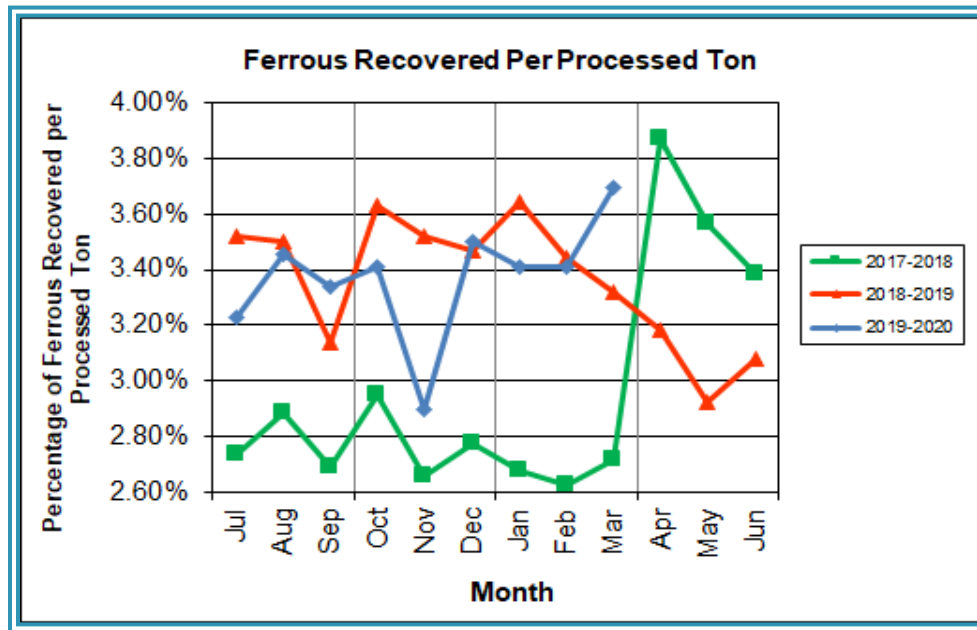
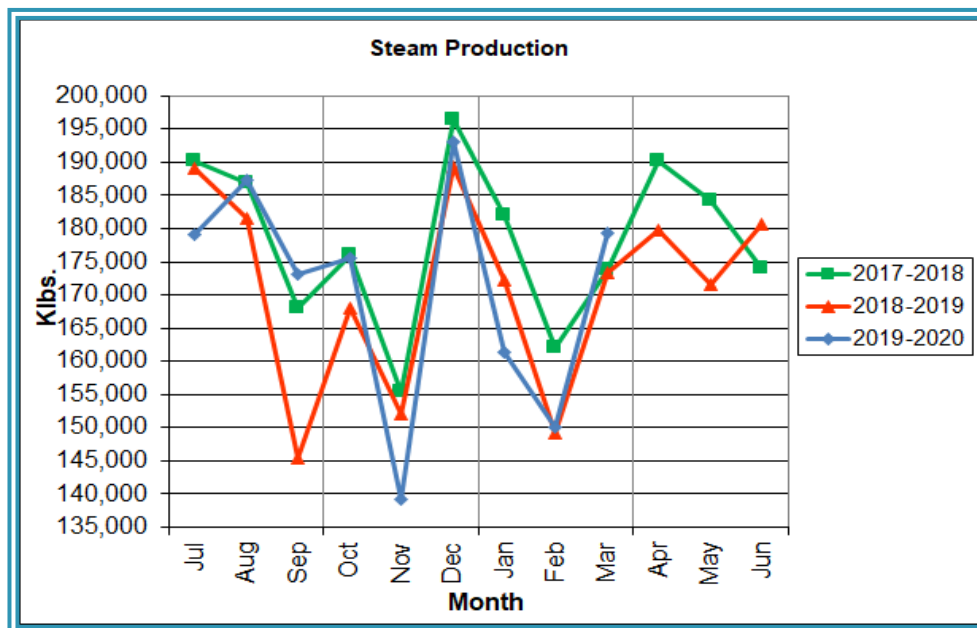


Chart 3 depicts the monthly ferrous metal recovery rate as a percentage of processed MSW tonnage. In Q3FY20, 2,875 tons of ferrous metals were recovered, which is 0.7% higher than the corresponding quarter in FY19 and equivalent to 3.5% of processed waste.

Chart 4: Steam Production



In Chart 4, the total steam production for Q3FY20 was 490,998 klbs, and lower (0.8%) than the corresponding quarter in FY19. The decrease in steam generation

is attributable to the decrease (0.6%) in waste heating value, paired with more boiler downtime (150.2 additional hours) downtime experienced by the boilers, offset by an additional day of operations in February 2020 due to a Leap Year.

Chart 5: 12-Month Rolling Steam Production

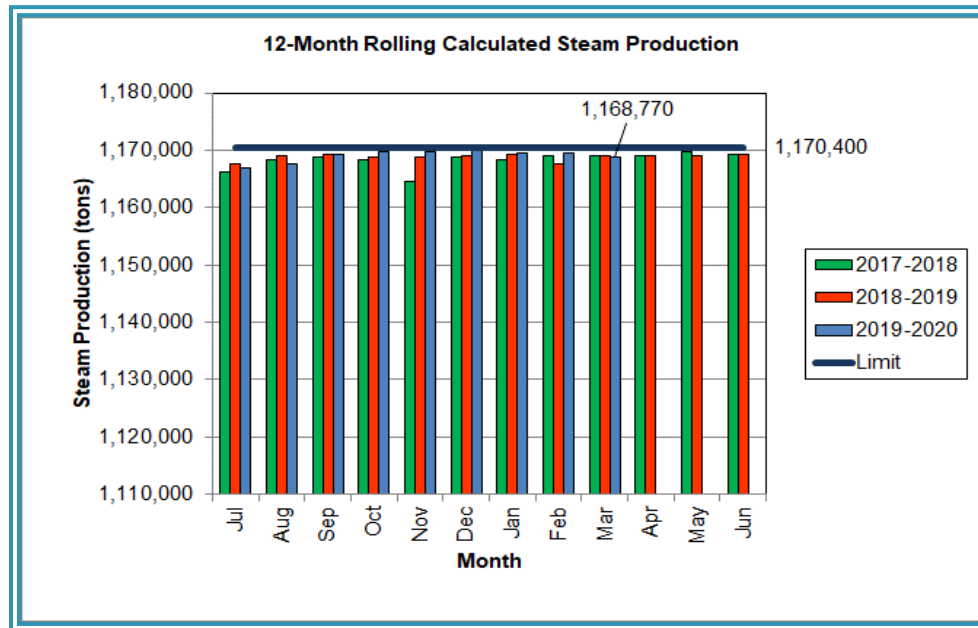
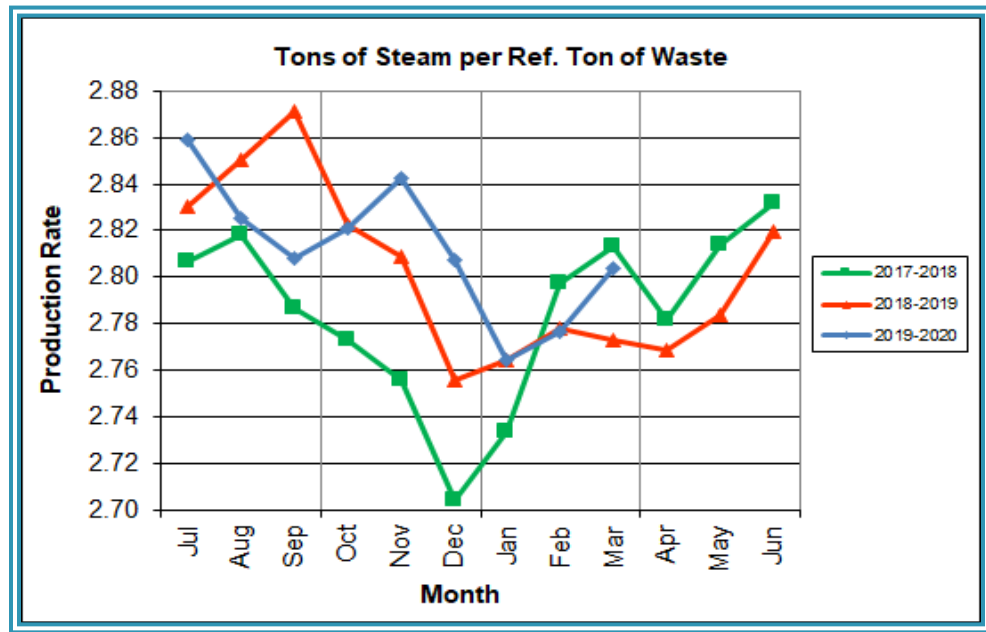


