



**Pinellas County, Florida
Waste-To-Energy Facility**

**Draft Operations Report for the
1st Quarter of Billing Year No. 1
(October - December 2014)**



April 2015

**CDM
Smith**

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Section 1

Introduction

This report includes CDM Smith's review of operations at the Pinellas County Waste-to-Energy Facility (Facility) for the period of October – December 2014, which represents the 1st Quarter of Billing Year No. 1 (BY No. 1) as defined in the Service Agreement dated December XX, 2014 between Pinellas County and Covanta Projects, LLC. During this 1st Quarter of Fiscal Year 2015, a new Contractor assumed responsibility for the operation, maintenance, and management of the Facility on December 7, 2014. The change of responsibility in Facility operations took place during a period of major scheduled outages, and required close coordination between the prior and new Contractors, along with the County and CDM Smith.

The report is based on data and information reported by Pinellas County (County), the prior Facility operator, Green Conversion Systems LLC (GCS), and Covanta Pinellas, the new Facility operator as of December 7, 2014. CDM Smith has not independently verified the accuracy of the data and information provided by the County, GCS or Covanta. The report is also based on observations made by CDM Smith during site visits to the Facility.

The report does not include a detailed review of the environmental performance of the Facility. This function is being performed by ARCADIS / Earthshine Environmental under a separate contract with the County.

Summary of Procurement Process for New Facility Operator

On November 26, 2013, the Board of County Commissioners (BOCC) approved Amendment No. 6 to the GCS Service Agreement. The effective date for Amendment No. 6 was December 1, 2013. Amendment No. 6 addressed issues associated with the County's desire to shorten GCS's term of operation, which was to expire no later than December 31, 2014 or no sooner than thirty days termination for convenience to be exercisable by the County on or after April 1, 2014. The amendment eliminated the original compensation structure under the Service Agreement, including the sharing of revenues generated by Facility operations with GCS. It also established a compensation agreement by which GCS's cost for labor was reimbursed on a cost plus basis, while replacement equipment, insurance, supplies and other materials was reimbursed on an actual cost basis.

The County formally initiated a procurement process for a future operator of the Facility in the second half of BY No. 8. The process included the following major activities:

- Issue of Request for Qualifications (RFQ) - The procurement process was led by the Solid Waste Department, which included representatives of Solid Waste Operations; the County Attorney's Office, the Purchasing Department and Risk Management, along with outside legal counsel and the technical / procurement consultant (CDM Smith). The technical and financial criteria for the RFQ were developed by the County's team and the RFQ was issued on March 14, 2014.
- Receipt of Vendor Qualifications - A total of four respondents submitted their qualifications which were reviewed and evaluated by consensus by the County's evaluation team. The four

vendors which responded to the RFQ included: Covanta Projects, Green Conversion Systems Inc. (GCS), Deltaway, and Wheelabrator Technologies.

- Evaluation of Qualified Vendors – In May 2014, two of the four vendors were determined to be qualified by the County’s team:
 - Covanta Projects
 - Wheelabrator Technologies
- Issue of Draft Request for Proposals (RFP) - In June 2014, a draft Service Agreement was developed by the County and its Consultants for review and discussion by the two qualified vendors. The draft Service Agreement established the conditions for the term, payments, performance guarantees, and the operation, maintenance and management obligations. The RFP included a Technical Recovery Plan (TRP) with a maximum budget of \$150 million for completion by the vendor within a two year period. Three rounds of informational meetings were conducted with the two qualified vendors to review the terms and conditions of the draft Service Agreement and project approach, with the final round completed in August 2014.
- Proposals were received in the 1st Quarter of FY 2015 - Priced proposals were received from the two qualified vendors on October 2, 2014 and evaluated based upon a Net Present Value (NPV) analysis. The NPV was calculated based upon the vendor’s service fee which was calculated by multiplying the bid processing fee times an estimated solid waste delivery of 810,000 tons per year over the initial 10-year term, plus the fixed price for managing the Technical Recovery Projects (TRP), divided by two years. The County recommended that the contract be awarded to Covanta Projects, LLC based upon the results of the NPV analysis.
- The County issued a formal Notice of Termination to GCS on November 6, 2014 providing a 30-day notice of their plans to terminate the GCS operating contract.
- Covanta Pinellas (Covanta) officially assumed responsibility for the management, operation, repair or replacement and maintenance of the Facility at 12:00 AM (0000) on Sunday, December 7, 2014. All but three of the prior GCS employees were offered and accepted positions with Covanta. The new Facility Manager, Paul Grego, officially started at the Facility on Tuesday, December 9, 2014.

Summary of Key Points of Covanta Service Agreement

There are a number of key terms and conditions of the Service Agreement between Pinellas County, Florida and Covanta (Service Agreement) which will impact the obligations of Covanta and the interaction with the County and its Consulting Engineer, CDM Smith. These key terms and conditions include:

1. Authorized Representatives - Ms. Beth Burns was named the delegated Authorized Representative for the County, effective Month XX, 2014. Ms. Kelsi Oswald accepted the position of Interim Solid Waste Director in September 2014 in anticipation of the future retirement of Mr. Robert Hauser on January 9, 2015. Effective December 9, 2014, the Facility Manager, Mr. Paul Grego, assumed the duties of the Authorized Representative for Covanta as defined in Section 15.8 of the Service Agreement. As defined in Section 3.4.3.5 of the Service Agreement, the Technical Recovery Plan Manager is responsible for management, implementation and

coordination of all Work associated with the Technical Recovery Plan. Mr. Joseph Treshler was formally named in Covanta's proposal to serve in this capacity.

2. **Designated Staff Assignments** – In accordance with Section 3.4.3 of the new Service Agreement, Covanta is to maintain the Facility with the following full time on-site employees. The initial staffing of these positions are also noted below:

- a. Facility Manager: Paul Grego
- b. Environmental Compliance Manager: Rebecca Bigari
- c. Health and Safety Director: Robert Tilley
- d. Operations Manager: Elwyn Lowe
- e. Traffic Control Director: Marlboro Guzzi
- f. Technical Recovery Plan Manager: Joseph Treshler
- g. Maintenance Manager: Chris Schuckert
- h. Receptionist: Nancy Horneman

3. Definition of Terms in the Covanta Service Agreement

- a. **Billing Year** means a Fiscal year, except that the first Billing Year shall commence on the Commencement Date (December 7, 2014) and end at the end of the Fiscal Year in which the Commencement Date occurred and (b) the last Billing Year shall end concurrently with the end of the Term (December 31, 2024) or, as applicable, the date of termination of the Agreement.
- b. **Early Award Period** is defined as the period between the Commencement Date (December 7, 2014) and January 1, 2015.
- c. **Initial Operating Period** is defined as the two year period from the Commencement Date (December 7, 2014) through December 31, 2016. The On-Peak and Total Capacity Factors during the Initial Operation Period shall be at least 70 percent, as measured on a twelve month rolling average basis under the Power Purchase Agreement. Failure to maintain the required capacity factors shall result in the automatic forfeit of the Capacity Maintenance Credit Payment entitled to Covanta during the Initial Operating Period. If the Facility fails to maintain at least a 60 percent Total Capacity Factor and On-Peak Capacity Factor during the Initial Operating Period, Covanta is to pay Electric Capacity Payment Damages.
- d. **Technical Recovery Plan Inspection Period** has been defined as the six month period from the Commencement Date through July 1, 2015. During this period of time, Covanta is to inspect and examine all Facility Systems and Equipment and propose other TRP projects to correct conditions that do not meet the definition of Acceptable Operating Condition.

- e. **Latent Defect Testing Period** is the period from the Contract Date through December 31, 2015. During this period of time, Covanta is to inspect and examine all Facility Systems and Equipment and propose LDC projects to correct conditions that do not meet the definition of Acceptable Operating Condition in excess of \$20,000.
 - f. **Latent Defect Projects** are those projects in which the Facility's systems or Equipment fails to satisfy the relevant acceptance standards or criteria specified in Part B of Schedule 19 (Technical Recovery Plan) and the estimated aggregate Repair or Replacement cost of such Facility System or Equipment is greater than twenty thousand dollars (\$20,000).
 - g. **Technical Recovery Plan (TRP)** is to be implemented during the Transition Period (period from Contract Date through Commencement Date of December 7, 2014) and the Initial Operating Period (through December 31, 2016). Work to be completed includes Schedule 19 projects and other Technical Recovery Projects added in accordance with the terms of Section 10.6 of the Service Agreement.
 - h. **Transition Plan** (Schedule 17 of Service Agreement) was submitted by Covanta as part of the Final Request for Proposals issued September 22, 2014. This plan describes how Covanta intends to approach and implement the TRP, including a proposed schedule, and how it will be planned, procured, and installed/constructed.
 - i. **Emergency Plan** – As part of the Transition Plan within 30 days of the Contract Date, Covanta shall provide the County's Authorized Representative with a plan of action to be implemented by Covanta in the event an Emergency shall occur (the Emergency Plan).
 - j. **Rolling Stock** is not considered Facility Equipment. Covanta is to furnish and maintain Rolling Stock during the Term as required to perform the work.
4. **Performance Guarantees** (Schedule 2) – Covanta shall maintain the RRF and Site in accordance with all Standards of Maintenance, with the following guarantees:
- a. **Annual Processing Guarantee** shall be lesser of 930,000 tons of Processible Waste, or the amount of Processible Waste delivered by or on behalf of the County.
 - b. **Electric Energy Recovery Guarantee** shall be not less than 430 Kwh per ton of Processible Waste Processed (net of electricity used by the Facility while the Facility is generating Electric Energy).
 - c. **Residue Quality Guarantee** shall have less than four percent (4%) unburned carbon by weight (dry basis), excluding the amount of carbon in the Residue from the activated carbon injection system; and less than thirty percent (30%) water by weight.
 - d. **Residue Particle Size Guarantees**
 - i. A minimum of one hundred percent (100%) of the residue shall be processed through the plus five inch separation system.

- ii. The plus five inch separation system shall be available one hundred percent (100%) of the time that one of more boiler is in operation.
 - iii. **Residue Particle Size Guarantee.** A minimum of ninety eight percent (98%) of the Residue produced downstream of the plus five inch separation system shall have a maximum particle size of five inches in diameter.
 - e. **Ferrous Metal Recovery Guarantee** shall meet the requirement for recovery of at least eighty percent (80%) by weight of all Ferrous Metals which would not pass through a one inch (1") screen.
 - f. **Non-Ferrous Metal Recovery Guarantee** shall meet the requirement for recovery of at least sixty percent (60%) by weight of all Non-Ferrous Metals which would not pass through a three eighths inch (3/8") screen.
 - g. **Ferrous Metal Recovery System Availability Guarantee** shall meet the requirement to be operational and available for recovery of Ferrous Metals at least ninety percent (90%) of the time that Residue is being generated.
 - h. **Non-Ferrous Metal Recovery System Availability Guarantee** shall meet the requirement to be operational and available for recovery of Non-Ferrous Metals at least ninety percent (90%) of the time that Residue is being generated.
 - i. **Process Wastewater Quality Guarantee** for water discharges into the sanitary sewer shall meet the maximum concentrations and restrictions identified in Table 2 in Schedule 2 of the Service Agreement.
 - j. **Environmental Regulations Guarantees** shall be met at all times as defined in the County's State of Florida Electrical Power Plant Certifications (No. PA 78-11) for units 1 and 2 and PA 83-18 for Unit 3, and the Florida Department of Environmental Protection Title V Air Operations Permit No. 1030117-009-AV.
 - k. **Electric Reliability Guarantee** shall be met at all times for all applicable Generator Owner and Generator Operator requirements pertaining to the Facility specified in the NERC Reliability Standards, except that the County shall be responsible for meeting the requirements of Standards BAL-005 and FAC-001 and FAC-002.
5. **Utility and Reagent Utilization Allowances** (Schedule 7) - Covanta shall operate the RRF in accordance with the following requirements and allowances for utilization of utilities and reagents:
- a. **Process Water means the water consumed by the Facility for boiler water makeup, cooling tower makeup, wash down and other non-sanitary uses.** Covanta is to operate the Facility to minimize the use of Reclaimed Water for Processing by using treated water from Pond A to supply the Facility's Process Water requirements up to the maximum availability of treated water from Pond A. If the Facility's Process Water demand is greater than the available treated water from Pond A, Covanta shall next use Reclaimed Water up to

the maximum availability of the Reclaimed water. If the Facility's Process Water demand is greater than the available treated water from the combined treated Pond A water and Reclaimed Water, then potable water shall next be used except that it shall only be used for boiler make-up water and such use must be approved in writing by the County's Authorized Representative. Under normal conditions, potable water shall only be used for drinking, personnel sanitary use, and certain laboratory equipment and cleaning uses, as approved by the County's Authorized Representative.

- b. **Process Wastewater Utilization Allowance** is one hundred (100) gallons of Process Wastewater per Ton of Processible Waste Processed which is discharged to the sanitary sewer during a Billing Year. Natural Gas Allowance is one million (1,000,000) therms, as corrected by the natural gas supplier to a base heating unit, of natural gas during a Billing Year.
- c. **Purchased Electricity Allowance** is three hundred sixty thousand (360,000) kilowatt-hours of purchased electricity during a Billing Year.
- d. **Maximum Reagent Utilization Allowances**
 - i. Pebble Lime Utilization Allowance for the Facility is twenty (20) pounds of Pebble Lime (CaO – 90% reactive) per Ton of Processible Waste Processed during a Billing Year.
 - ii. Urea Utilization Allowance for the Facility is five tenths (0.50) gallon of Urea per Ton of Processible Waste Processed during a Billing Year.
 - iii. Carbon Utilization Allowance for the Facility is one hundred ten (110) percent of the hourly feed rate or sixty-six hundredths (0.66) of a pound of carbon per Ton of Processible Waste Processed during a Billing Year, provided that if more than sixty-six hundredths (0.66) of a pound of carbon per Ton of Processible Waste Processed is demonstrated to be required to meet the applicable emission limits, then the rate used during the dioxin compliance test shall govern until the next dioxin compliance test. "Hourly feed rate" means the activated carbon feed rate per boiler operating hour as demonstrated during the most recent dioxin compliance test.

