

The Harrisburg Authority
Harrisburg Resource Recovery Facility
Monthly Operating Report
October 2011

Prepared by Covanta Harrisburg, Inc.

October 1st , 2011 to October 31st , 2011

Table of Contents

- 1.0 Summary
- 2.0 Production and Performance Summary
- 3.0 O & M Activities
- 4.0 Safety and Environmental
- 5.0 MBE/WBE Participation

1.0 Summary

This Harrisburg Resources Recovery Operating Report covers the period October 1st 2011 to October 31st, 2011.

WASTE VOLUMES:

- Waste volume received for October was 21,781 tons or 927 tons per workday.
- Volume processed by the facility for October was 20,585 tons or 664 tons per day.
- Long-haul spot waste deliveries for October were 3,844 tons or 18% of the total volume received.

Efforts continue to optimize pricing for waste deliveries for the facility.

ENERGY SALES:

6,498 MWs of electric were sold on to the PJM grid. Day Ahead pricing averaged \$36.88 per MW and Real Time pricing averaged \$37.34 per MW.

OUTAGE ACTIVITY:

There were scheduled outages on Units #1 and #3 in October. Work on Unit #1 include the Air Heater tube replacement; this project was completed on time and under budget by approximately 150k. Unit #3s outage included 200sq ft of inconel overlay as well as explosive cleaning and water washing.

There were several unscheduled outages due to bearing failures and repair of the Unit #2 transition chute wall. Additionally, the turbine was offline due to the failure of the electric hydraulic power cylinder

COMMUNITY ACTIVITY (Preceding 6 months):

- Participated in a fund raising event for a Dauphin County environmental education organization.
- Participated in the Youth Day of Caring event in South Allison Hill.
- Donated supplies to the Harrisburg Multicultural Event.
- Sponsored several Earth Day events at several local school districts.
- Several EITC scholarships were awarded to Harrisburg area students.
- Covanta Harrisburg continues to support the fund raising activities of Centenary UM Church, Steelton, PA.

2.0 Production and Performance Summary:

HARRISBURG RESOURCE RECOVERY FACILITY Production and Performance Summary

From: [01-October-2011](#) **To** [31-October-2011](#)

| DESIGN DATA | No. Operating Units | | 3 |
|--------------------|---------------------|------------------|--------|
| Refuse (TPD) | 800 | HHV (Btu/lb) | 5,200 |
| Steam (lb/hr) | 205,710 | Turbine (MW) | 20.843 |
| Steam Press (psig) | 600 | Stm Temp (deg F) | 750 |
| Gross KWH/Ton | 560 | Net KWH/Ton | 470 |

| PRODUCTION | UNITS | ACTUAL PRODUCTION VALUES | | |
|-----------------------|--------------|---------------------------------|-------|---------------|
| Refuse Received | Tons | 21,781 | 703 | TPD |
| Non-Processible Waste | Tons | 1,071 | 35 | TPD |
| Refuse Processed | Tons | 20,585 | 664 | TPD |
| Supplemental Waste | Tons | 0 | 0.0 | % of Refuse |
| Ash | Tons | 7,077 | 34.4 | % of Refuse |
| Ferrous | Tons | 454 | 2.2 | % of Refuse |
| Steam | klbs | 116,363 | 76.0 | % of MCR |
| Steam Exported | klbs | 0 | 0.0 | Lbs Steam/Ton |
| Gross Electric | MWH | 8,830 | 428.9 | KWH/Ton |
| Net Electric | MWH | 6,498 | 315.7 | KWH/Ton |

| UTILITIES | UNITS | ACTUAL | UTILITY PER TON OF REFUSE | |
|--------------------|--------------|-------------------|----------------------------------|----------|
| In-plant Power | MWH | 2,458 | 119.4 | KWH/Ton |
| Purchased Power | MWH | 126 | 6.1 | KWH/Ton |
| Aux Fuel Oil | kgals | 0.00 | 0.0 | Gal/Ton |
| Aux Natural Gas | kCuFt | 3,510 | 170.5 | CuFt/Ton |
| Waste Water | kgals | 0 | 0.0 | Gal/Ton |
| Make-up | kgals | 1,325 | 64.4 | Gal/Ton |
| Make-up | % of Steam | 9.49 | | |
| Potable Water | kgals | 12,335 | 599.2 | Gal/Ton |
| Hydrated Lime | Tons | 526 | 51.1 | Lbs/Ton |
| Urea | Gals | 6,382 | 0.31 | Gal/Ton |
| Carbon | Tons | 13 | 1.3 | Lbs/Ton |
| PERFORMANCE | UNITS | CALCULATED | TUBE LEAK INCIDENTS | |
| Refuse HHV | Btu/lb | 4,439 | Monthly | YTD |
| Refuse Processed | Ref Tons | 17,573 | 0 | 0 |
| Refuse Processed | Ref TPD | 567 | | |
| Gross Energy Rec. | KWH/Ref Ton | 502.5 | | |
| In-plant Elec. | KWH/Ref Ton | 139.9 | | |

| AVAILABILITY | UNITS | MONTHLY | YTD | MONTHLY | YTD |
|---------------------|--------------|----------------|------------|----------------|------------|
|---------------------|--------------|----------------|------------|----------------|------------|

| | | AVAIL. | AVAIL. | TIME ON-LINE | TIME ON-LINE |
|--------------------|---|--------|--------|--------------|--------------|
| Boiler 1 | % | 61.9% | 88.9% | 56.8% | 86.0% |
| Boiler 2 | % | 83.3% | 88.8% | 83.3% | 87.7% |
| Boiler 3 | % | 78.8% | 88.9% | 78.8% | 88.8% |
| Avg. Boiler Avail. | % | 74.7% | 88.8% | 73.0% | 87.5% |
| Turbine | % | 94.1% | 97.4% | 94.1% | 97.2% |

3.0 O&M Activities:

SCHEDULED OUTAGES:

Scheduled outages were performed on Unit #1 and Unit #3. Work on Unit #1 included the Air Heater Tube replacement as well as a repair of a furnace tube. Unit #3 work included 200 sq.ft. of inconel overlay, explosive cleaning and bearing work on the ash roller.

NON-SCHEDULED OUTAGES:

- Boiler #1 was taken offline 54.5 hours to change-out a bearing on the Combustion Air Fan and for a breakage of the Ash Roller drive flange.
- Boiler #2 was taken offline 124.6 hours for a bearing change on the Induce Draft fan and for repair of the transition chute wall.
- The Turbine/Generator was offline 43.9 hours due to a failure of the electric hydraulic power cylinder.

4.0 Safety and Environmental:

0 OSHA recordable accidents.

The facility experienced four (4) reportable, one for furnace temperature and three for CO, and no reportable exempt air emission permit limit exceedances during the month of October 2011.

5.0 MBE/WBE Participation

As October 31th, 2011 there were Forty Eight (48) workers employed by Covanta at the facility.

| City Residents 14 % Total City Employees | | | Minority Employees 22% Total Employees | | | Women 8% Total Employees | | |
|---|---|------|---|----|------|-----------------------------|---|------|
| Afro-American | 4 | 57 % | Afro-American | 6 | 50 % | Afro-American | 1 | 25 % |
| Caucasian | 2 | 29 % | Female | 4 | 40 % | Caucasian | 3 | 75 % |
| Hispanic | 1 | 14 % | Hispanic | 1 | 10 % | | | |
| TOTAL # City Residents | 7 | 100% | TOTAL # Minority Employ. | 11 | 100% | TOTAL # Women | 4 | 100% |