Chart 5 depicts the 12-month rolling steam production total for the quarter ending in March 2020, and for the prior two (2) fiscal years. According to the Title V permit, the annual steam production for the Facility shall not exceed 1,170,400 tons on the basis of an average value of 3.34 lbs. of steam 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 Q3FY20. The 12-month rolling total for steam production ending in March 2020 was 1,168,770 tons which is 99.9% of the limit. Chart 5 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 Q3FY20, this metric tracked higher (0.4%) at 2.78 tons_{steam}/ton_{ref} compared to the corresponding quarter in FY19.

Chart 7: Calculated Waste Heating Value

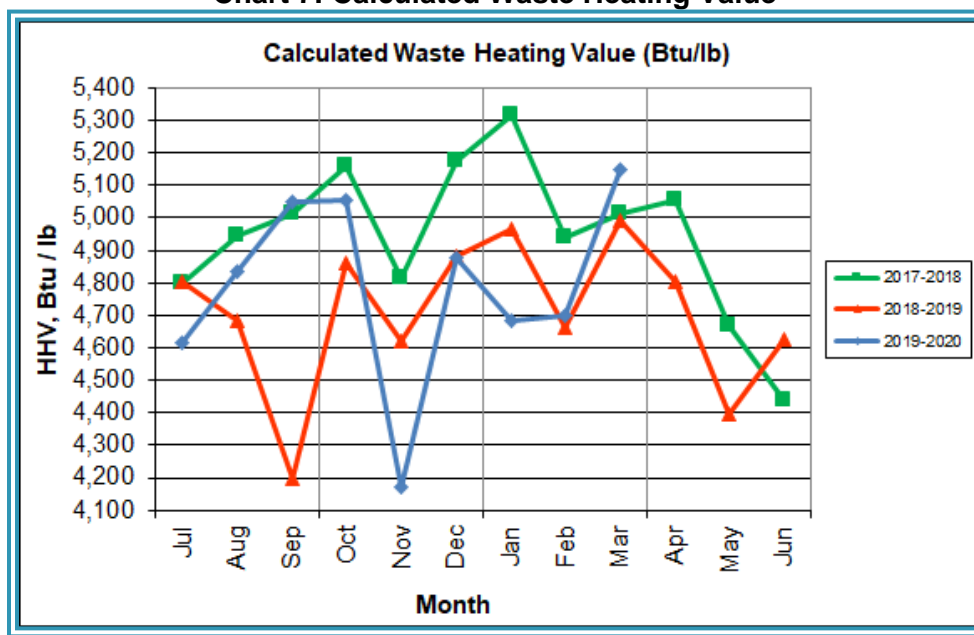


Chart 7 illustrates that Q3FY20 calculated average waste heating value was lower (0.6%) at 4,844 Btu/lb than the corresponding quarter Q3FY19, which averaged 4,873 Btu/lb. Note that the waste heating value in November 2019 of 4,172 Btu/lb was a historical low.

The disparity in average heating value of the fuel compared to the original design value (4,500 Btu/lb) established in the 1980's is one of the reasons that the annual capacity utilization is close to 100% and considerably higher than similar facilities that generally operate in the 90% range (see Section 2.0). In other words, there was sufficient conservatism in the original design of the boiler(s) and their capacity to absorb more heat, and routinely process more MSW, than they were originally rated for.

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)
Q3FY18	Quarterly Totals	82,328	0	17,229	3,014	2,202	517,901	36,100
	January -18	28,181	0	6,084	1,301	755	181,955	12,951
	February -18	26,407	0	5,322	884	693	162,127	11,120
	March - 18	27,740	0	5,823	829	754	173,819	12,029
Q3FY19	Quarterly Totals	82,325	0	16,787	2,592	2,856	494,761	34,931
	January -19	28,251	0	5,696	964	1,029	172,350	12,314
	February -19	25,895	0	5,218	743	891	149,123	10,284
	March - 19	28,179	0	5,873	885	936	173,288	12,333
Q3FY20	Quarterly Totals	81,905	0	16,780	3,447	2,875	490,998	33,705
	January - 20	28,049	0	5,474	1,239	957	161,447	11,230
	February - 20	25,901	0	5,074	1,102	884	150,168	10,062
	March - 20	27,955	0	6,232	1,106	1,034	179,383	12,413
FY20 YTD Totals		256,787	0	51,105	11,097	8,671	1,538,424	105,242
FY19 Totals		350,057	0	67,068	11,778	11,756	2,052,153	142,430
FY18 Totals		350,087	0	70,368	16,431	10,418	2,139,023	150,506

Table 2 presents the production data provided to HDR by CAAL for Q3FY20 on both a monthly and quarterly basis. For purposes of comparison, data for Q3FY18 and Q3FY19 are also shown, as well as FY18, FY19 and FY20 year to date totals.