6. Covanta Technical Obligations

- a. **Acceptance of Facility "As-Is"** – Covanta accepts the Facility on an "as-is" basis on the Commencement Date except for work to be performed during the Initial Operating Period (through December 31, 2016). This work includes Schedule 19 projects (TRP projects, LDC projects, and other projects discovered and added in accordance with Section 10.6). Following the Initial Operating Period and except with respect to any Technical Recovery Projects to be completed after the Initial Operating Period, Covanta shall be deemed to have accepted the Facility on an "as-is" basis.
- b. **Major Overhaul of Turbine Generators** - Covanta shall undertake a major maintenance overhaul at least every five (5) years for each turbine-generator, with a one-year extension of the five (5) year required frequency if a major overhaul was performed in the first full or partial Billing Year.

- c. **Replacement of Unsupported Equipment** - Covanta is responsible for replacement of unsupported equipment with new equipment.
- d. **Equipment Warranties and Guarantees** - Covanta shall maintain, on behalf of the County, all third party warranties and guarantees on Equipment. Upon request of the County's Authorized Representative, Covanta shall provide a current list and copies of all warranties and guarantees with respect to Equipment and components thereof.
- e. **Required Facility Equipment List and Required Spare Parts List (Schedule 16A)** – Covanta is obligated to conduct a physical inventory to verify the presence of the listed Facility Equipment. Within 60 days after completing the inventory, Covanta is to provide a report to the County's Authorized Representative identifying (a) obsolete equipment or spare parts recommended to be removed from the lists, (b) equipment or spare parts that either (1) are not on either inventory list, (2) were not present in the physical inventory, or (3) were not present in the recommended quantity, (c) items whose description or condition do not match the Initial Equipment List or Initial Spare Parts List, and (d) the estimated value of the Spare Parts which are required to be in inventory at the Facility at the earlier to occur of the expiration or termination of this Agreement (the "Required Facility Equipment List" and ("the Required Spare Parts List"). For Replacement Equipment or Spare Parts from an insurable event for which insurance proceeds were paid for such replacement, the insurance company shall have the right to salvage value. If the insurance does not claim the Equipment or Spare Parts for its salvage value, Covanta may sell, exchange, or dispose of Equipment or Spare Parts and retain the proceeds. On a temporary basis, Covanta may share Equipment and Spare Parts (except for Critical Spare Parts), with other facilities that they operate and maintain. Covanta shall not remove Equipment from the Facility Site if the Equipment use is restricted or otherwise prohibited by any Equipment financing covenants or security agreements that the County may enter into relative to the Facility or the System. The County's Authorized Representative shall approve such removal in writing in cases where Covanta is unsure of the applicability of restrictions or covenants.
- f. **Critical Spare Parts** (Schedule 16B) to be maintained by Covanta and a joint physical inventory shall be performed annually no later than October 31 of each Billing Year by the County's Authorized Representative, the Consulting Engineer, and the Covanta Authorized Representative. Items of Equipment or Spare Parts that are obsolete shall be deleted from the Required Facility Equipment List or Required Spare Parts List, and the Estimated Value adjusted accordingly.
- g. **Refuse Pit Management** – Covanta shall manage the Pit such that all processible waste in the Pit is turned over at least as frequently as once every three months. Standing water shall be removed from the Pit, treated, diluted, or blended as necessary and discharged into a sewer manhole on the Facility Site such that the wastewater discharged from the Facility meets the applicable pretreatment standards of Applicable Law. Water level in the pit shall be limited to no more than three (3) feet at any time. Notwithstanding the foregoing Pit turnover requirements, if the Processible waste level in a bay of the Pit is five (5) feet or less in height, such Pit bay shall be deemed to have been turned over. Covanta shall maintain written records of when Processible Waste in each bay was turned over in accordance with the reporting requirements in Schedule 6.

7. Covanta Reporting Requirements

- a. **Daily Report** shall be transmitted electronically to the County and Consulting Engineer in email format every day (on or before 9:00 am), with the information specified in Schedule 6 of the Service Agreement, including:
 - i. Current and next day projected operating status of each boiler and turbine generator,
 - ii. Reason or purpose and anticipated duration for any scheduled or unscheduled Equipment downtime,
 - iii. Estimated inventory in the Pit,
 - iv. Discussion as to whether the need for diversion of waste may be required within the next two (2) days, and
 - v. Time of scheduled inspections of the Equipment or Facility or both, if any for the current and next day.
- b. **Weekly Report** shall be prepared and submitted by Covanta in a spreadsheet format on or before the close of business each Monday pursuant to Section 5.1 and Schedule 6 of the Service Agreement. A list of 52 parameters and data that is to be reported weekly (with daily, weekly and monthly totals) is specified in Section 2.1 of Schedule 6.
- c. **Monthly Report** shall be prepared and submitted by Covanta by the fifteenth (15th) Day of each Billing Month in electronic format pursuant to Section 5.1 and Schedule 6 of the Service Agreement. The list of 52 parameters to be reported on a weekly basis (with daily, weekly and monthly totals) is specified in Section 2.1 of Schedule 6. 17 additional parameters are also to be reported with Monthly totals, Billing Year to date totals, and twelve-month rolling averages), along with the estimated Higher Heating Value of Processible Waste. Covanta is also to provide CEMS data required for GHG reporting, including carbon dioxide and air flow measurements for each boiler, reported on an Hourly basis, for each month.

Monthly operational Status information is also to be reported in the Monthly Report, including:

- i. Description of all scheduled and unscheduled outages during the reporting period for the boilers, turbine-generators, and metal recovery equipment, including unit identification, start date, outage duration, and a detailed description of the reason for each outage.
- ii. Description of any partial or total shutdowns for maintenance and Repair or Replacement anticipated during the next three (3) months.
- iii. Description of any Repair or Replacement performed to Equipment, the Facility or the Facility Site, or any or all of the foregoing, during the reporting period including any deficiencies identified by the County's Authorized Representative or the Consulting Engineer, or both, in accordance with Section 6 of the Service Agreement.
- iv. Number of Preventive Maintenance (PM) work orders completed each month as well as the number of PM work orders remaining open.

- v. Description of all environmental testing conducted during the reporting period including air emission, CEMS, and Residue tests, or other required monitoring or any and all of the foregoing that are anticipated to be performed during the next three Billing Months.
- vi. Description of any regulatory or insurance inspections and any inspections of major equipment performed by Covanta or outside party during the reporting period.
- vii. Description of any major safety issues during the reporting period including all OSHA reportable accidents.
- viii. Processible waste higher heating values (HHV) calculated in accordance with Schedule 4 of the Service Agreement including calculation worksheet and the Daily data used as input to the calculation.
- ix. Spare 13.8 kV transformer maintenance log (and the annual maintenance log of the month in which annual maintenance was performed on such transformer).
- x. The date(s) on which Processible Waste was turned over in the pit or standing water was removed from the pit, or both, if any pursuant to Section 7.1.3 of the Service Agreement.
- xi. The dates and descriptions of any reportable air quality violations and process upsets.
- xii. The Punchlist Items which were cured during the reporting period.

Within 10 days following the Monthly meeting, Covanta is to submit a final Monthly Report incorporating any changes as discussed at the Monthly meeting.

- d. **Environmental Reports** - Covanta is to provide copies of all environmental test or compliance reports which are required to be submitted to any regulatory agency or insurance company, along with any correspondence to or from any regulatory agency or insurance company.
- e. **Other Technical Data** – Covanta shall provide copies of all technical data, reports, and certificates associated with the inspection, repair or replacement, maintenance or certification of Facility components to the County's Authorized Representative and the Consulting Engineer upon issuance of the data, report, or certifications. This shall include, but not be limited to ultrasonic thickness (UT) data, boiler hydro test reports, outage reports, vendor and insurance inspection reports, electrical test data, boiler certifications, etc.
- f. **Maintenance Records** – Covanta is to provide copies of preventive maintenance and repair and replacement work orders completed each month in digital format so that the data can be uploaded to the County's Asset Management System. Alternatively, Covanta may provide the County with access to its work management system.
- g. **Annual Processing Projection** – Each year, on or before October 1, Covanta shall provide the County with an outage schedule for the forthcoming calendar year. The schedule shall include the planned outages for each boiler and each turbine generator, including the start date and scheduled duration of each outage. Covanta shall also provide a monthly forecast for the forthcoming calendar year with an estimate of tons that will be processed and electricity generated each month. Covanta shall make the County aware of any change to the annual outage schedule and forecast upon becoming aware of the need for such change.

- h. **Monthly Meeting and Minutes** - Covanta is responsible for preparation of an agenda and the minutes of the Monthly Meetings. The agenda and meeting minutes will be submitted to the attendees sufficiently in advance of the future scheduled meetings to facilitate the County's review and comment, and any agreed upon changes to such agenda and minutes will be incorporated, as applicable.

8. County Responsibilities

- a. The County is responsible for the maintenance of landscaping around Covanta's administration building on the south side of the 110th Avenue.
- b. The County is responsible for maintenance and calibration of weigh scales in accordance with Applicable Law. Covanta has the right to have an employee present from time to time in the scale house during the receiving time to observe scale house operations, provided that such observation time must be scheduled in advance with the County's Authorized Representative, and not interfere with scale house operations. The County shall deliver the following information to Covanta on a Monthly Basis, no later than seven (7) days after the first day of the Billing Month:
 - i. Total quantity of Processible Waste delivered to the Facility, including total amount of Returned Processible Waste;
 - ii. Quantity of residue delivered to landfill;
 - iii. Quantity of diverted waste delivered to landfill;
 - iv. Quantity of Prohibited Waste that was delivered to and accepted by the Facility and that was not processed and transferred to either the Landfill or some other location;
 - v. Copy of the statement from Duke Energy showing net revenue received by the County for electricity sold and calculation of the Total Capacity Factor and On-Peak Capacity Factor on a twelve (12) month rolling average basis;
 - vi. Copy of the Utility invoices for all utilities paid by the County and for which Covanta has a Maximum Utilization Allowance;
 - vii. Quantity of ferrous and non-ferrous metals transported off the Facility site;
 - viii. Amount of treated water delivered from the Industrial Water Treatment Facility; and
 - ix. Adjustments for the previous Billing Month pursuant to Section 8.4.7.5.
- c. The County is to provide trucks and containers for transport from the Facility to the Landfill for the disposal of Processible Waste not Processed, Nonprocessible Waste, Recovered Materials and Residue, at a rate such that Facility Operations will not be adversely affected. Covanta is responsible for the separation of metals from the Non-processible Waste and placing of such metals in one of the roll-off containers and the remaining Non-processible Waste in the other roll-off container. Metals which are classified as White Goods and may contain refrigerants (refrigerators, freezers, air conditioning units) shall be stored upright in segregated locations on the tipping floor until refrigerants have been removed by a licensed

contractor who shall be provided by the County at the County's sole cost and expense. The White Goods shall then be placed in the designated container for metals.

- d. The County is responsible for providing potable water, Reclaimed Water, treated Pond A water, natural gas, electricity, and a connection for wastewater disposal.
- e. The County is responsible for delivery of waste equal to at least the Base Delivery Amount of Processible Waste. The County does not have an obligation to deliver Processible Waste in circumstances when the queue for vehicles hauling Processible Waste to the Facility extends beyond the beginning of the ramp leading to the Facility tipping floor. Covanta may reject tenders of (a) Processible Waste delivered at hours other than the Receiving Time, (b) Processible Waste delivered to the Facility in excess of twenty one thousand (21,000) tons per week, or in excess of eighty four thousand (84,000) tons in any consecutive four (4) week period, provided that Covanta may not reject if there is available capacity to receive and store such Processible Waste, (c) Processible Waste which the Facility is unable to accept as a result of (1) Force Majeure, (2) County Fault or (3) Pertinent provisions of the Service Agreement (d) Prohibited Waste, (e) Processible Waste which cannot be accepted at the Facility due to a mechanical breakdown of vehicles or vehicle accident on the ramp to the Facility or the tipping floor, (f) Processible Waste under circumstances wherein Covanta discovers that hazardous waste or bio-medical waste has been delivered to the tipping floor and (g) Processible waste under circumstances wherein Covanta requests that that the County divert Processible Waste due to current pit inventory and boiler status.
- f. The County, at its sole cost and expense, will be solely responsible for the administration of the delivery of all Special Waste to the Facility.

9. Consulting Engineer Inspections and Reports

- a. Commencing on the Commencement Date, the Consulting Engineer shall have the right to conduct an inspection to determine if the Facility and Facility Site is being repaired or replaced and maintained in accordance with Section 3.10 of the Service Agreement. This inspection may include inspection of the Facility and the Records. Within fifteen (15) Business Days of an inspection, the Consulting Engineer shall file a written report with the County's Authorized Representative and Covanta's Authorized Representative of the findings. The report shall further identify the Cure that Covanta shall pursue to bring such Punch List Items into compliance with the Standards of Maintenance and Section 3.10 of the Service Agreement, along with the proposed timeline by which each Punch List Item must achieve compliance.
- b. Upon receipt of the Consulting Engineer's Report, the Covanta Authorized Representative shall have ten (10) Business Days thereafter to provide the County's Authorized Representative with notice of any disagreement on an item by item basis. Failure of Covanta's Authorized Representative to give such notice within the 10 Business Day period shall be deemed acceptance or approval of the Consulting Engineer's Report findings.
- c. If Covanta's Authorized Representative gives such notice to the County's Authorized Representative, the Authorized Representatives shall meet either in person or by teleconference at the Consulting Engineer's discretion within ten (10) Business Days in an

effort to resolve the disputed portions of the Consulting Engineer's Report and agree upon a final cure and schedule.