In comparing quarterly totals, the data shows:

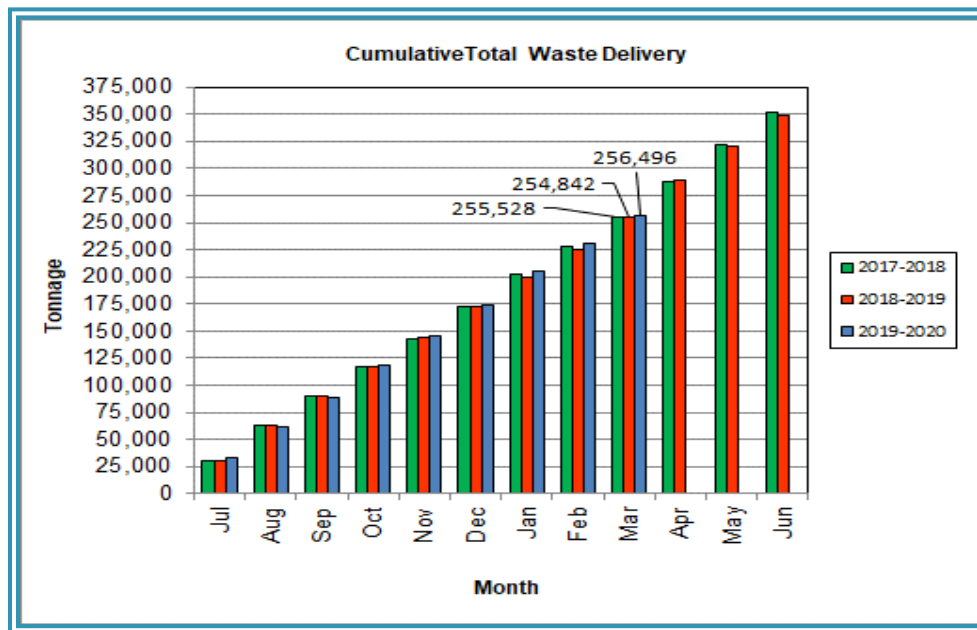
- Less waste was processed in Q3FY20 than Q3FY19 and Q3FY18
- Less steam was generated in Q3FY20 than Q3FY19 and Q3FY18
- Less electricity (net) was generated in Q3FY20 than Q3FY19 and Q3FY18
- More supplemental waste was received in Q3FY20 than Q3FY19 and Q3FY18.

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.

Table 3: Waste Delivery Classification

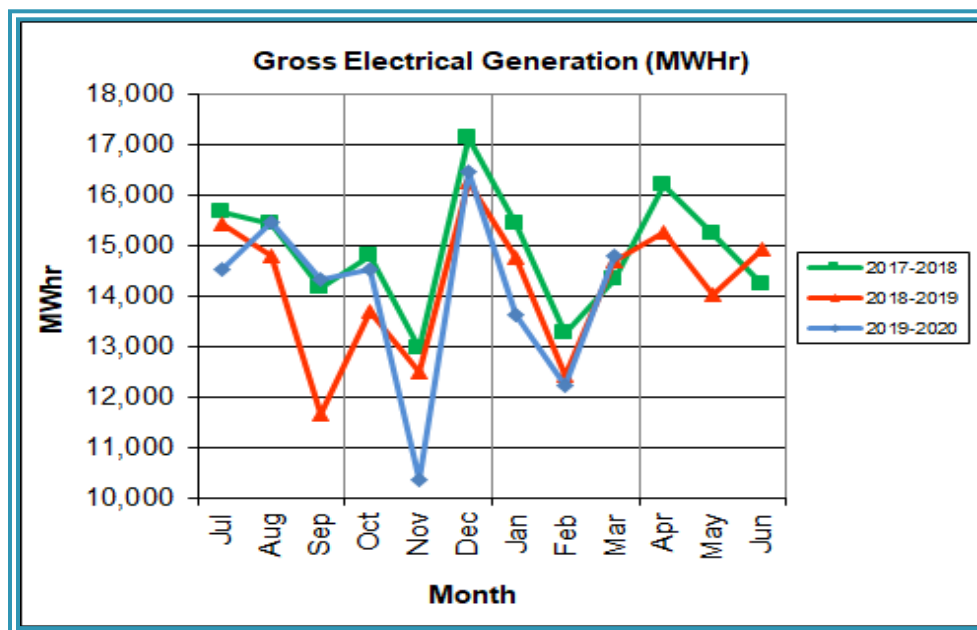
		<u>Jul</u>	<u>Aug</u>	<u>Sep</u>	<u>Oct</u>	<u>Nov</u>	<u>Dec</u>	<u>Jan</u>	<u>Feb</u>	<u>Mar</u>	<u>Apr</u>	<u>May</u>	<u>Jun</u>	<u>Totals</u>	<u>% of Total</u>
FY16	City Waste	1,960	1,563	1,723	1,645	1,685	1,872	1,147	1,619	1,811	2,024	1,950	2,220	21,219	6.03%
	County Waste	3,627	2,880	2,832	2,869	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>Totals</u>	<u>% of Total</u>
FY17	City Waste	1,678	1,836	1,668	1,722	1,817	1,708	1,597	1,452	1,604	1,882	2,170	2,002	21,136	6.06%
	County Waste	2,386	2,469	2,370	2,184	2,321	2,289	2,287	2,016	2,517	2,371	2,877	2,889	28,976	8.31%
	Municipal Solid Waste	24,862	26,976	22,760	22,110	21,598	25,996	24,218	20,888	20,401	25,004	26,143	24,135	285,091	81.78%
	Supplemental Waste	504	642	734	926	941	1,036	1,083	1,413	1,291	1,420	1,705	1,717	13,412	3.85%
	MSW Totals	29,430	31,922	27,532	26,941	26,677	31,030	29,185	25,769	25,814	30,677	32,895	30,743	348,615	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>
FY18	City Waste	1,699	1,876	1,642	1,719	1,849	1,541	1,621	1,365	1,569	2,000	2,298	2,011	21,191	6.03%
	County Waste	2,458	2,654	2,513	2,529	2,635	2,321	2,502	2,110	2,391	2,509	2,959	2,776	30,356	8.63%
	Municipal Solid Waste	24,950	25,303	21,518	20,885	19,108	24,668	25,302	20,826	22,980	26,645	27,438	24,091	283,714	80.67%
	Supplemental Waste	1,807	1,835	1,805	1,638	1,553	1,339	1,301	884	829	886	1,391	1,161	16,430	4.67%
	MSW Totals	30,914	31,668	27,478	26,772	25,146	29,869	30,726	25,185	27,770	32,040	34,086	30,039	351,691	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>
FY19	City Waste	1,848	1,836	1,823	1,996	1,892	1,732	1,823	1,458	1,614	2,063	2,442	1,882	22,409	6.43%
	County Waste	2,560	2,798	2,554	2,656	2,746	2,439	2,567	2,165	2,336	2,586	2,989	2,686	31,081	8.92%
	Municipal Solid Waste	25,442	25,920	21,873	21,678	21,472	23,046	21,455	21,975	24,323	28,361	25,444	22,197	283,185	81.27%
	Supplemental Waste	1,012	1,040	1,138	1,108	992	933	964	743	885	895	1,038	1,029	11,777	3.38%
	MSW Totals	30,862	31,595	27,388	27,438	27,102	28,150	26,808	26,342	29,157	33,904	31,913	27,793	348,454	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>
FY20	City Waste	2,070	1,771	1,726	1,894	1,742	1,844	1,870	1,489	1,925				16,329	6.37%
	County Waste	3,069	2,600	2,544	2,664	2,507	2,575	2,694	2,195	2,509				23,357	9.11%
	Brokered Waste	-	-	-	-	-	-	120	114	67				301	0.12%
	Municipal Solid Waste	26,033	23,287	22,129	23,644	20,837	23,822	24,859	20,472	20,333				205,414	80.08%
	Supplemental Waste	1,269	1,321	1,236	1,340	1,238	1,246	1,239	1,102	1,106				11,096	4.33%
	MSW Totals	32,440	28,979	27,634	29,541	26,324	29,487	30,781	25,371	25,939				256,498	100.00%

Chart 8: Cumulative Total Waste Delivery



As depicted in Table 3 and Chart 8, through the quarter ending in March 2020 cumulative total waste delivery was 0.6% higher compared to the same period in FY19.

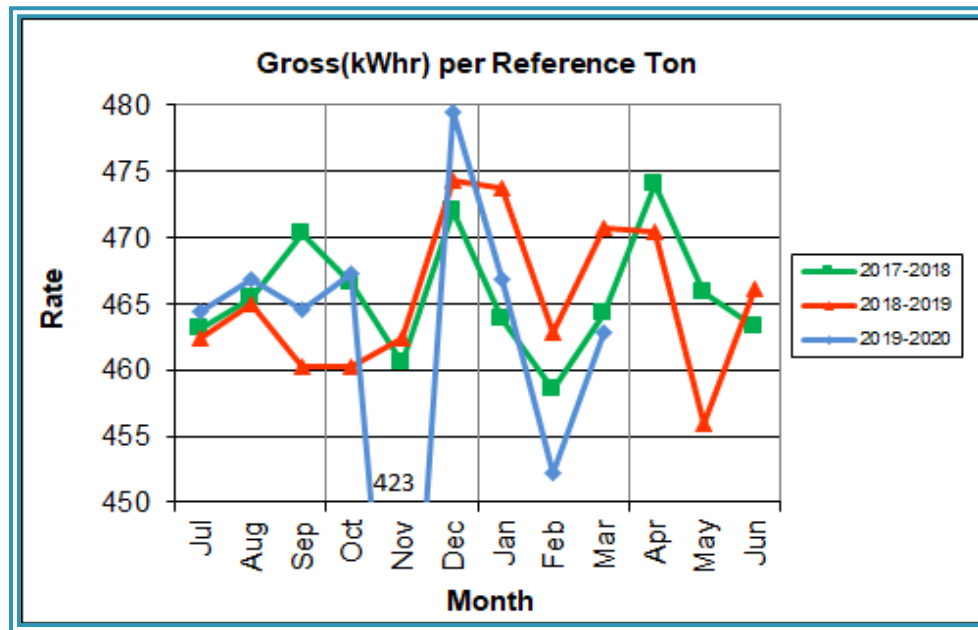
Chart 9: Gross Electrical Generation



During Q3FY20, the Facility generated 40,665 MWhrs (gross) of electricity compared to Q3FY19 generation of 41,894 MWhrs (gross), a 2.9% decrease. The decrease in electricity generated (gross) in Q3FY20, is partly due to lower steam

production, offset by less turbine generator downtime (113.7 fewer hours), and an additional day of operations in February 2020 due to a Leap Year. Note that the sharp spikes depicted in Chart Nos. 10 through 13 for November 2019 are a result of significant downtime (635.0 hours) experienced by Turbine Generator No. 1 for a Turbine Generator No. 1 Scheduled Major Overhaul.

Chart 10: Gross Conversion Rate



As shown in Chart 10, the average gross electrical generation per reference ton of refuse processed during Q3FY20 was 461 kWhr, which is lower (1.8%) than the corresponding quarter in FY19. 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

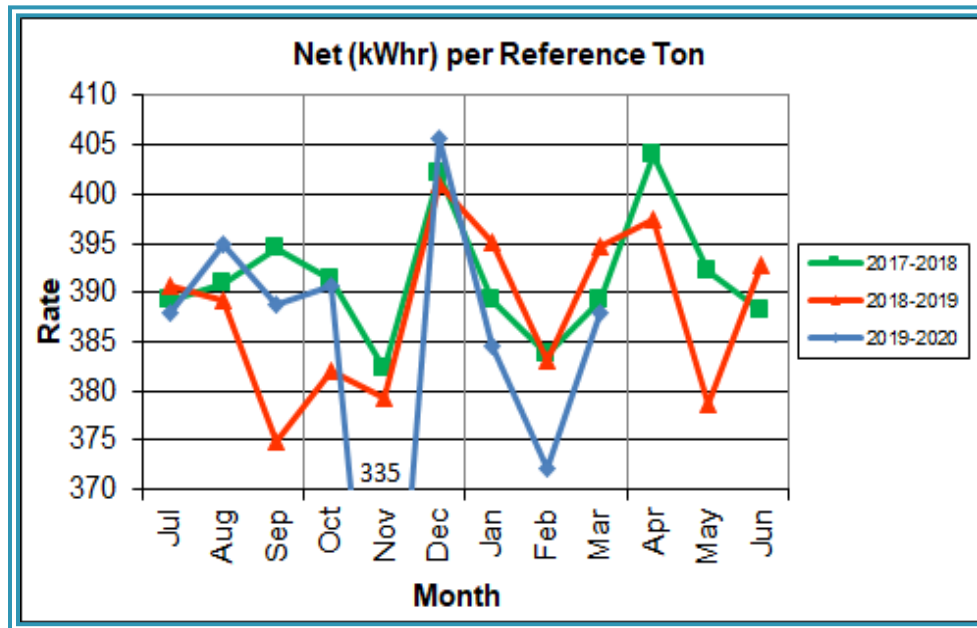


Chart 11 depicts the normalized net power (gross minus in-house usage) generation history. In Q3FY20, the average net electrical generation per reference ton was 382 kWhr, which is 2.4% lower than the corresponding quarter in FY19.

Chart 12: Net Conversion Rate

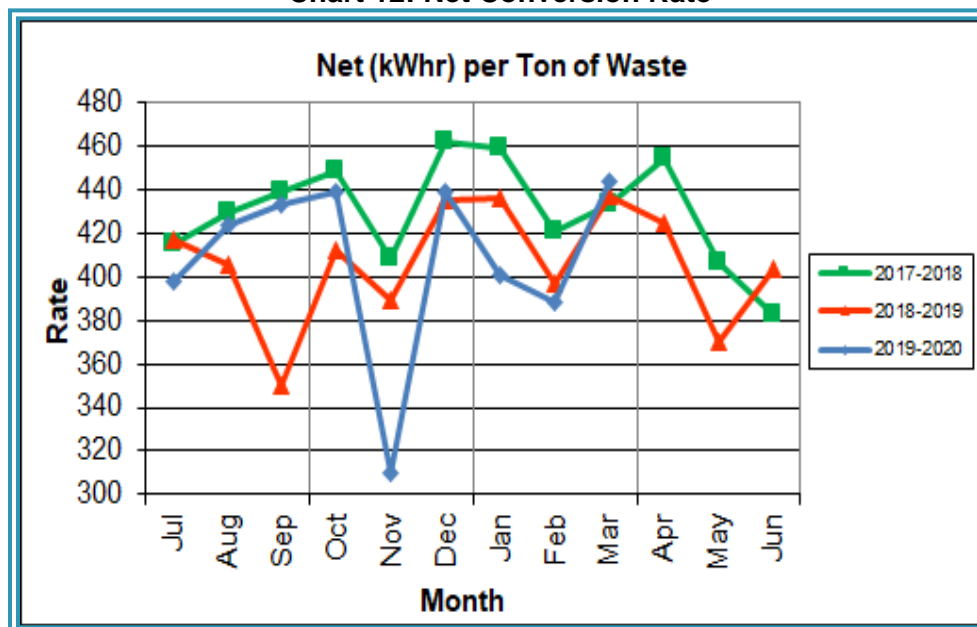


Chart 12 depicts the net power generation per processed ton. The net electrical generation per processed ton in Q3FY20 was 411 kWhr, which is 3.0% lower than the corresponding quarter in FY19 and is attributable to a slight decrease (0.6%)