- d. If the Authorized Representatives and the Consulting Engineer resolve some or all disputed portions of the Report, such Report will be amended and redelivered by the Consulting Engineer to the Authorized Representatives within five (5) Business Days after such resolution and Covanta shall diligently pursue the necessary cures that are no longer in dispute.
- e. If within ten (10) Business Days, after the initial meeting of the Consulting Engineer and Authorized Representatives to resolve the disputed portions of the Consulting Engineer's Report, resolution is not achieved as to all contested items, Covanta may refer the remaining disputed items to dispute resolution pursuant to Section 14 of the Service Agreement. Failure of Covanta to refer the matter to dispute resolution within thirty (30) Days shall be deemed a waiver of its obligations and its right to so refer the matter to dispute resolution and the Consulting Engineer's Report and proposed Cure and Timeframe for each Punch List Item not disputed within such time period shall be deemed final, the Timeframe shall immediately commence and Covanta shall comply with the same.
- f. Failure to cure any of the items included on the Consulting Engineer's Inspection Report within the Timeframe shall subject Covanta to the Withholding in accordance with Section 8.4.7.2.
- g. **Retainage for Uncorrected Work** – If Covanta does not achieve compliance within the Timeframe relative to all Punch List Items (a) identified in the Consulting Engineer's Report that have not been referred to dispute resolution or (b) determined in accordance with the dispute resolution process, then the County's Authorized Representative, upon notice to Covanta's Authorized Representative may direct that the Consulting Engineer prepare a cost estimate to complete the compliance work with respect to each Punch List Item not brought into compliance within the Timeframe for such Final Punch List Items. In preparing the cost estimate, the Consulting Engineer may be required to inspect the Facility or the Facility site and Covanta shall be fully cooperative in such inspection. Upon completion of such cost estimate, the Consulting Engineer shall file its written cost estimate with the Authorized Representatives. The County's Authorized Representative may determine that the County payment of Covanta's current invoice and, as necessary, future Monthly invoices for Work performed, be set-off in accordance with Section 6.4 of the Service Agreement.
- h. **County Completion of Work** - The County may cause the Final Punch List Items referenced in Retainage for Uncorrected Work above to be completed in accordance with Section 6.4 of the Service Agreement. Covanta shall thereafter operate and maintain each such item in accordance with the Service Agreement and \waive any claim it may assert against the County that it can no longer operate the Facility in accordance with the Performance Guarantees, Utilization allowances, and other obligations under the Service Agreement.

10. Covanta Service Fee and Revenue Sharing During Initial Operating Period

- a. As an item of note, there is an Initial Service Fee for the Initial Operating Period (through December 31, 2016) and a Permanent Service Fee following the Initial Operating Period and

through the remainder of the Term (December 31, 2024). The Monthly Initial Service Fee (ISF) Formula and definition of terms is as follows:

$$\text{ISF} = \text{MPF} + \text{ENR} + \text{CMC} + \text{MMF} + \text{RMNR} + \text{PTC} = /- \text{ADJ}$$

- b. **Monthly Processing Fee (MPF) for Base Delivery Amount** - As defined in Section 8.2.2.1, for tons of Processible Waste up to and including the Base Delivery Amount (810,000 tons) for each Billing Year, the MPF shall be the product of the Processing Fee as adjusted by the Adjustment Factor multiplied by the Base Delivery Amount divided by 12 Billing Months (67,500 tons per month), pro rata for a Billing Month less than a full Billing Month.
- c. **Monthly Processing Fee (MPF) for Excess Tonnage Amount** – As defined in Section 8.2.2.2, for tons of Processible Waste delivered in excess of the Base Delivery Amount, if any, for each Billing Year, the MPF for the Billing Month shall be the number of tons of Processible Waste in excess of the Base Delivery Amount (67,500 tons per month) delivered by or on behalf of the County and accepted for Processing by Covanta at the Facility for the Billing Month, multiplied by the product of 40% multiplied by the Processing Fee, as adjusted by the Adjustment Factor.
- d. **Electric Energy Net Revenues (ENR)** – Covanta shall be paid 10% of the Net Revenues from the generation and sale of Electric Energy to the Electric Utility.
- e. **Capacity Maintenance Credit (CMC)** – Capacity Factors are measured on a twelve (12) month rolling average basis pursuant to the Power Purchase Agreement. No Capacity Maintenance Credits shall accrue, be earned or paid during the Early Award Period. If, on the first day immediately following the end of the Early Award Period (January 1, 2015), either or both of the On-Peak Capacity Factor and Total Capacity Factor are below or both are at or above seventy-five percent (75%), Covanta may be entitled to receive a Capacity Maintenance Credit for the attainment of specified levels in a Billing Month commencing January 2015 and through the Initial Operating Period. If both capacity factors are at least seventy percent (70%), (measured for a Billing Month commencing January 2015 for one or more capacity factors below 75% and on a twelve (12) month rolling average basis for both capacity factors equal to or above 75%), the County shall pay Covanta a Capacity Maintenance Credit equal to three hundred thirty thousand dollars (\$330,000) for each such Billing Month occurring during the first twelve (12) Billing Months commencing January 2015 during the Initial Operating Period or two hundred forty-seven thousand five hundred dollars (\$247,500) for each such Billing Month occurring during the remainder of the Initial Operating Period (i.e., beginning on February 2016). For avoidance of doubt, Covanta shall not be entitled to receive any Capacity maintenance Credit in any Billing Month commencing January, 2015 and through the Initial Operating Period in which the On-Peak Capacity Factor or the Total Capacity Factor, or both, are less than seventy percent (70%), as measured on a twelve (12) Month rolling average basis.
- f. **Pass Through Costs (PTC)** – The costs and expenses for the following items shall not be included in the Processing Fee and shall be paid as Pass Through Costs invoiced to the County at cost upon Covanta's provision of Cost Substantiation to the County:
 - i. **Utilities** – not to exceed the Maximum Utility Utilization Allowance.
 - ii. **Reagents** – not to exceed the Maximum Reagent Utilization Allowance.

- iii. **Loss of Recovered Material Market** – the County will pay the cost of such market loss in the amount by which the cost to transport and sell or provide ferrous and non-ferrous metals to the market place in an economic loss at an amount not to exceed \$50,000 per Billing Year.
 - iv. **Fees** – application, renewal, maintenance and inspection fee for the County permits as may be required by the DEP for the ownership, operation and maintenance of the Facility.
 - v. **Economic Benefit from Emission Purchase and Sale Transactions and Sharing of Tax Incentives or Subsidies** – (a) administrative cost or Economic Benefit, or both, or (b) its share of tax incentives or subsidies, or both (a) and (b) subject to cost substantiation.
 - vi. **Pass Through Taxes and Fees** – the County will pay Covanta for all taxes and fees on a pass through basis.
 - vii. **County Required Insurance Obligations Transfer** – premiums and reasonable broker fees for policies of Required County Insurance.
 - viii. **Additional Electronic Communication Items** – additional electronic communication devices and systems to implement the Communication Plan.
 - ix. **Special Handling Costs for Special Waste Processing** – special handling costs for Processing Special Waste subject to cost substantiation.
 - x. **Shortfall in Initial Equipment or Spare Parts** – cost of the missing required Equipment or required Spare Parts.
- g. **Adjustments**
- i. **Liquidated Damages, Penalties and other Fees and Costs**
 - 1. Electric Capacity Payment Damages
 - a. Covanta requested reduction of Committed Capacity on a temporary or permanent basis.
 - b. Facility has not maintained 70% Capacity Factors, and was not due to the occurrence of (1) Force majeure, (2) County Fault, (3) a Weighted Average Annual Higher Heating Value below 4,000 BTU per pound, or (4) the failure of the County to deliver the Base Delivery Amount to the Facility as measured on a 12-month rolling average.
 - 2. Residue Particle Size Guarantee Adjustment – Covanta shall pay \$1,000 per day for each day that the residue does not meet the Residue Particle Size Guarantee as determined pursuant to Performance Tests.
 - 3. Plus Five Separation System Availability Guarantee Adjustment - Covanta shall pay \$1,000 per day for each day that the Plus Five Separation System Availability Guarantee is not met.

4. Residue Quality Guarantee Adjustment - Covanta shall pay \$1,000 per day for each day that the residue does not meet the Residue Quality Guarantee until such time that a Performance Test evidences that the residue meets the guarantee.
5. Liquidated Damages – Generally – It is accepted that it would be impossible, impractical, or extremely difficult to fix the actual damages suffered by the County resulting from the failure of Covanta to satisfy any of its obligations or guarantees described in Section 8.4.1. The liquidated damages specified in Section 8.4.1 are reasonable and do not constitute a penalty.
- ii. **Violation of Residue and Recovered Materials Management Plan** – the County may assess \$2,000, adjusted by the Adjustment Factor, for each violation of Covanta’s obligation to comply with the approved Residue and Recovered Materials Management Plan.
- iii. **County’s Cost to Cure** – County’s “Cost to Cure” work in accordance with Section 6.4 shall be credited against the Monthly invoice amount.
- iv. **Inventory Settlement** – Covanta shall pay the County if the Final Value is less than the Estimated Value of the Required Spare Parts List at expiration of the Term or termination of the Service Agreement.
- v. **Failure to Meet Ferrous Metal Recovery Guarantee or the Non-Ferrous Metal Recovery Guarantee, or both as a result of a Performance Test** – Actual damages measured in terms of the actual reduction in County Net Revenues calculated by the difference between the Net Revenues that should have been received if the applicable Ferrous Metal Recovery Guarantee or Non-Ferrous Metal Recovery Guarantee, or both, were not met.
- vi. **DEP Fees, Fines, Administrative Actions, Notices of Violations and Lawsuits**
 1. **Fines and Penalties Caused by Covanta** – If Covanta has to pay any fine or penalty by any Governmental Authority for any violation of Applicable Law that was not caused by the occurrence of a Force Majeure or County Fault the amount of which totals (a) at least twenty-five thousand dollars (\$25,000) per violation, or (b) on an accumulated basis for a Billing Year, fifty thousand dollars (\$50,000) or more, the County has the right to request, by giving at least five (5) Business Days prior notice to Covanta’s Authorized Representative, that either or both Covanta’s senior executive officers and the Guarantor appear before the Board of County Commissioners to explain why such current or accumulated payments was or is necessary. Failure to appear as a scheduled meeting shall be a Contractor Event of Default.
 2. Fines and Penalties Caused by Force Majeure or County Fault – Any fines or penalties imposed by any Governmental Authority for a violation of Applicable Law that was caused by the occurrence of a Force Majeure or County Fault, shall be paid by the County.
- vii. Withholding – The County shall withhold the following as an Adjustment to the monthly invoice:

1. Failure to Make Submittals – Up to five thousand (\$5,000) fine may be withheld by the County until Covanta makes the required filing of the following submittals:
 - (a) Reports, submittals, notices and comments required by Section 3.7 (Regulatory Reports)
 - (b) Residue and Recovered Materials Management Plan
 - (c) Updated Operation and Maintenance Manuals, drawings and records required by Section 3.25
 - (d) Written protocols specified in Section 3.27.1
 - (e) Communication Plan pursuant to Section 3.33
 - (b) Reports required to be filed and submitted under the Service Agreement
 2. Failure to Timely Cure Items identified on the Consulting Engineer's Inspection Report -Up to one thousand (\$1,000) per Day may be withheld by the County until Covanta cures any Final Punch List Item in accordance with Section 6.2 (Resolution of Disagreements).
 3. Failure to Timely Complete the Technical Recovery Plan - Up to five thousand (\$5,000) per Day may be withheld by the County until Covanta cures any such noncompliance and is verified by the County's Authorized Representative.
 4. Failure to Comply with Schedules - Up to one thousand (\$1,000) per Day may be withheld by the County until Covanta cures such noncompliance and is verified by the County's Authorized Representative.
- viii. **Scale Record True-Up** – Adjustment in the case that the County had to estimate the Tons of Processible Waste delivered to the Facility in a prior Billing Month.
- h. **Payment of Remaining Monthly TRP Management Fee Due to Early Completion of TRP Projects** – Payment of all remaining monthly TRP Management Fees if all TRP Projects have been completed prior to December 31, 2016 (Initial Operating Period).
- i. **Annual True-Up, Reconciliation**
- i. True-Up of the Adjustment Factor – At the commencement of each Billing Year, if current indices used for calculating and applying the Adjustment Factor are not available, the most recently published value of each non-current index shall be used each Billing Month until all applicable indices are current and available. At such time, the County shall adjust the service fee in accordance with Schedule 5 (Adjustment Factor) and be included as an Adjustment to the invoice for the next Billing Month.
 - ii. Annual Reconciliation
 1. Annual Processing Guarantee Shortfall Damages
 2. Base Delivery Amount Shortfall Damages

- (a) Lost Processing Fees
 - (b) Lost Electrical Revenues
 - (c) Lost Recovered Materials Revenues
 - (d) Returned Processible Waste Credit
3. Annual Electric Energy Recovery Guarantee Damages – Covanta shall pay to the County any Lost Electric Energy Revenues for the Billing Year.
4. Annual Ferrous Metal and Non-Ferrous Metal Recovery System Availability Guarantee
- (a) Ferrous Metal Recovery System Availability Guarantees – A liquidated damage charge of five thousand dollars (\$5,000) shall be paid for each 1% or portion thereof that the actual availability is below the Ferrous Metal Recovery System Availability for the Billing Year.
 - (b) Non-Ferrous Metal Recovery System Availability Guarantees - A liquidated damage charge of ten thousand dollars (\$10,000) shall be paid for each 1% or portion thereof that the actual availability is below the Non-Ferrous Metal Recovery System Availability for the Billing Year.
 - (c) Excess Reagent and/or Utility Usage – Covanta shall be liable for and pay to the County the costs for all such excess Reagent or Utility usage.
 - (d) HHV Adjustment Amount – An HHV adjustment shall be calculated for any Billing Year in which the weighted Average Annual Higher Heating Value is (a) equal to or less than four thousand (4,000) Btu/Pound and equal to or greater than five thousand (5,000) Btu/Pound.
 - (e) Invoicing and Payment of Annual Reconciliation – Within sixty (60) days following the end of each Billing Year, Covanta shall prepare an annual settlement statement setting forth any amounts due either party in accordance with Section 8.6.2.7, with the invoice prepared in accordance with Schedule 12C.