in waste heating value, offset by less turbine generator downtime (113.7 fewer hours), and an additional day of operations in February 2020 due to a Leap Year.

Chart 13: Gross Turbine Generator Conversion Rate

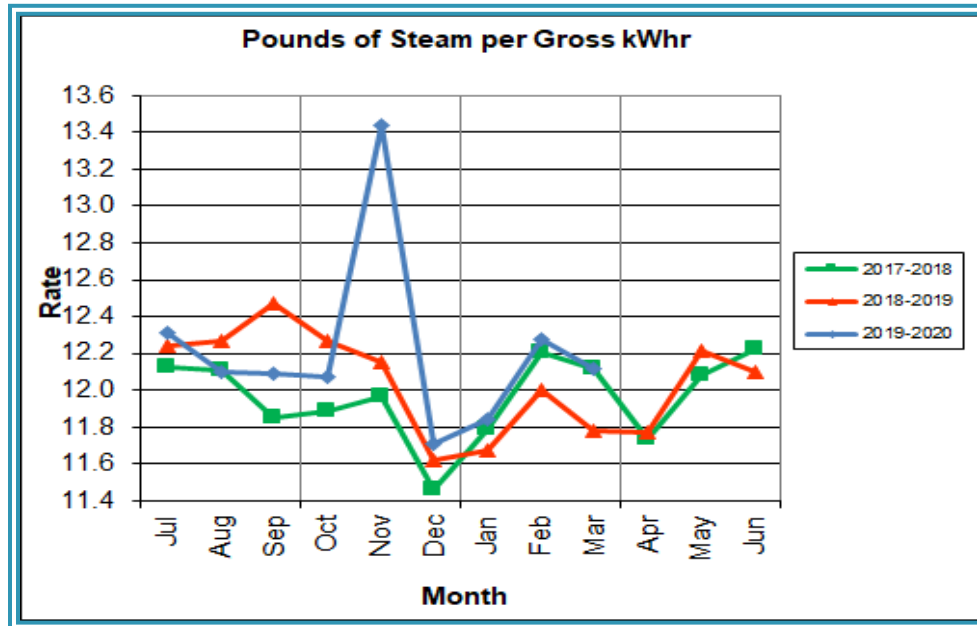


Chart 13 illustrates the quantities of steam required to generate one (1) kWhr of electricity. This measure is a turbine generator performance indicator, where lower steam rates indicate superior performance. For simplification, this calculated rate is based on the average for the two turbine generators. In Q3FY20 the average lbs of steam consumed per gross kWhr generated was 12.1, which is 2.2% higher (less efficient) than the corresponding quarter Q3FY19. 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 main steam temperature during the quarter was 674.5°F, which is 6.5°F lower than the average main steam temperature of the corresponding quarter last fiscal year and 25.5°F lower than design temperature of 700°F.

4.1 Utility and Reagent Consumptions

Table 4: Facility Utility and Reagent Consumptions

Utility	Units	Q3FY20 Total	Q3FY19 Total	Q3FY20"Per Processed Ton" Consumption	Q3FY19"Per Processed Ton" Consumption	FY20 YTD Total
Purchased Power	MW/hr	5,537	5,496	0.0676	0.0668	16,728
Fuel Oil	Gal.	9,740	8,420	0.12	0.10	34,200
Boiler Make-up	Gal.	2,926,000	1,588,000	35.72	19.29	6,958,000
Cooling Tower Make-up	Gal.	28,910,106	27,065,631	352.97	328.77	107,456,313
Pebble Lime	Lbs.	1,065,000	1,370,000	13.00	16.64	3,803,000
Ammonia	Lbs.	163,000	160,000	1.99	1.94	512,000
Carbon	Lbs.	72,000	80,000	0.88	0.97	216,000
Dolomitic Lime	Lbs.	-	8,000	0.00	0.10	0

Fuel oil usage during the quarter represents approximately 0.18% of the total heat input to the boilers, which compares favorably with industry averages, and is slightly higher than the percentage of heat input in Q3FY19 which was 0.16%. 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 5.0% of steam flow, which is significantly higher than the boiler makeup in Q3FY19 which was 2.7% of steam flow. Pebble lime usage, at 1,065,000 lbs. is significantly lower (22.3%) than the corresponding quarter last year, and attributable to more boiler downtime (150.2 additional hours) during the quarter. During Q3FY19, CAAI reported that it was discontinuing dolomitic lime feed, while increasing lime slurry feed in an effort to stabilize the ash pH to levels that will minimize dolomitic lime to condition the ash going forward. Ash pH levels in the range of 8 to 11 are desirable to minimize leaching potential of heavy metals. In comparing Q3FY20 to Q3FY19 on a per processed ton consumption basis:

- the purchased power consumption rate was 1.3% higher
- the total fuel oil consumption rate was 16.3% higher
- the boiler make-up water consumption rate was 85.2% higher
- the cooling tower make-up water consumption rate was 7.4% higher
- the total pebble lime consumption rate was 21.9% lower
- the ammonia consumption rate was 2.4% higher
- the carbon consumption rate was 9.5% lower

- the total dolomitic lime consumption rate was 100.0% lower, as no dolomitic lime was fed during the quarter

The decrease in carbon consumption during the quarter was primarily attributable to the Facility demonstrating compliance with mercury and dioxin/furan emissions limits during 2019 Stack Testing (March 2019) at a minimum feed rate of 12.0 lbs. per hour, rather than a minimum of 13.0 lbs. per hour which was demonstrated in 2018.

4.2 Safety & Environmental Training

The Facility experienced no OSHA recordable accidents or First Aid accidents during the quarter. CAAL has operated 736 days without an OSHA recordable accident as of March 31, 2020. Safety and Environmental training was conducted with themes as follows:

January 2020

- Safety:
 - Pre-job Planning and Hazard Recognition
 - Hidden Hazards in the Workplace
 - Cold Weather Preparation
 - Health and Safety Policy
- Environmental:
 - Environmental Mission Statement

February 2020

- Safety:
 - Mobile Equipment
 - Heavy Metals and Respiratory Protection
 - Right Personal Protective Equipment (PPE) for the job
- Environmental:
 - Environmental Permits and PPE
 - Effects of Modifications of Environmental Permits

March 2020

- Safety:
 - Fall Rescue

- Contractor Safety
- Scaffolding
- Environmental:
 - Responding to Tipping Floor Odors
 - Environmental Compliance During Maintenance Outages

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 20, 2020 Boiler No. 3 experienced 252.5 hours of downtime for a Scheduled Maintenance Boiler Outage. Some significant maintenance activities that were completed during the outage are:

- Replacement of Sootblower G9B Nos. 2, 3, 4, 5, 6, 7, 13, 14, and 21
- Repair of the front drop-off wall on Run No. 1 Side
- Replacement of the ignition roof panel across the front wall
- Installation of 550 tiles on the front wall
- Repair of holes in the convection pass hopper
- Repair of holes in the Induced Draft Fan ductwork
- Replacement of the lower four (4) feet of hoppers on the baghouse cells
- Replacement of four (4) troughs on the baghouse screw conveyors
- Completion of repairs to the turning vanes and “T” cup in the SDA.

Beginning February 8, 2020 Boiler No. 1 experienced 140.4 hours of downtime for a Scheduled Maintenance Boiler Outage. Some significant maintenance activities that were completed during the outage are:

- Change-out of 10 broken grate bars and various under-grate repairs

- Rebuild of the feed table drop-off wall and installation of all new feed table bars and cast angles
- Replacement of No. 1 Ash Discharger Hand Wheel
- Replacement of the isolation valve for Feeder No. 2
- Repair of the feed chute water jacket
- Repair of the feed chute transition piece
- Replacement of five (5) wear plates in the ash discharger
- Change-out of the Induced Draft Fan Outboard Bearing to a new style bearing
- Miscellaneous patchwork in the Induced Draft Fan Inlet Duct
- Complete patch work in the baghouse hoppers

Beginning February 29, 2020 Boiler No. 2 experienced 140.8 hours of downtime for a Scheduled Maintenance Boiler Outage. Some significant maintenance activities that were completed during the outage are:

- Replacement of the economizer inlet valve
- Rebuild of the No. 3 Superheater thermal drain valve
- Replacement of a braided water hose on the feed chute
- Repair of the baghouse outlet duct that had significant holes at the upper 90' bend
- Replacement of a section of the water wall drain line that goes over the main vibrating pan
- Replacement of four (4) water wall drain valves on the left side of the boiler on the 1.5 level
- Replacement of the Under Fire Air fan expansion joint
- Replacement of various guide and support rollers

In addition to the scheduled outages, CAAI reports that 1,071 preventative maintenance actions were completed during the quarter.

5.1 Availability

Facility availabilities for Q3FY20 are shown in Table 5. According to CAAI reports, the average unit availabilities for Boiler Nos. 1, 2, and 3 for Q3FY20 were 93.3%, 93.7%, and 85.3%, respectively. The three-boiler average availability during the quarter was 90.7%, and was negatively impacted by scheduled maintenance on all three (3) boilers totaling 533.7 hours of downtime.

According to CAAI reports, the average unit availabilities for Turbine Generator Nos. 1 and 2 for Q3FY20 was 100.0% for both.

Table 5: Quarterly Facility Unit Availabilities

Availability	Q1FY20 Average	Q2FY20 Average	Q3FY20 Average	FY20 YTD Average
Boiler No. 1	95.9%	99.0%	93.3%	96.1%
Boiler No. 2	96.3%	82.8%	93.7%	90.9%
Boiler No. 3	97.4%	99.4%	85.3%	94.0%
Avg.	96.6%	93.7%	90.7%	93.7%
Turbine No. 1	100.0%	70.5%	100.0%	90.2%
Turbine No. 2	100.0%	100.0%	100.0%	100.0%
Avg.	100.0%	85.3%	100.0%	95.1%

Table 6: Boiler Downtime – Q3FY20

Boiler Number	Outage Begin Date	Outage End Date	Hours Unavailable	Downtime Classification	Reason Unavailable
3	1/13/20	1/14/20	43.6	Unscheduled	Induced Draft Fan Bearing and Fan Replacement
3	1/20/20	1/30/20	252.5	Scheduled	Scheduled Maintenance Boiler Outage
3	2/6/20	2/6/20	15.1	Unscheduled	Waterwall Failure – Stress Crack Repair
1	2/8/20	2/14/20	140.4	Scheduled	Scheduled Maintenance Boiler Outage
3	2/22/20	2/22/20	15.6	Unscheduled	Economizer Failure – Pin Hole Leak on Header Repair
2	2/29/20	3/6/20	140.8	Scheduled	Scheduled Maintenance Boiler Outage
Total Unscheduled Downtime				74.3 Hours	
Total Scheduled Downtime				533.7 Hours	
Total Standby Downtime				0.0 Hours	
Total Downtime				608.0 Hours	

Table 7: Turbine Generator Downtime – Q3FY20

Turbine Generator Number	Outage Begin Date	Outage End Date	Hours Unavailable	Downtime Classification	Reason Unavailable
No Downtime was experienced by the Turbine Generators during Q3FY20					
Total Unscheduled Downtime				0.0 Hours	
Total Scheduled Downtime				0.0 Hours	
Total Standby Downtime				0.0 Hours	
Total Downtime				0.0 Hours	

5.2 Facility Housekeeping

CAAI is performing Facility housekeeping and maintaining plant cleanliness in accordance with acceptable industry practices. A site inspection was conducted in November 2019. 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 November 2019 inspection are presented in Table 8.

Table 8: Facility Housekeeping Ratings – February 2020

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 Q3FY20 are summarized in Appendix A. No permit deviations were experienced by the Facility during the Q3FY20 and as of March 31, 2021 the Facility operated 115 days without an environmental excursion.

The Facility completed its annual Performance Stack Testing and Relative Accuracy Test Audit (RATA) on all units. Results from the 2020 Stack Testing will be included in the Q4FY20 Quarterly Report.

6.1 Low NO_x Technology Implementation

The Virginia Department of Environmental Quality (VADEQ) has issued the final RACT permits for the installation and operation of LNTM Technology. During November 2019, Boiler No. 2 was retrofitted with LNTM Technology, including the installation of all associated ductwork, nozzles, and controls and CAAI reports that final calibration of instrumentation is tentatively scheduled for late February 2020 and continued through the end of Q3FY20. CAAI stated that the LNTM Technology on Boiler No. 2 will be fully in-service at the end of June 2020, and that it plans to install the LNTM Technology on subsequent units in the second quarters of Fiscal Years 2021 and 2022.

6.2 Nitrogen Oxide Emissions

During Q3FY20, the monthly emission concentrations of nitrogen oxides (NO_x) averaged 160.3 ppmdv, 156.3 ppmdv, and 159.7 ppmdv for Boiler Nos. 1, 2, and 3, respectively. As previously mentioned, the LNTM Technology was installed on Boiler No. 2 in November 2019, and CAAI has indicated that the system continued to undergo a period of calibration and optimization through Q3FY20, and will be fully in-service at the end of Q4FY20. CAAI continued to operate the boilers at the lower (160 ppmdv) set-points through Q3FY20.