Section 2

Operations

2.1 Facility Performance

The overall performance of the Facility during the 1st Quarter of BY No. 1 was good and within the expected range for this industry. There was one planned major outage for each of the three combustion units, along with one common outage in which all three units were shut down. There were several unplanned outages that occurred during the 1st Quarter which slightly lowered the overall boiler availability and negatively impacted the Facility's ability to process waste and generate electricity. Not including downtime for the scheduled outages, the average boiler availability for the 1st Quarter of BY No. 1 was 94.04 percent and the average turbine-generator (TG) availability was 95.8 percent.

Overview of Monthly Facility Performance – October

The average boiler availability during October 2014 was 81.0 percent and the average TG availability was 97.0 percent. Boiler performance declined from September due to several planned and unplanned maintenance activities including,

- Shutdown of Boiler No. 1 for scheduled fall outage (297.1 hours)
- Continuation of shutdown of Boiler No. 2 due to roof tube failure at screenwall penetration (61.49 hours)
- Shutdown of Boiler No. 2 to replace the No. 3 feeder cylinder (16.22 hours)
- Shutdown of Boiler No. 2 to replace FD fan coupling (4.3 hours)
- Shutdown of Boiler No. 3 for grate repairs on run 5, zone 4 (44.02 hours)
- Shutdown of TG2 due to no supply steam (44.55 hours)

If the scheduled outage time is not included in the availability calculations, the average boiler availability for October 2014 would increase to 94.3 percent. There were no interruptions in the operation of the boiler and TG units due to lack of waste for the month of October. The County returned a total of 337 tons of waste from the landfill to help maintain an ample supply of fuel to the units during periods of reduced waste deliveries.

Overview of Monthly Facility Performance – November

The average boiler availability during November 2014 was 80.2 percent and the average TG availability was 95.4 percent. Performance was similar to the previous month (October 2014). There were several planned and unplanned maintenance activities including,

- Continuation of shutdown of Boiler No. 2 to replace FD fan coupling (36.5 hours)
- Shutdown of Boiler No. for scheduled fall outage (325.6 hours)

- Shutdown of Boiler No. 3 due to roof tube failure at screenwall penetration (65.32 hours)
- Shutdown of TG2 due to no supply steam (65.55 hours)

If the scheduled outage time is not included in the availability calculations, the average boiler availability for November 2014 would increase to 95.3 percent. There were no interruptions in the operation of the boiler and TG units due to lack of waste for the month of November. The County did not have to return any waste from the landfill during the month to help maintain an ample supply of fuel to the units during periods of reduced waste deliveries.

Overview of Monthly Facility Performance – December

The average boiler availability during December 2014 was 24.1 percent and the average TG availability was 27.42 percent. Boiler performance decreased significantly from the previous month due to a number of planned and unplanned maintenance activities including,

- Shutdown of Boiler No. 1 for scheduled common outage (612.5 hours)
- Shutdown of Boiler No. 2 for scheduled common outage (624.7 hours)
- Shutdown of Boiler No. 3 for scheduled fall and common outages (425.1 hours)
- Shutdown of Boiler No. 3 for grate repairs on run 5, zone 3 (30.8 hours)
- Shutdown of TG1 for scheduled common outage (613.7 hours)
- Shutdown of TG2 for scheduled common outage (434.2 hours)
- Shutdown of TG2 due to no supply steam (31.66 hours)

If the scheduled outage time is not included in the availability calculations, the average boiler availability for December 2014 would increase to 98.6 percent and the TG availability would increase to 97.8 percent. There were no interruptions in the operation of the boiler and TG units due to lack of waste for the month of December. The County did not have to return any waste from the landfill during the month to help maintain an ample supply of fuel to the units during periods of reduced waste deliveries.

Downtime due to Lack of Waste

There was no reported downtime related to lack of waste during the 1st Quarter.

Key Performance Data

A summary of the monthly operating data for the 1st Quarter of BY No. 1 is presented in **Table 2-1**. These data were compiled by the County and were not verified by CDM Smith. Amendment No. 6 changed, among other things, many of the performance guarantees. These changes are reflected under the guarantee column in Table 2-1. A number of performance guarantees have been eliminated that GCS was previously required to meet including the electric energy recovery guarantee, the maximum utility utilization guarantees (excluding maximum concentrations and restrictions for process wastewater) and the maximum reagent utilization guarantees. The performance guarantees and requirements under the new Service Agreement with Covanta will be included in the next quarterly report.

Table 2-1
Pinellas County WTE Facility Summary of Billing Month Operating Data for 1st Quarter of BY No. 1

ITEM	Oct-14	Nov-14	Dec-14	BILLING YEAR No. 1	GUARANTEE ⁽²⁾	BASELINE ANNUAL VALUES ⁽³⁾
NUMBER OF DAYS IN MONTH	31	30	31	92		
PROCESSIBLE WASTE DELIVERIES						
Total Processible Waste Available (tons)	75,455	66,378	78,630	220,462	NA ⁽¹⁰⁾	
Total Processible Waste Diverted to Landfill (tons)	0	0	0	0	NA	
Processible Waste Diverted to Recovery Area (tons)	1,300	2,567	52,353	56,220		
Processible Waste Returned from Landfill (tons)	337	0	0	337	NA	
Total Processible Waste Delivered to WTE Facility (tons)	74,187	63,829	26,283	164,299	NA	
Pit Rejects, Bulky Metals and Electronics Removed (tons)	32	19	6	57	NA	
Processible Waste Accepted at WTE Facility (tons)	74,155	63,810	26,277	164,242	NA	840,000-951,000
Beginning Pit Inventory (tons)	5,029	6,732	2,160			
Ending Pit Inventory (tons)	6,732	2,160	7,074			
Change in Pit Inventory (tons)	1,703	(4,572)	4,914		NA	
Estimated Processible Waste Processed (tons)	72,452	68,382	21,363	164,242	>50,000 per month or >67,000 rolling 3 month average ⁽¹¹⁾	
Estimated Waste Higher Heating Value (HHV) (Btu/lb)	4,671	4,651	4,689	4,607	NA	4,600-4,700
Monthly Rainfall (inches) ⁽⁴⁾	0.82	0.96	0.81	2.59		45
Average Daily Processing Rate (tons/day/unit)	962	947	951	966.2		
STEAM PRODUCTION						
Unit 1 Steam Generated (Klbs)	93,718	156,120	29,102	278,940	NA	1,525,000-1,785,000
Unit 2 Steam Generated (Klbs)	138,208	73,573	25,841	237,622	NA	1,523,000-1,785,000
Unit 3 Steam Generated (Klbs)	148,927	139,056	62,709	350,692	NA	1,580,000-1,790,000
Total Steam Generated (Klbs)	380,853	368,749	117,652	867,254	NA	4,628,000-5,216,000
Average Lbs Steam/Operating Hour/Unit	1,082,338	862,571	72,577	212,585	NA	208,000-221,000
Steam Capacity Utilization (%) ⁽⁵⁾	470.6	375.0	31.6	92.4	NA	92.5-98.4
Lbs Steam/Lb Processible Waste Processed	2.63	2.70	2.75	2.64	NA	2.72-2.84
ELECTRICAL PRODUCTION						
Gross Electricity Generated T-G No. 1 (MWH)	24,928	25,175	6,107	56,210	NA	291,000-372,000
Steam Bypassed to Dump Condenser No. 1 (Klbs)	0	0	0	0	NA	
Lbs Steam/KWH T-G No. 1 ⁽⁶⁾	9.30	9.12	9.00	9.19	NA	9.35-10.51
Gross Electricity Generated T-G No. 2 (MWH)	14,828	14,160	5,828	34,816	NA	151,000-176,000
Steam Bypassed to Dump Condenser No. 1 (Klbs)	0	0	0	0	NA	
Lbs Steam/KWH T-G No. 2 ⁽⁶⁾	10.04	9.82	10.76	10.07	NA	10.21-11.6
Total Gross Electricity Generated (MWH)	39,756	39,335	11,935	91,026	NA	429,000-540,000
Gross KWH/Ton Processible Waste Processed	549	575	559	554	NA	511-573
In-plant Electricity Usage (MWH)	6,347	6,348	2,025	14,720	NA	65,000-75,000
In-plant Electricity Usage (% of Gross)	16.0	16.1	17.0	16.2	NA	13.8-16.1
In-plant KWH/Ton Processible Waste Processed	88	93	95	90	NA	78-85
Net Electricity Sold (MWH)	33,409	32,987	9,910	76,306	NA	360,000-466,000
Net KWH/Ton Processible Waste Processed	461	482	464	465	NA ⁽¹²⁾	429-493
Total Electrical Capacity Factor (%) ^{(7) (8)}	0.82	0.84	0.58	81.84	> 75 ^{(8) (13)}	
On-Peak Electrical Capacity Factor (%) ^{(7) (8)}	0.83	0.86	0.58	82.18	NA ⁽¹⁴⁾	
RESIDUE GENERATION						
<5 Inch Ash Landfilled (tons)	6,275	17,651	6,275	30,200	NA	241,000-247,000
>5 Inch Ash Landfilled (tons)	0	169	0	169	NA	
Net Ferrous Metal Recovered/Shipped (tons)	960	1,964	960	3,883	NA	11,000-15,000
Net Non-Ferrous Metal Recovered/Shipped (tons)	22	22	22	67	NA	800-1,400
Total Residue (tons)	7,257	19,806	7,257	34,319	NA	256,000-284,000
Total Residue/Processible Waste Processed (%)	10.0	29.0	34.0	20.9	NA	29.5-33.0
Ferrous Metal Recovered/Processible Waste Processed (%)	1.3	2.9	4.5	2.4	NA	1.4-1.6
Non-FE Metal Recovered/Processible Waste Processed (%)	0.03	0.03	0.11	0.04	NA	0.10-0.15
REAGENT USAGE						
Scrubber Lime Delivered (tons)	784.1	0.0	0.0	784	NA	7,800-9,600
Lb Scrubber Lime/Ton Processible Waste Processed	21.6	0.0	0.0	9.5	NA ⁽¹⁵⁾	17.0-23.5
Carbon Delivered (tons)	22.9	0.0	0.0	22.9	NA	235-265
Lb Carbon/Ton Processible Waste Processed	0.63	0.00	0.00	0.28	NA ⁽¹⁶⁾	0.50-0.67
Lb Carbon/Operating Hour/Unit (lb/hr/unit)	108.1	0.0	0.0	11.2	NA ⁽¹⁷⁾	
Urea Delivered (gallons)	47	0	0	47	NA	117,000-433,000
Gal Urea/Ton Processible Waste Processed	0.00	0.00	0.00	0.00	NA ⁽¹⁸⁾	0.13-0.45
UTILITIES						
Electricity Purchased (KWH)	0	0	500,472	500,472	NA ⁽¹⁹⁾	122,000-1,454,000
Natural Gas Purchased (100CF)	62,500	37,400	14,400	114,300	NA ⁽²⁰⁾	800,000-1,400,000
City Water Used for Process Water (Kgallons)	65	77	63	205	NA	
Reclaimed Water Used for Fire System (Kgallons)	211	138	117	466	NA	
Reclaimed Water Used for Balance of Plant (Kgallons)	25,234	25,100	9,189	59,523	NA	153,000-306,000
Water Treatment Plant to Cooling Tower (Kgallons)	12,480	8,827	2,908	24,215	NA	205,000-405,000
Total Process Water Used (Kgallons)	37,989	34,142	12,277	84,408	NA	520,000-590,000
Gal. Tot. Process Water/Ton Proc. Waste Processed	524	499	575	514	NA ⁽²¹⁾	606-699
Process Wastewater Disposed (Kgallons)	3,400	5,800	54,913	64,113	NA	75,000-108,000
Gal. Process Wastewater/Ton Proc. Waste Processed	47	85	2,570	390	NA ⁽²²⁾	83-136
OPERATING HOURS						

Table 2-1
Pinellas County WTE Facility Summary of Billing Month Operating Data for 1st Quarter of BY No. 1