6.3 Sulfur Dioxide Emissions

During Q3FY20 the monthly emission concentration of stack sulfur dioxide (SO₂) averaged 0.3 ppmdv, 2.3 ppmdv, and 1.3 ppmdv for Boiler Nos. 1, 2, and 3, respectively. All of these stack SO₂ concentrations are significantly below the permit limit of 29 ppmdv @ 7% O₂.

6.4 Carbon Monoxide Emissions

During Q3FY20, the monthly average CO emission concentrations on Boiler Nos. 1, 2, and 3 were 33.7 ppmdv, 34.7 ppmdv, and 23.0 ppmdv, respectively, and all are well within permit limits (100 ppmdv, hourly average).

6.5 Opacity

During Q3FY20, the average opacity on Boiler Nos. 1, 2, and 3 were 0.3%, 1.0%, and 0.8%, respectively, which are all significantly below the 10% (6-minute) average permit limit.

6.6 Daily Emissions Data

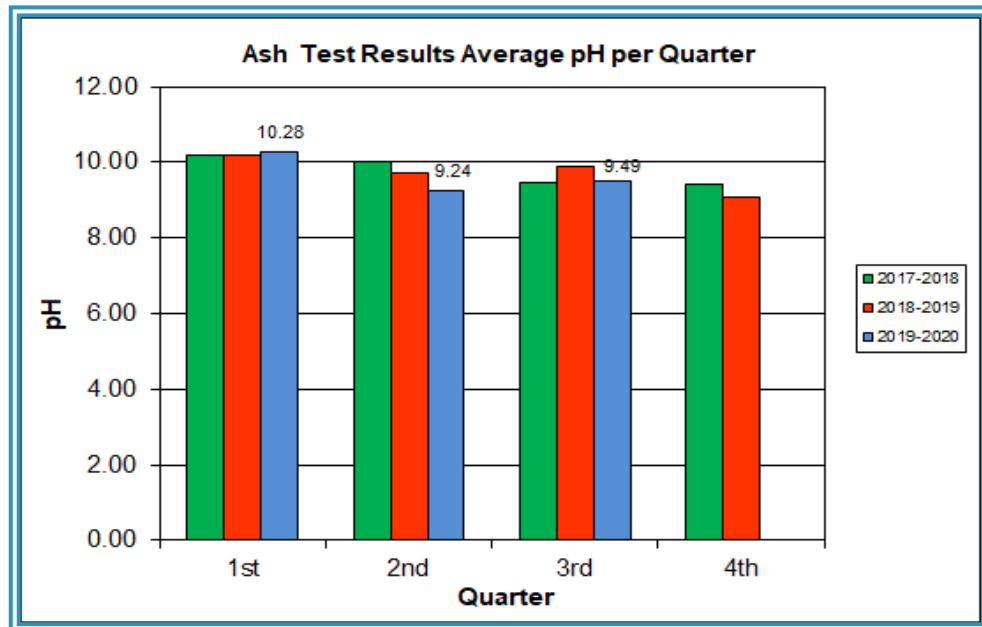
Appendix A, Tables 9, 10, and 11 tabulate the monthly average, maximum, and minimum emissions data for each unit during Q3FY20. Excursions, if any, would appear in bold print. It should be noted that these tabulations of monthly averages, reported here for informational purposes, are based on tabulations 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.

6.7 Ash System Compliance

During Q3FY19, CAAI reported that it was discontinuing dolomitic lime feed, while increasing lime slurry feed in an effort to stabilize the ash pH to levels that will allow eliminating dolomitic lime to condition the ash going forward. The desired ash pH level ranges from 8.0 to 11.0. Ash Toxicity (TCLP) tests were not performed during Q3FY20. In addition to periodic TCLP tests, 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 14 where each quarter is represented by the average of the respective monthly readings. During Q3FY19, the average ash pH for in-house tests was 9.5.

Chart 14: 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 - 20	AVG	84.3	20.0	0.0	32.0	161.0	0.5	300.0	12.3	3.5
	Max	91.7	27.0	3.0	40.0	167.0	1.0	300.0	12.4	3.9
	Min	73.3	11.0	0.0	23.0	158.0	0.2	300.0	12.2	3.0
Feb - 20	AVG	76.6	28.0	0.0	35.0	159.0	0.2	300.0	12.3	3.2
	Max	86.3	69.0	1.0	45.0	160.0	0.5	300.0	12.5	4.3
	Min	67.6	9.0	0.0	25.0	158.0	0.0	297.0	12.3	2.6
Mar - 20	AVG	84.3	30.0	1.0	34.0	161.0	0.1	300.0	12.3	3.6
	Max	88.6	42.0	2.0	47.0	172.0	0.4	302.0	12.5	3.9
	Min	78.0	13.0	0.0	23.0	157.0	0.0	299.0	12.3	3.0
Quarter Average		81.7	26.0	0.3	33.7	160.3	0.3	300.0	12.3	3.4
Quarter Max Value		91.7	69.0	3.0	47.0	172.0	1.0	302.0	12.5	4.3
Quarter Min Value		67.6	9.0	0.0	23.0	157.0	0.0	297.0	12.2	2.6
Limits:		98	NA	29	100	205	10	331	12(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	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 - 20	AVG	85.1	21.0	2.0	36.0	160.0	1.0	301.0	12.3	3.7
	Max	89.9	28.0	5.0	45.0	161.0	1.4	302.0	12.5	3.9
	Min	71.5	15.0	0.0	29.0	159.0	0.6	300.0	12.2	3.1
Feb - 20	AVG	78.0	17.0	2.0	37.0	154.0	1.1	302.0	12.3	3.4
	Max	88.2	28.0	7.0	43.0	159.0	1.4	303.0	12.4	3.9
	Min	65.8	9.0	0.0	31.0	111.0	0.9	300.0	12.2	2.8
Mar - 20	AVG	85.5	57.0	3.0	31.0	155.0	1.0	302.0	12.2	3.7
	Max	88.8	81.0	7.0	46.0	163.0	1.4	302.0	12.4	4.2
	Min	81.7	42.0	0.0	23.0	133.0	0.6	301.0	12.1	3.4
Quarter Average		82.9	31.7	2.3	34.7	156.3	1.0	301.7	12.3	3.6
Quarter Max Value		89.9	81.0	7.0	46.0	163.0	1.4	303.0	12.5	4.2
Quarter Min Value		65.8	9.0	0.0	23.0	111.0	0.6	300.0	12.1	2.8
Limits:		98	NA	29	100	205	10	330	12(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	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 - 20	AVG	73.5	21.0	2.0	21.0	160.0	0.4	298.0	12.3	3.1
	Max	88.3	50.0	5.0	32.0	192.0	1.4	299.0	12.6	3.7
	Min	3.6	10.0	0.0	8.0	157.0	0.0	292.0	12.0	0.9
Feb - 20	AVG	80.1	54.0	1.0	22.0	159.0	0.9	298.0	12.4	3.3
	Max	92.6	96.0	9.0	30.0	162.0	1.8	299.0	12.4	4.0
	Min	67.6	33.0	0.0	14.0	158.0	0.3	295.0	12.3	2.8
Mar - 20	AVG	86.5	42.0	1.0	26.0	160.0	1.0	298.0	12.3	3.6
	Max	90.8	54.0	2.0	40.0	162.0	1.5	299.0	12.9	3.9
	Min	78.8	30.0	0.0	17.0	158.0	0.7	298.0	12.3	3.3
Quarter Average		80.0	39.0	1.3	23.0	159.7	0.8	298.0	12.3	3.3
Quarter Max Value		92.6	96.0	9.0	40.0	192.0	1.8	299.0	12.9	4.0
Quarter Min Value		3.6	10.0	0.0	8.0	157.0	0.0	292.0	12.0	0.9
Limits:		98	NA	29	100	205	10	332	12(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 2020



**Figure 1: Siding on north side of Baghouse No. 2
Deteriorated – New Deficiency**



Figure 2: Two-way Traffic Sign uprooted on Facility Entrance Road – New Deficiency



**Figure 3: Light Fixtures (typical of 2) out at Penthouse
Elevation of Boiler House – New Deficiency**



**Figure 4: Warning signs on Tipping Floor Columns
missing/faded – New Deficiency**



**Figure 5: Light fixtures (typical of 2) out, north end of
Tipping Floor Enclosure – New Deficiency**



**Figure 6: Siding on east side of Tipping Floor Enclosure
corroded – New Deficiency**



Figure 7: Boiler No. 1 Grates Cleaned off and Scaffolding Installed – Boiler No. 1 Outage in Progress



Figure 8: New Grate Bars Staged for Installation – Boiler No. 1 Outage in Progress



Figure 9: Ferrous Drum Magnet – Minimal Gap Between Magnet and Main Vibrating Conveyor



Figure 10: Baghouse No. 1 Area – Old Screw Conveyor Troughs for disposal – Boiler No. 1 Outage in Progress



Figure 11: Baghouse Compartment Aisle – No issues Observed



Figure 12: Rotary Atomizer Removed for Cleaning and Maintenance – Boiler No. 1 Outage in Progress



Figure 13: Cooling Tower from SDA Penthouse



Figure 14: Scale House & Scales from Turbine Generator Enclosure Roof



Figure 15: New Larger Boiler No. 2 Over Fire Air Fan Fully In Service – Boiler No. 2 LN Technology Upgrade

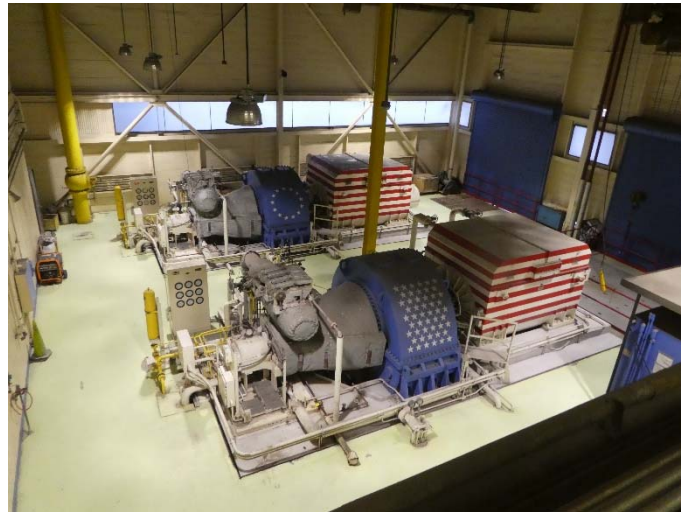


Figure 16: Turbine Generator Deck – Cleaned up following the Turbine Generator Overhaul that occurred last quarter



Figure 17: Security Camera Panel and Infrared Detection Camera Panel in Control Room



Figure 18: New Automatic Voltage Regulator Cabinet Fully In Service – Turbine Generator No. 1 Overhaul Installation



Figure 19: Control Panel on New Automatic Voltage Regulator Cabinet



Figure 20: Spare Crane Grapple Tines Stored Next to Cooling Towers



Figure 21: Scale House and Scales from Tipping Floor Entrance Roadway



Figure 22: General Facility Photo – Northeast of Facility on Tipping Floor Entrance

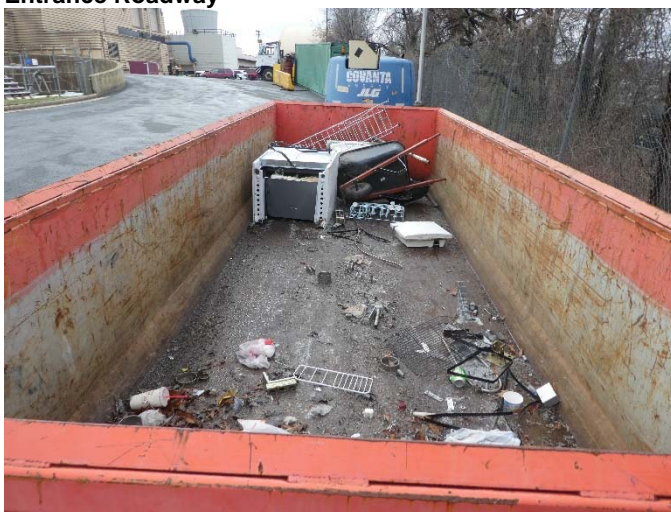


Figure 23: White Goods Roll-Off



Figure 24: Citizen's Drop-off Roll-off



Figure 25: General Facility Photo – East Side from Fire Station Entrance



Figure 26: General Facility Photo – Southwest Corner from UPS Entrance



Figure 27: Cooling Tower, Stack, SDAs, and Economizers



Figure 28: Ash & Ferrous Metal Loading Area – No issues observed

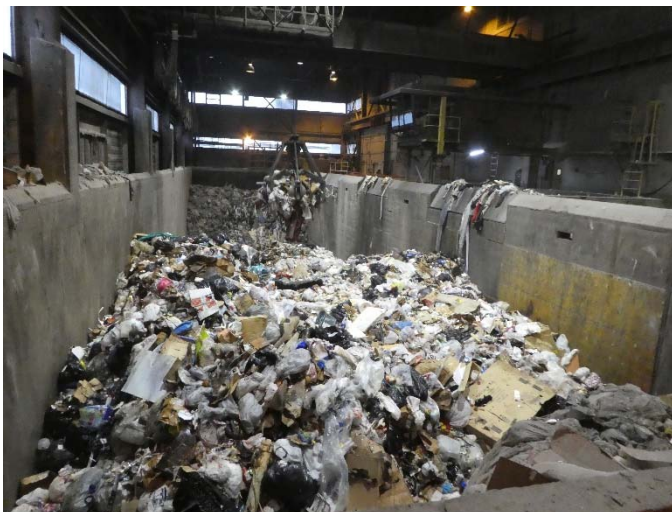


Figure 29: Refuse Pit, Crane Grapple, and Crane Pulpit from North end of Charging Floor



Figure 30: Induced Draft Fan, SDA, Dolomitic Lime Silo, and Economizer