ITEM	Oct-14	Nov-14	Dec-14	BILLING YEAR No. 1	GUARANTEE ⁽²⁾	BASELINE ANNUAL VALUES ⁽³⁾
Unit No.1 Downtime (hours)	297.2	0.1	612.5	910	NA	614-1,580
Unit No.1 Downtime Due to Lack of Waste (hours) ⁽⁹⁾	0.0	0.0	0.0	0.0		
Unit No.1 Operating Hours	446.9	719.9	131.5	1,298		
Unit No.1 Availability Incl. Lack of Waste Downtime (%)	60.1	100.0	17.7	58.8		
Unit No.1 Availability Excl. Lack of Waste Downtime (%)	60.1	100.0	17.7	58.8	NA	82.0-93.0
Unit No.2 Downtime (hours)	82.5	362.0	624.7	1,069	NA	619-1,680
Unit No.2 Downtime Due to Lack of Waste (hours) ⁽⁹⁾	0.0	0.0	0.0	0.0		
Unit No.2 Operating Hours	661.5	358.0	119.3	1,139		
Unit No.2 Availability Incl. Lack of Waste Downtime (%)	88.9	49.7	16.0	51.6		
Unit No.2 Availability Excl. Lack of Waste Downtime (%)	88.9	49.7	16.0	51.6	NA	80.8-92.9
Unit No.3 Downtime (hours)	44.2	65.4	455.8	565	NA	596-1,208
Unit No.3 Downtime Due to Lack of Waste (hours) ⁽⁹⁾	0.0	0.0	0.0	0.0		
Unit No.3 Operating Hours	699.8	654.6	288.2	1,643		
Unit No.3 Availability Incl. Lack of Waste Downtime (%)	94.1	90.9	38.7	74.4		
Unit No.3 Availability Excl. Lack of Waste Downtime (%)	94.1	90.9	38.7	74.4	NA	86.2-93.2
Total WTE Facility Downtime (unit hours)	423.88	427.50	1,693.06	2,544	NA	2,355-4,111
Total WTE Facility Downtime Due to Lack of Waste (hours) ⁽⁹⁾	0.00	0.00	0.00	0.0		
Total WTE Operating Hours	1808.1	1732.5	538.9	4,080		
WTE Facility Availability Incl. Lack of Waste Downtime (%)	81.0	80.2	24.1	61.6		
WTE Facility Availability Excl. Lack of Waste Downtime (%)	81.0	80.2	24.1	61.6	NA	84.4-91.1
Turbine-Generator No.1 Downtime (hours)	0.0	0.0	614.0	614	NA	223-1,151
Turbine-Generator No.1 Availability (%)	100.0	100.0	17.5	72.2	NA	93.0-97.5
Turbine-Generator No. 2 Downtime (hours)	44.6	65.6	466.0	576	NA	623-1,280
Turbine-Generator No. 2 Availability (%)	94.0	90.9	37.4	73.9	NA	85.4-92.9
Total Turbine Downtime	44.6	65.6	1,080.0	1,190		
Total Turbine Availability	97.00	95.44	27.42	73.0		
Residue Production Time (hours)	662.7	678.4	326.2	1,667	NA	
Ferrous Metal Recovery System Operating Time (hours)	662.7	678.4	326.2	1,667	NA	
Ferrous Metal Recovery System Availability (%)	100.0	100.0	100.0	100.0	≥ 90	
Non-Ferrous Metal Recovery System Operating Time (hours)	641.7	664.5	321.2	1,627	NA	
Non-Ferrous Metal Recovery System Availability (%)	96.8	98.0	98.5	97.6	≥ 90	
+5 Inch Separation System Operating Time (hours)	662.7	678.4	326.2	1,667	NA	
+5 Inch Separation System Availability (%)	100.0	100.0	100.0	100.0	100	

Notes:

- 1) Billing Year based on October 1 through September 30.
 - 2) Performance Guarantees evaluated on a Billing Year basis in accordance with Schedule 3 of the Service Agreement unless otherwise noted.
 - 3) Based on data for calendar years 2000-2006. Excludes years where boiler capital replacement projects (CRP) and major turbine outages were undertaken.
 - 4) As reported by the National Weather Service at Tampa International Airport.
 - 5) Calculated based on a steam flow control set point of 230,000 lbs/hr/unit. Design MCR is 244,000 lbs/hr/unit.
 - 6) Excludes steam bypassed to dump condenser.
 - 7) Based on a percentage of 54.75 MW.
 - 8) Rolling 12-month average.
 - 9) Downtime numbers are based on GCS's reported cause for the downtime and the County does not concur with this determination in all cases.
 - 10) Revised per Amendment No. 6 to the Service Agreement. Previous delivery guarantee under Amendment 4 was ≥920,000 tons per year.
 - 11) Revised per Amendment No. 6 to the Service Agreement. Previous processing guarantee under Amendment 4 was ≥920,000 tons per year.
 - 12) Revised per Amendment No. 6 to the Service Agreement. Previous Net KWH/Ton Processible Waste Processed under Amendment 4 was ≥450.
 - 13) Revised per Amendment No. 6 to the Service Agreement. Previous total electrical capacity factor guarantee under Amendment 4 was ≥77.
 - 14) Revised per Amendment No. 6 to the Service Agreement. Previous on-peak electrical capacity factor guarantee under Amendment 4 was ≥77.
 - 15) Revised per Amendment No. 6 to the Service Agreement. Previous Lb Scrubber Lime/Ton Processible Waste Processed guarantee under Schedule 2 of the Service Agreement was ≤18.
 - 16) Revised per Amendment No. 6 to the Service Agreement. Previous Lb Carbon/Ton Processible Waste Processed guarantee under Schedule 2 of the Service Agreement was ≤0.66.
 - 17) Revised per Amendment No. 6 to the Service Agreement. Previous Lb Carbon/Operating Hour/Unit (lb/hr/unit) guarantee under Schedule 2 of the Service Agreement was ≥16 - ≤17.6.
 Permit limit of ≥ 16 lbs/hr/unit based on the average carbon feed rate demonstrated during the 2012 dioxin stack tests.
 Previous guarantee of ≤17.6 lbs/hr/unit based on 110% of permit limit.
 The permit limit will be updated based on the average carbon feed rate demonstrated during the 2014 dioxin stack tests when the information becomes available.
 - 18) Revised per Amendment No. 6 to the Service Agreement. Previous Gal Urea/Ton Processible Waste Processed guarantee under Schedule 2 of the Service Agreement was ≤0.20.
 - 19) Revised per Amendment No. 6 to the Service Agreement. Previous Electricity Purchased (KWH) guarantee under Schedule 2 of the Service Agreement was 0.
 - 20) Revised per Amendment No. 6 to the Service Agreement. Previous Natural Gas Purchased (100CF) guarantee under Schedule 2 of the Service Agreement was 0.
 - 21) Revised per Amendment No. 6 to the Service Agreement. Previous Gal. Tot. Process Water/Ton Proc. Waste Processed guarantee under Schedule 2 of the Service Agreement was ≤585.
 - 22) Revised per Amendment No. 6 to the Service Agreement. Previous Gal. Process Wastewater/Ton Proc. Waste Processed guarantee under Schedule 2 of the Service Agreement was ≤20.
- NA - Not Applicable

For purposes of allowing comparison to past performance and requirements, the discussion that follows includes the guarantees which were previously required to be met under the original Service Agreement and subsequent Amendment No. 4.

Metal Recovery System Performance

The ferrous metal recovery system availability during the 1st Quarter remained the same as the 4th Quarter at 100 percent, while the non-ferrous metal recovery system availability increased from 92.8 percent to 97.6 percent. Both of these system availabilities exceeded the annual guaranteed availability of 90 percent.

The average ferrous metal recovery rate observed during the 1st Quarter decreased from the 4th Quarter from 2.83 to 2.4 percent. By comparison, the Facility's ferrous metal recovery rate during the 1st Quarter is more in-line with the 2.5 percent observed at other WTE facilities, including nearby facilities in Hillsborough County and Pasco County. However, as an item of note, previously the plus 5-inch material included with the recovered ferrous metals was artificially increasing the reported ferrous tonnage and recovery rate. The contamination rates were very high (at times greater than 50 percent), so the reported ferrous metal tonnage was misleading. Typically, in most WTE facilities, the plus 5-inch material is hand sorted to separate the ferrous metals from the non-metallic items. The separated ferrous metals are then deposited in the ferrous metal bunker for recycling. If the sorting process is not performed, a significant amount of non-metallic debris will be added to the ferrous metal bunker, and lead to higher than expected tonnage for recovered ferrous metals.

The average non-ferrous metal recovery rate observed during the 1st Quarter decreased slightly from the 4th Quarter from 0.06 percent to 0.04 percent. By comparison, the Facility's non-ferrous metal recovery rate during this quarter is significantly lower than the 0.10-0.15 percent observed at other WTE facilities, including nearby facilities in Hillsborough County and Pasco County.

Reagent Use

Reagent usage during the 1st Quarter was below the previous annual guarantee values for pebble lime, urea and carbon.

The average lime usage rate during the 1st Quarter remained the same of the 4th Quarter rate of 17.8 pounds per ton of waste processed. This is below the previous guarantee limit of 18 pounds of lime per ton of waste processed. The average urea usage rate during the 1st Quarter also remained the same as the 4th Quarter at 0.08 gallons per ton of waste processed. This is below the previous guarantee limit of less than or equal to 0.20 gallons per ton of waste processed.

The average activated carbon usage rate per ton of processible waste processed increased from 0.36 pounds in the 4th Quarter to 0.56 pounds in the 1st Quarter. This is below the previous carbon utilization guarantee of less than 0.66 pounds.

The average activated carbon usage rate per boiler operating hour increased from 14.87 pounds in the 4th Quarter to 22.5 pounds in the 1st Quarter. This exceeds the previous carbon utilization guarantee of 17.6 lbs.

Process Wastewater Disposal

Process wastewater disposed during the 1st Quarter increased significantly from the 4th Quarter from 31,286,000 gallons to 64,113,000 or from 125 gallons per ton of processed waste to 395 gallons per ton of processed waste. The amount of wastewater disposed during the 1st Quarter was affected by

boiler drains, blowdowns and cleaning activities during the numerous unscheduled maintenance outages.

Process Water Usage

The total amount of process water used decreased from 145,452,000 gallons in the 4th Quarter to 84,408,000 gallons in the 1st Quarter. Also, the total process water used per ton of waste processed decreased from 580 gallons in the 4th Quarter to 520 gallons in the 1st Quarter. As an item of note, the new water treatment plant (WTP) began drawing water from Pond A and supplying the treated process water to the Facility during the 3rd Quarter of BY No. 7. The WTP continued to provide treated process water to the Facility in the 1st Quarter. Approximately 29 percent of the total process water usage has been provided by the WTP during the quarter, with reclaimed water providing the bulk of the remainder of the process water.

Electrical Capacity Factors

The average monthly capacity factors for the 1st Quarter were 81.84 percent total and 82.18 percent for on-peak periods. The rolling 12-month total capacity factor is calculated by Duke Energy (formerly Progress Energy Florida) and tracked by the County. As of the end of the 1st Quarter, the rolling 12-month capacity factor increased from the end of the 4th Quarter. The rolling 12-month average for the total electrical capacity factor increased from 82.62 to 83.68 percent. The capacity factor is based upon the County's committed capacity of 54,750 kW.

Amendment No. 6 removed GCS's electrical capacity factor obligations, but does include incentives and penalties for increasing or decreasing the total capacity factor above or below the specified capacity factor of 75 percent. For each full one percent that the total capacity factor increases above the specified capacity factor, the labor markup percentage shall be increased by one percent commencing with the Billing Month after the Billing Month in which the increase was achieved and continuing for each Billing Month thereafter. For each full one percent that the total capacity factor decreases below the specified capacity factor, the labor markup percentage shall be decreased by one percent commencing with the Billing Month after the Billing Month in which the decrease occurred and continuing for each Billing Month thereafter.

The 12-month rolling average total capacity factor data through the 1st Quarter of BY No. 1 are shown in **Figure 2-1**. Based upon Amendment No. 6, if the total capacity factor for a Billing Month is a full one percent above the specified capacity factor of 75 percent, GCS is able to increase their labor markup percentage from 12.5 percent by that full percentage increase in the next Billing Month after achieving the increase. **Table 2-2** summarizes the months in which GCS was able to increase their labor markup percentage from the original 12.5 percent. The increase in total and peak capacity factors has been the result of the incentives provided by the County to GCS in Amendment No. 6, along with a heavy focus on preventive maintenance and planned outages on a semi-annual basis.

Figure 2-1
Rolling 12-Month Average Total Capacity Factor

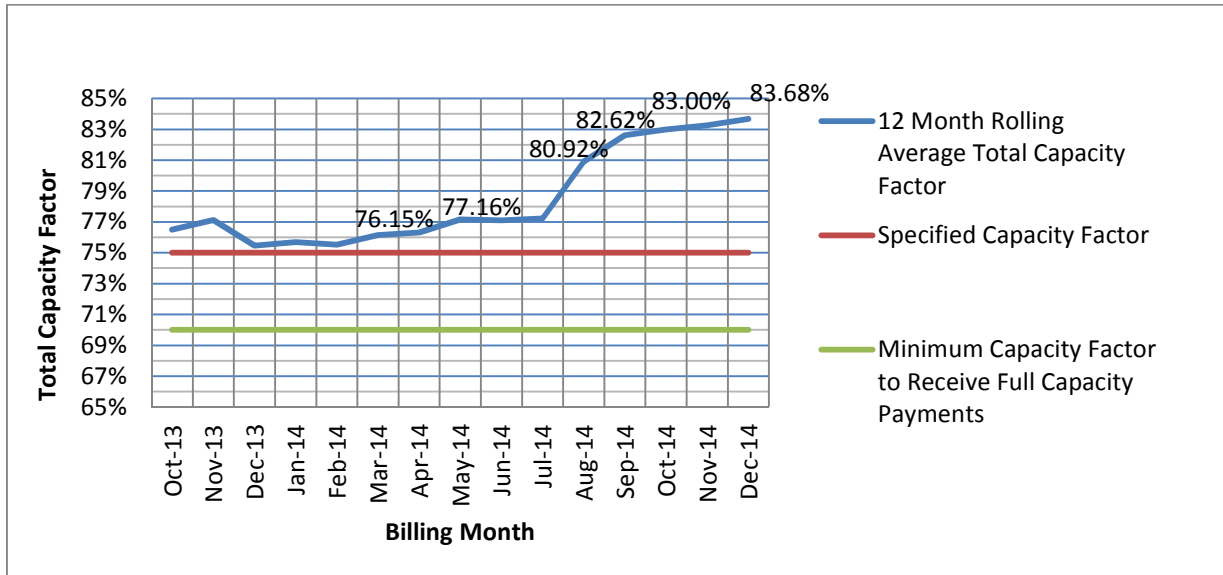


Table 2-2
Months in which 12-month Total Capacity Factor Rolling Average was above 75%

Month	12-month Total Capacity Factor Rolling Average	Full Percent above Specified Capacity Factor of 75%	Month of Labor Markup Percentage Increase
March 2014	76.15	1 percent	April @ 13.5 percent
May 2014	77.16	2 percent	June @ 14.5 percent
August 2014	80.92	5 percent	September @ 17.5 percent
September 2014	82.62	7 percent	October @ 19.5 percent
October 2014	83.00	8 percent	November @ 20.5 percent

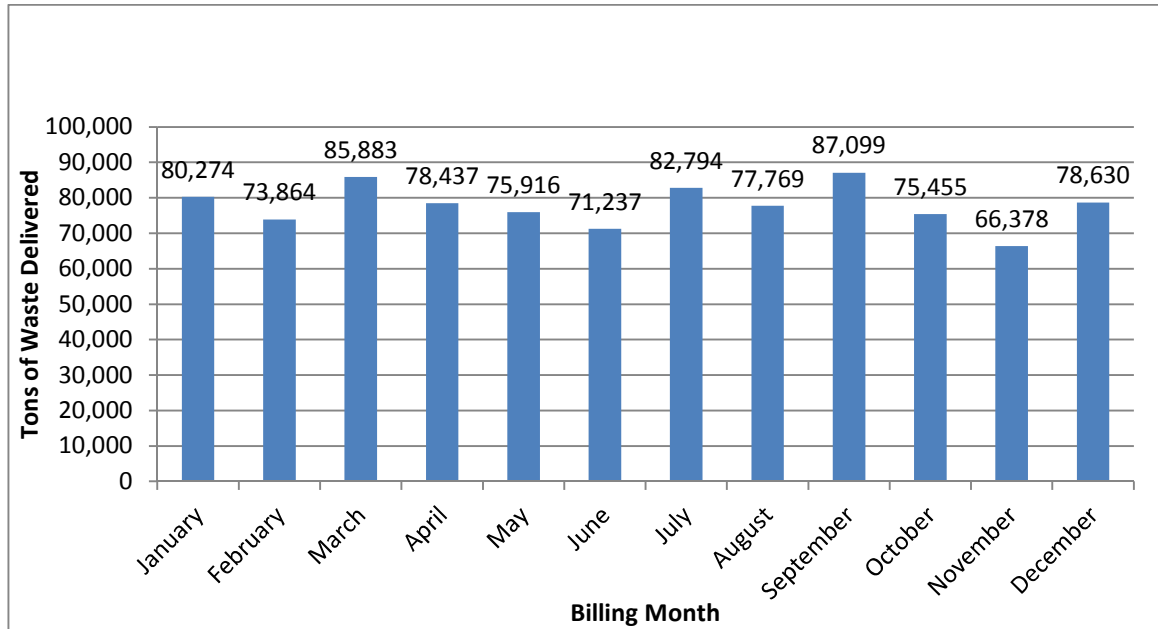
Under the County's energy agreement with Duke Energy, the capacity factors need to be maintained above 70 percent to receive full capacity payments, which are a significant source of revenue to the County. The current value of capacity payments amounts to approximately \$3,530,000 per month applicable in calendar year 2014.

2.2 Waste Generation

Under Amendment No. 6, the County is no longer required to meet a specified delivery guarantee in terms of annual tonnage. The amendment states that the County shall use reasonable efforts to deliver, or cause to be delivered to the Facility, all processible waste within its control to the Facility in accordance with the following: with respect to such deliveries, the County shall make reasonable efforts to deliver, or cause to be delivered, processible waste on a relatively equal and consistent basis over each Billing Month subject to normal seasonal solid waste quantity variations and other factors. In addition, the County shall deliver or cause to be delivered, if all of the following conditions apply, such additional processible waste as (a) GCS has requested, (b) GCS has available Facility capacity for storage and processing as demonstrated by the line of vehicles waiting to deliver processible waste

not extending past the beginning of the ramp leading to the Facility tipping floor and (c) the County has reasonably available to it to so deliver or to cause to be delivered. During the 1st Quarter of BY No. 1, the County met its current obligations for waste delivery under the Amendment No. 6 terms. The monthly processible waste delivered by the County and made available to the Facility since Amendment No. 6 became effective and through the 1st Quarter of BY No. 1 is shown in **Figure 2-2**.

Figure 2-2
Monthly Processible Waste Available through 1st Quarter of BY No. 1



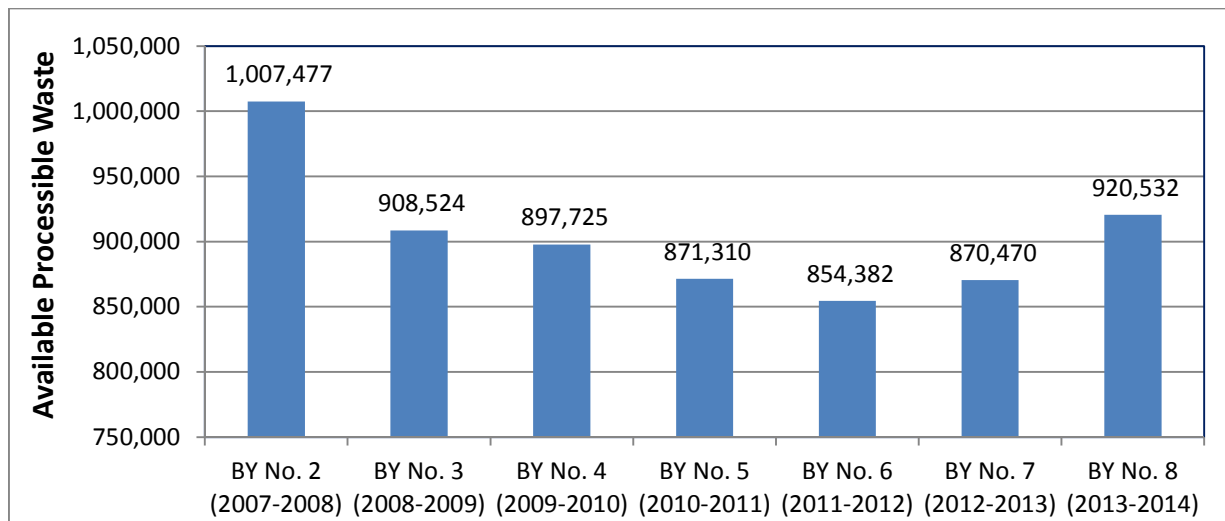
The total processible waste available to the Facility during the 1st Quarter was 220,462 tons, which is approximately 6.4 percent higher than the 1st Quarter of BY No. 8, and 11 percent lower than the prior 4th Quarter of BY No. 8. The total available waste data as currently reported by the County, however, includes the waste returned from the landfill on a monthly basis. The amount of waste returned from the landfill during the 1st Quarter was minimal due to the scheduled fall outages on each combustion unit and the common outage during which each unit was shut down that were completed during the quarter. Only 337 tons of waste were returned from the landfill in early October. The amount of waste returned from the landfill during the 1st Quarter represents approximately 0.15 percent of the total processible waste which was available in the 1st Quarter. The scheduled fall and common outages also caused the Facility not to be able to accept all of the available waste during the 1st Quarter. Approximately 1,300 tons in October, 2,567 in November and 52,353 tons in August were diverted to the landfill recovery area (as shown in Table 2-1) for a quarterly total of 56,220 tons.

During the 3rd Quarter of BY No. 6, the County began a pilot program to determine if unprocessed waste diverted to the landfill could be temporarily covered and preserved for possible future processing at the Facility. While only 137 tons was returned from the landfill during BY No. 6, 9,998 tons was reclaimed and returned during BY No. 7 under the pilot program. On July 16, 2013, the County finalized a contract amendment with the landfill operator to return waste at a cost to the County of \$12 per ton. However, January 2014 was the first month after implementation of the new amendment that waste was returned to the Facility. A total of 43,375 tons of waste has been recovered and returned to the Facility for processing through the 1st Quarter of BY No. 1.

Scheduled outages are targeted for waste diversions to the temporary storage area for future recovery. In the 1st Quarter of BY No. 8 during which the scheduled fall outages occurred, 39,533 tons of the 42,536 tons of waste that was diverted to the landfill (approximately 93 percent) was sent to the specific area for recovery. None of the 2,227 tons diverted to the landfill during the 2nd Quarter was sent to the temporary storage area for future recovery. All of the 31,027 tons of diverted waste during the 3rd Quarter, 285 tons during the 4th Quarter (approximately 75 percent) and all of the 56,220 tons during the 1st Quarter of BY No. 1 were directed to the storage area for future recovery. Per the contract amendment, the County can return 50,000 tons of stored waste to the Facility per Billing Year. The Facility determines when the waste is to be returned based on pit levels and unit operations. During those periods when waste is being recovered and returned, the landfill contractor can average approximately 300 to 500 tons per day to the Facility.

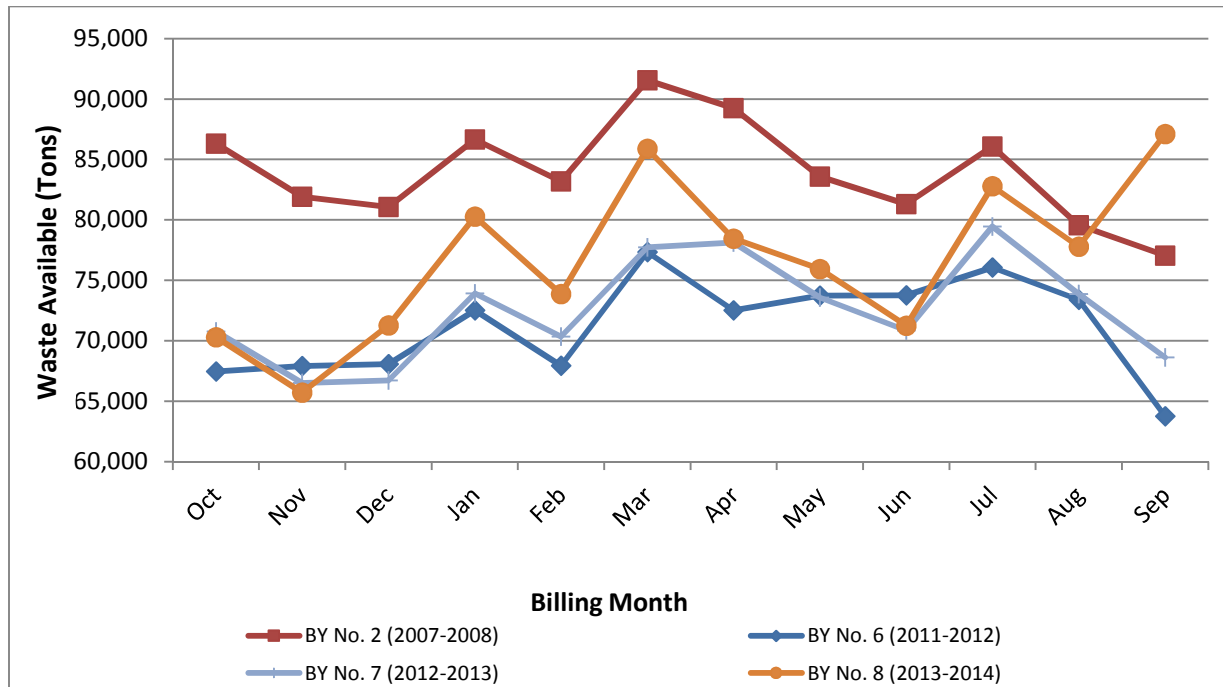
As shown in **Figure 2-3**, waste delivery quantities continue to be well below the pre-recession waste delivery quantities observed during BY No. 2, even with returned waste from the landfill. BY No. 6 was the low point in the downward trend since BY No. 2. The downward trend reversed itself slightly during BY No. 7, when waste deliveries were approximately 1.9 percent higher than BY No. 6. This upward trend has continued in BY No. 8 with approximately 5.75 percent more waste delivered than in BY No. 7.

Figure 2-3
Comparison of Total Processible Waste Available for BY Nos. 2 through 8



The reason for the overall reduced waste delivery quantities in Pinellas County since BY No. 2 is not fully known. **Figure 2-4** displays monthly data for the peak year (BY No. 2) and the most recent three years. This graph indicates that a similar decline has been observed during each Billing Month, not just during the peak tourist months of January through April. The effects of the local economy over the past six years may be the most significant cause for waste reduction, which has resulted in a drop in population in Pinellas County since the pre-recession period of BY No. 2. Additionally, there may be a significant impact due to greater participation in single stream curbside recycling programs by several communities within Pinellas County. Nevertheless, waste deliveries for BY No. 8 did increase over BY No. 7, continuing a two year rising trend. As noted earlier, the Facility did not have any interruptions due to reduced waste deliveries (lack of waste) during the 1st Quarter due in large part to the County's willingness to return waste from the landfill during the period.

Figure 2-4
Comparison of Total Processible Waste Available for BY Nos. 2, 6, 7, and 8



2.3 Waste Processed

The total processible waste which was available to the Facility during the 1st Quarter was 220,462 tons, down 11 percent compared to the prior quarter value of 247,662 tons. This total includes only 337 tons of waste returned from the landfill during the 1st Quarter. A total of 56,220 tons were diverted to the landfill due to the scheduled fall and common outages, resulting in a total of 164,242 tons of processible waste delivered to the Facility. A total of 57 tons of pit rejects, bulky metals and electronics were removed from the pit. The amount of processible waste actually processed during the 1st Quarter was 162,197 tons.

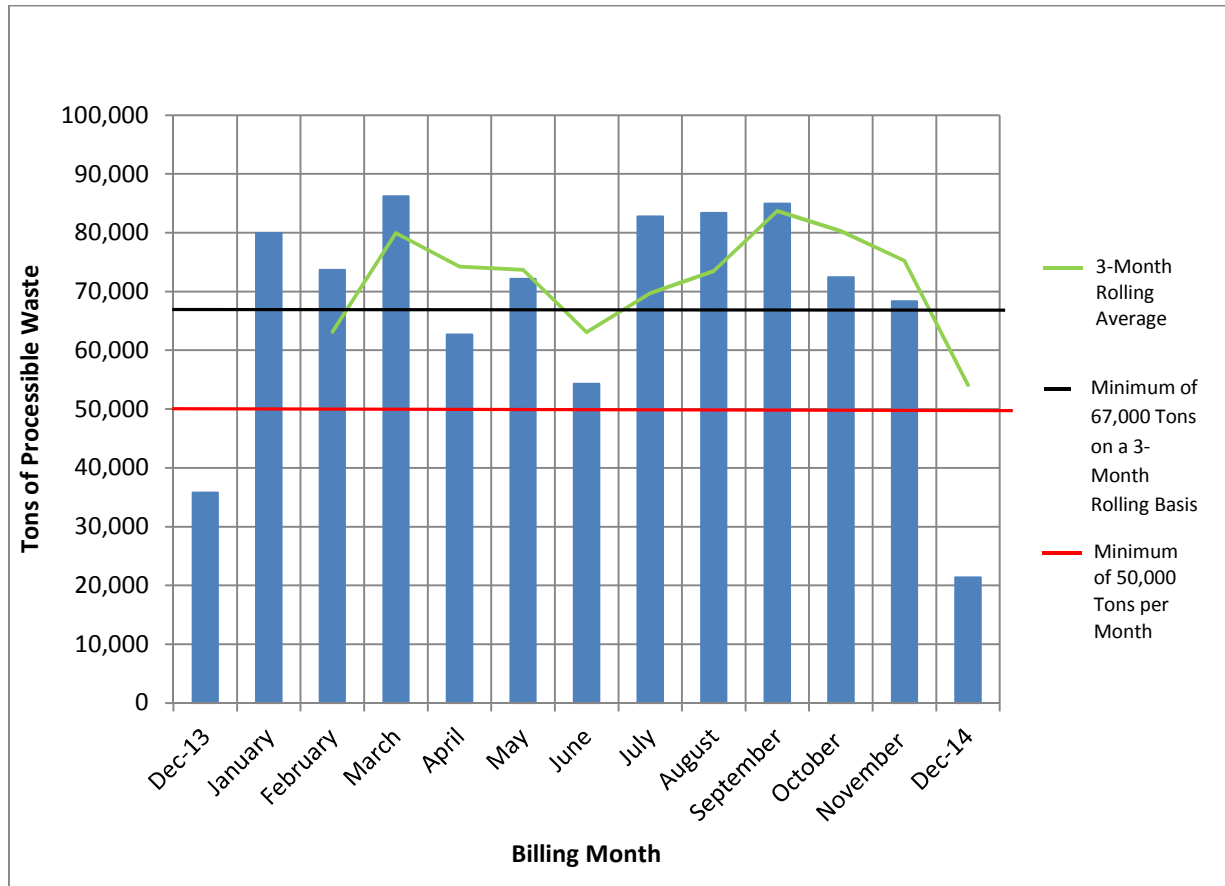
Amendment No. 6 also modified GCS's waste processing requirement. During each Billing Month, but subject to GCS's rejection rights during any Billing Month specified in Section 7.1.2(a) of the original Service Agreement, GCS is required to process a minimum of 67,000 tons of processible waste on a rolling three Billing Month basis, but in no event less than 50,000 tons of processible waste in any Billing Month provided that the County delivers or causes to be delivered at least that amount of processible waste to the Facility during the Billing Month.

GCS is excused of the processing requirement for any Billing Month in which the County specifically authorizes or instructs that work be performed by GCS that would preclude meeting the processing requirement so long as GCS delivers advance notice to the County's Authorized Representative stating that such work is reasonably expected to prevent meeting the processing requirement and describing the reasons in sufficient detail.

The monthly processible waste processed data since the effective date of Amendment No. 6 and through the 1st Quarter of BY No. 1 are shown in **Figure 2-5**. Since that time, GCS has exceeded the minimum waste processing requirement of 50,000 tons each billing month with the exception of

December 2013 during which combustion unit and common plant scheduled outages occurred. These fall outages had been planned and were currently underway when the Amendment became effective. As shown on Figure 2-2, the County did deliver at least 50,000 tons to the Facility during each month through the 1st Quarter of BY No. 1. Note that December 2014 has been excluded from the analysis since Covanta assumed operations early that month.

Figure 2-5
Monthly Processible Waste Processed Compared to GCS Processing Requirement



GCS also exceeded the minimum waste processing requirement of 67,000 tons on a rolling three month basis through the 1st Quarter of BY No. 1. The only two months in which GCS did not meet the minimum requirement were during the months of February and June 2014. The 3-month rolling average for the month of February 2014 includes data from the month of December 2013 during which work authorized by the County prior to the effective date of the Amended Service Agreement was performed and therefore, would be excusable under the terms of the agreement. The 3-month rolling average for the month of June 2014 includes data from the months of April, May and June during which the scheduled spring outages occurred. As shown on the trend line in Figure 2-5, the 3-month rolling average was 63,061 tons at the end of June 2014, 3,939 tons below the minimum processing requirement on a rolling three month basis. GCS formally requested in a March letter to the County that the months of April, May and June 2014 be specifically excluded from the 3-month rolling averages due to the authorized spring outages and mutually agreed upon planned scope of work. The County neither formally approved nor denied this request.

2.4 Carbon Monoxide Exceedances

During the 1st Quarter of BY No. 1, there was only one CO excess emission that exceeded the 100 ppm, 24-hour limit. The FDEP Consent Order temporarily relaxes the limit for CO from an average of 100 ppm on a 4-hour block to 100 ppm on a 24-hour block. The CO exceedance that occurred on November 23, 2014 was due to a tube failure in Unit No. 3 that resulted in an emergency shutdown of the unit. Although they did not exceed the current CO limits, there were several additional excess CO emission incidents which were reported to the FDEP. These incidents reportedly occurred during boiler startup, shutdown, or other malfunction conditions, which are exempt and not considered reportable events. The following excess emission incidents during the 1st Quarter were reported to FDEP for information as follows:

- Two CO incidents during the month of October (Unit No. 3)
- Two CO incidents during the month of November (Unit No. 3)
- One CO incident during the month of December (Unit No. 3)

The County and Florida Department of Environmental Protection (FDEP) have entered into a consent order that governs the implementation of a corrective action plan, including attainment of task specific milestones to correct carbon monoxide emission exceedances. A detailed assessment of the environmental performance of the Facility during the 1st Quarter, along with status of the CO Task Force action plan, has been prepared by Earthshine Environmental and issued as a separate report.

2.5 Opacity Exceedances

During the 1st Quarter, there were several excess opacity emission incidents. These incidents reportedly occurred during boiler startup, shutdown, or other malfunction conditions, which are exempt and not considered reportable events. The excess emission incidents during the 1st Quarter which were reported to FDEP for information were:

- Three opacity incidents during the month of December

A detailed assessment of the environmental performance of the Facility during the 1st Quarter, along with the status of the CO Task Force action plan, has been prepared by Earthshine Environmental and issued as a separate report.

2.6 Environmental Performance Incentive

Under the new terms of Amendment No. 6, a performance incentive has been included for GCS for operation of the Facility with no exceedances. A Facility exceedance is defined as any exceedance of air emissions standards or other conditions in the Permits, whether or not regulatory action is taken by any Governmental Authority. For each Billing Month in which there are no Facility exceedances, GCS's labor markup percentage can be increased by one percent for the Billing Month only in which no Facility exceedances occurred.

There were no reported exceedances of emissions or other Facility permit-required operating conditions in October. However, in November there was one CO exceedance. December has not been included in the analysis since Covanta assumed operations early that month. GCS, therefore, was eligible to increase their labor markup percentage by one percent for October as allowed under the terms of Article 2.6 of Amendment No. 6.

2.7 Refuse Pit Turnover

Section 7.1.3 of the Service Agreement requires GCS to turn over the waste in each of the eight waste storage pit bays at least once every three months (13 weeks). This process is intended to prevent the accumulation of standing water at the bottom of the storage pit and to minimize the potential for spontaneous combustion from decomposing waste. GCS's weekly records indicate that during the 1st Quarter, the waste was turned over in all eight bays 1 time each. The dates and intervals between bay turnovers are summarized in **Table 2-3** for the past two cycles reported by GCS. As shown in Table 2-3, GCS met the requirement for not exceeding 13 week periods between turnovers during the 1st Quarter.

Table 2-3
Summary of Refuse Pit Turnovers during 4th Quarter

Bay Number	1 st Quarter Turn Over Date(s)	Time Between Previous Turn Over (weeks)	4 th Quarter Turn Over Date	Time Between Turn Over (weeks)	Prior 4 th Quarter Turn Over Date
1	October 27	5	September 22	11	July 7
2	October 27	5	September 22	11	July 7
3	November 24	8	September 29	9	July 28
4	November 24	8	September 29	9	July 28
5	October 13	4	September 14	3	August 24
6	December 1	9	September 29	5	August 24
7	December 1	9	September 29	10	July 21
8	December 1	9	September 29	10	July 21

In CDM Smith's opinion, the most effective approach is to rotate the waste in one bay of the refuse pit on a biweekly basis, rather than multiple bays as a group on a periodic basis as has been GCS's practice. In this way, the amount of water in the bottom of the refuse pit will be partially removed on a regular basis, thereby reducing the tendency for the water to accumulate to the point of impacting the combustion of waste. Based on the reported turnover dates, it appears that GCS is rotating the refuse pit on a more frequent basis due to lower waste deliveries, which requires that they dig deeper into the refuse pit on a weekly basis, making it more convenient to turn over the remaining waste. Waste turnover in the refuse pits generally occurs on Monday mornings when the inventory is at the lowest for the week.

GCS has been submitting weekly refuse pit inventory data to the County since taking over operations from Veolia in mid-December 2012. Starting on February 18, 2013, GCS began reporting their "Comments on Refuse Conditions" at the request of the County, along with the pit inventory data. The comments typically have been reported using one of the following descriptions:

- No Visible Issues
- Dark Damp Material
- Excess Moisture due to Rain
- Standing Water at Bottom of Pit

During the 1st Quarter, there were a total of 13 weekly refuse pit inventory reports. Each report contains data for 16 zones (8 along the front of the pit and 8 along the rear of the pit). The vast

majority of the comments, which were noted on the pit inventory sheets, were “no visible issues.” The only dates where GCS noted conditions of concern were October 26 (dark damp material in Bays 1 and 2, front and rear) and November 24 (dark damp material in Bays 3 and 4, front and rear). These two reports occurred during a period of exceptionally heavy rainfall. Paying strict attention to the 13 week maximum interval between pit rotations has been effective in minimizing the amount of water which accumulates in the bottom of the pit.

2.8 Key Staff Changes

During the 1st Quarter of BY No. 1, Covanta officially assumed responsibility for the management, operation, repair or replacement and maintenance of the Facility at 12:00 AM (0000) on Sunday, December 7, 2014. All but five of the prior GCS employees (Facility Manager, Projects Manager, Mechanical Maintenance Supervisor, one Crane Operator and one RSPB Ash Operator) were offered and accepted positions with Covanta.

Effective December 9, 2014, Paul Grego officially assumed the duties of Facility Manager and Authorized Representative for Covanta. Subsequently, Ms. Kelsi Oswald accepted the position of Pinellas County Solid Waste Director and Beth Burns was named the delegated Authorized Representative for the County. Joseph Treshler was formally named in Covanta’s proposal to serve as the Technical Recovery Plan Manager and will be responsible for management, implementation and coordination of all Work associated with the Technical Recovery Plan. In accordance with Section 3.4.3 of the new Service Agreement, Covanta is to maintain the Facility with the following full time on-site employees. The initial staffing of these positions are also noted below:

- Facility Manager: Paul Grego
- Environmental Compliance Manager: Rebecca Bigari
- Health and Safety Director: Robert Tilley
- Operations Manager: Elwyn Lowe
- Traffic Control Director: Marlboro Guzzi
- Technical Recovery Plan Manager: Joseph Treshler
- Maintenance Manager: Chris Schuckert
- Receptionist: Nancy Horneman

2.9 County / Consultant Involvement in Daily Operations

With the execution of Amendment No. 6, the County assumed a more active role in management oversight of the Facility. In December 2013, the County authorized Bill Crellin (subconsultant to CDM Smith) to maintain a full-time presence at the Facility. The County and its consultants have direct involvement in decision making for Facility operation, maintenance, repairs and improvements. In accordance with the amendment, Mr. Crellin was fully engaged and involved (e.g., privy to all discussions, information, data, policy formation, priority planning and decision making meetings and activities, etc.) by Facility management and was invited and permitted to attend all meetings of any type or nature. GCS is expected to work cooperatively with the County and its representatives in determining operation, maintenance, repair and improvement priorities and GCS will undertake such

matters and projects as instructed by the County, its Consulting Engineer, or other authorized representatives of the County. Mr. Crellin prepared daily reports to keep the County and consulting team informed and involved with the day to day Facility operations and issues. The daily reports prepared during his on-site presence in the 1st Quarter are included in **Appendix A**.

Starting with the 2nd Quarter of BY No. 8 and extending through the 1st Quarter of BY No. 1, CDM Smith consulting engineers also become more involved with maintenance, repair and improvement projects associated with the Facility. Joe Cascio assisted with instrumentation, lighting and baghouse improvements and decisions regarding electrical maintenance at the Facility. The goal of the day to day oversight and involvement by the County and consultants was to identify and perform the repairs, maintenance and improvements needed at the Facility in the most efficient and cost effective manner possible, while improving Facility performance and operations. The overall improvement of the electrical capacity factor, and reduction in number of unplanned outages and air emission exceedances is a testament to the effectiveness of the County's direct involvement in daily operations.

2.10 Housekeeping

GCS started to make improvements in the area of housekeeping at the Facility in late 2013 and continued to make significant progress through the 1st Quarter of BY No. 1. However, the improvements in housekeeping are largely due to contract laborers that are brought on site on an almost daily basis. GCS was using temporary laborers from Action Labor at the beginning of the 2nd Quarter, but started using Pacesetters again on January 6, 2014. Throughout most of the 1st Quarter, 15 laborers (10 on day shift and 5 on night shift) were brought on site on a daily basis with the primary focus for cleanup being the concrete pavements under the boilers, SDAs and baghouses. This number of nearly permanent housekeeping support is considered unusual in this industry and significantly increases the County's costs. The root cause that results in the need for the almost constant housekeeping efforts needs to be addressed as further discussed below.

Although it occurred less frequently, the regular practice of dumping ash from various chutes, conveyors and hoppers to the concrete floors under the boilers, SDAs and baghouses continued during the 1st Quarter. As CDM Smith has stated repeatedly, this is not an acceptable practice and must be eliminated to avoid repeating prior unsafe working conditions throughout the Facility, the significant cost to repeatedly clean up this material and potential fines for environmental violations. Going forward, it is critical that GCS properly operate and maintain the ash collection and transfer systems so the level of housekeeping is more manageable on an ongoing basis. A work area that is clean and free of standing water, fugitive fly ash and slippery wet ash deposits will greatly improve the morale of the staff that are responsible for the safe and efficient operations and maintenance of the Facility.

There have been consistent problems with keeping the ash collection and transfer system in a good operating condition. The economizer hopper fly ash collection and transfer screw conveyors for Unit No. 1, which had been damaged and out of service since August 2013 were finally installed during the 3rd Quarter. In addition, new economizer hopper fly ash collection and transfer screw conveyors for both Unit Nos. 2 and 3 were installed during the 1st Quarter. However, there were consistent problems with the No. 1-5, 2-5 and 3-5 fly ash drag chain conveyors, the SDA hopper slide gates and the SDA fly ash transfer conveyors, as these systems were observed to be inoperable many times during inspections. All of these non-functioning systems result in plugged hoppers and higher than normal carryover of fly ash to the baghouses. During the 1st Quarter, the baghouse hopper project was started to address ongoing issues due to inoperable heaters, rappers, level detectors, double dump valves and

lack of properly installed insulation. Completion of this project by the end of the 1st Quarter should greatly reduce the need to clear ash from the hoppers by dumping it to the ground.

When ash is dumped, it is then either piled between the Nos. 2 and 3 baghouses or under the filter press. The piled ash is transferred to the RSPB using a Bobcat or front-end loader resulting in tracking of ash along the pavements outside the wind wall area. This can have significant negative effects since the ash has the potential to become entrained by air currents and settle in the cooling tower or coat electrical components in the switchyard.

The Facility continues to experience problems with proper operation of the pug mill for conditioning of the fly ash. During several inspections of the RSPB in the 1st Quarter, a significant amount of airborne fly ash was observed in the building. CDM Smith has previously recommended assigning a full-time attendant for the system, along with possible modifications to the spray bars/nozzles to eliminate the dusting which occurs inside the fly ash conditioning building, inclined belt gallery and the RSPB.

Figures 2-6 through 2-11 captured some of the major housekeeping issues observed during the 1st Quarter.

Figure 2-6
Poor housekeeping in RSPB on inclined grating along belt conveyor feeding
minus 5-inch ash to metal recovery system
(October 2014)



Figure 2-7
Poor housekeeping on stairs around Grizzly Scalper in RSPB
(October 2014)



Figure 2-8
Poor housekeeping around Grizzly Scalper in RSPB
(October 2014)



Figure 2-9
Ash from under inclined gallery belt conveyor on Facility roads
(October 2014)



Figure 2-10
Ash from under inclined gallery belt conveyor on Facility roads
(October 2014)



Figure 2-11
Dumped fly ash stored in belt filter press bunker for transfer to RSPB
(October 2014)



Section 3

Maintenance and Repairs

3.1 GCS Approach to Inspections, Maintenance and Repairs

3.1.1 History of Scheduled Outages

It is customary in the waste-to-energy industry to perform two scheduled outages per year on each combustion unit in order to maintain high annual on-line availability. GCS completed only one scheduled outage on each combustion unit during Billing Years No. 5, 6, and 7. In Billing Year No. 8, GCS performed a scheduled major outage on each combustion unit during the fall of 2013 and second major outages during the spring of 2014. The decision to perform a second major outage may have been due in part to the fact that there were not enough grate bars and other necessary spare parts to perform a full refurbishment of the combustion grates on Unit No. 2 during the fall outage.

The duration of the combustion unit outages during the 1st and 3rd Quarters of Billing Year No. 8 were significantly longer than the normal 7-10 day outage period, and is reflective of the extent of the repairs needed due to GCS's failure to conduct more frequent scheduled outages. In CDM Smith's opinion, the higher than expected unscheduled downtime and overall poor Facility performance experienced over the past several Billing Years is the direct result of GCS's decision not to perform semi-annual outages, which is not in accordance with the Standards of Maintenance as defined in the Service Agreement. Likewise, the 2014 fall outages were also significantly longer than normal industry standards.

The number of scheduled major outages during the prior eight Billing Years of operation and maintenance by GCS and Veolia is summarized below in **Table 3-1**.

Table 3-1 History of Scheduled Major Outages

Billing Year	Unit No. 1	Unit No. 2	Unit No. 3
BY No. 1 (Veolia)	Two	Two	Two
BY No. 2 (Veolia)	Two	Two	Two
BY No. 3 (Veolia)	Two	Two	Two
BY No. 4 (Veolia)	Two	Two	Two
BY No. 5 (Veolia)	One	One	None
BY No. 6 (Veolia)	One	One	One
BY No. 7 (Veolia / GCS)	One	One	One
BY No. 8 (GCS)	Two	Two	Two

Although a considerable amount of work was performed during the fall 2013 and spring 2014 outages, CDM Smith believes that much more remains to be performed due to the significant amount of deferred maintenance that has occurred over the past several years during which time only one major outage was performed on each unit. Many of the deferred maintenance repairs have allowed numerous components of the combustion, air pollution control, ash collection and treatment systems and balance of plant systems to fall into a serious state of disrepair. It will likely take several major outages and a large investment to correct this situation.

3.1.2 GCS's Performance versus WTE Industry Standards

It is typical in the WTE industry to perform two major outages on each combustion unit during the course of an operating year. During these major outages, a pre-planned scope of work is performed, based on inspections during earlier outages. Also, preventative maintenance (PM) is performed based on the plant operator's knowledge of the equipment and the frequency of maintenance required. Additionally, most WTE facilities hold minor outages between the major outages. These minor outages typically involve percussive blast cleaning of boiler internals, cleaning of other components, and quick visual inspections of the entire processing unit. Repairs are made only if they are considered necessary to run until the next scheduled major outage.

During 2013, GCS performed no combustion unit outages until the November/December 2013 time frame, when, under the County's direction, they were required to perform major outages on all Pinellas combustion units. The County dictated the work to be performed, provided experts and consultants to watch over the work, and paid GCS on a cost plus 5 percent basis for all work. The units were down for 3 weeks. Still, even with all the work performed during the November/December 2013 fall outage, the Facility was still in poor condition due to the prior neglect of maintenance by GCS and their predecessor, Veolia Environmental. Starting in the spring of 2014, GCS made the decision to resume the normal industry practice for performing biannual outages. The spring outages were completed in April and May of 2014. Again, it should be noted that the County paid GCS on a cost plus basis for the outage work performed. Is that a correct statement?

Listed below are major areas of a combustion unit with standard WTE industry-wide maintenance practices stated, along with the actual maintenance that GCS performed during the period when they had complete and direct control of the facility.

Feed Hopper

The feed hopper is typically visually inspected prior to bi-annual major outages. The tynes on the refuse cranes and metal plates on the feed hopper are subjected to impacts by heavy objects and typically suffer some damage during operations, including bent or damaged plate surfaces. If done on a bi-annual basis this is typically minor work during outages. It only involves cutting out and replacing plate material. GCS neglected this work throughout 2013 and early 2014. This scope of work became a major work item (estimated cost of \$75,000) and on the critical path during the fall 2014 outages.

Feed Chute

Typically, Ultrasonic Test (UT) measurements are taken on the four steel walls of the feed chute during each major outage to track wear rates. Low readings are the catalyst for future plans for replacing plate during the next major outage. GCS had not taken UT readings during the prior year.

Grate Surface and Undergrate Equipment

The original equipment manufacturer (OEM), Martin GmbH, recommends measurements be taken to assure the grate surface is moving in a parallel and square manner on a bi-annual basis. This was not done by GCS until November/December 2013 outages when Leo Lakowski and Ron Richter were hired by the County to supervise this work. This inspection and subsequent repairs and adjustments immediately improved the combustion in all three units and also decreased CO emissions.

When Bill Crellin (CDM Smith's subconsultant) arrived on December 10, 2013, he discovered that GCS O&M staff did not have a copy of a Martin Maintenance Manual. Bill provided his manual to GCS' Receptionist to make 6 copies of the Manual, and he personally gave them to GCS Management. During the spring 2014 outages (May through June 2014), numerous forceful discussions took place to convince GCS that the dimensional check and associated repairs to the undergrate and grate surfaces needed to be done again, due to their avoidance of this work in the past. Again, the preventive maintenance paid off with improved combustion, less down time associated with the grates and decreased CO emissions.

Boiler Water Walls

The boiler walls and roofs are built out of boiler tube material. These tubes typically experience damage from erosion and corrosion. It is common to take UT readings on these tubes during every bi-annual outage. Veolia did this in 2012, but GCS did not take any UT readings in 2013, and would not have done any more UT inspections without the County and their Consulting Engineers pushing for the work to be done. It should be noted that the County also paid for these UT inspections.

Sootblowers

There are 123 total sootblowers on the three combustion units at the Pinellas WTE facility. These sootblowers keep tubes in the boiler internals clean by inserting a lance that rotates and blows high-pressure steam to keep gas paths and tube surfaces clean of fly ash deposits.

Typically in the WTE and power generation industries, daily and weekly preventative maintenance (PMs) are performed on sootblowers. Work that can be performed immediately is done right away. Work that requires a combustion unit preplanned outage is scheduled for the next outage.

GCS totally neglected these 123 sootblowers throughout 2013 and up to February 2014, when at Bill Crellin's direction, they were all rebuilt or replaced, at an estimated cost of approximately \$1.5 million to Pinellas County.

Spray Dry Absorbers (SDAs)

This equipment is part of the Air Pollution Control (APC) system. The purpose of the SDA unit is to remove acid gases from the plant's flue gases. The SDA vessels are large and must be insulated to keep steel temperatures above the acid dew point temperature (approximately 250 degrees F) to prevent accelerated corrosion. GCS totally neglected the Unit No. 3 SDA hopper and left it uninsulated throughout their tenure at Pinellas (2013 and 2014). Smaller sections of the insulation have been missing on Unit Nos. 1 and 2 SDA hoppers throughout 2013 and 2014. There was no effort by GCS to repair and/or replace the insulation on the hoppers or vessels, in spite of repeated cautions expressed by CDM Smith. As of the end of the 1st Quarter of BY No. 1, the SDA Unit No. 3 hopper still remained in operation without insulation.

It is typical in the WTE industry to perform UT readings of the wall thicknesses of SDA vessels during bi-annual outages. GCS was scheduled to take thorough UT readings of the wall thicknesses of the Unit Nos. 2 and 3 SDA vessels during the prior spring outages, which were completed in June 2014. For unknown reasons, GCS neglected to secure this UT data.

GCS did propose to replace the hoppers of the SDAs on Unit Nos. 2 and 3 in FY 14. Veolia rebuilt the Unit No. 1 SDA hopper in 2009. Estimated costs for replacing the hoppers on the Unit Nos. 2 and 3

SDAs were approximately \$900,000 total (for both). This price may be misleading because much more work is likely to be discovered once the units are opened for inspection and repairs. The surrounding metal will also likely be in poor shape, electrical heaters will need to be removed and re-installed, insulation and lagging replaced, etc. Due to the late request for these replacements, and the lack of data on the condition of the SDA hoppers, the plan for replacement of the lower hoppers proposed by GCS did not materialize during the final quarter of GCS's term. Due to GCS's neglect (lack of insulation and lack of UT data on wall thicknesses), these SDA vessels will require significant repairs or replacement in the near future, at a cost in the multi-millions of dollars.

Baghouses

Baghouses remove particulate matter (particulate and fly ash) from the flue gas. They are also part of the air pollution control (APC) system. The hoppers under these baghouse modules (12 per unit, 36 total for the entire Facility) require electric heaters and mechanical rappers to keep fly ash flowing. In 2013 and early 2014, GCS totally ignored maintenance of the heaters and rappers on the baghouse hoppers. GCS's neglect of this equipment created huge problems; the screw conveyors, which are located under the hoppers and remove fly ash from the hoppers, broke down because of overloading. GCS hired (at the County's expense) 4 mechanics from SEMCO on a full time basis to maintain the screw conveyors and associated equipment in the APC area that collects and transports fly ash. This effort cost Pinellas County approximately \$12,000 per week (4 men x 40 hours x \$75/hour). Over the course of 2014, this hired maintenance has cost Pinellas County approximately \$450,000 plus costs for new screw conveyors and associated parts.

Because they could not operate the fly ash removal system, GCS was forced to frequently dump large volumes of fly ash on the ground below the 36 baghouse hoppers and manually transfer it to the RSPB. The removal process required contract laborers with brooms, shovels, bobcats, front-end loaders, and finally, hose washing the entire area. The frequent release of corrosive fly ash has destroyed much of the equipment, lighting and instrumentation in the baghouse area. The county has spent approximately \$1.5 million to complete repairs on this equipment that should have been maintained on a daily and weekly basis.

Filter Bags

The filter bags are part of the baghouse system. They act essentially as large vacuum cleaners for the flue gas that must pass through the fiberglass bags (approximately 6,300 total for all 3 combustion units). They are essential to meeting the Facility's environmental permit conditions for particulate matter.

Wheelabrator, as the initial plant operator, was able to achieve 12 to 15 months of operating life out of a bag. Because of the many reasons noted above, GCS often was only able to achieve only 6 months of service from the filter bags. All 6,300 bags were changed in March 2014 at a cost of approximately \$500,000 to Pinellas County. After only six months of operation, many of the bags that were installed in March 2014 (approximately 450 bags) were replaced in November 2014.

Instrumentation

The Pinellas WTE Facility is designed to run in a fully automatic mode. To accomplish this, plant instrumentation must be in good working order. The approximate 600 instruments must be inspected,

repaired (as required) and calibrated on a semi-annual basis. This work should be part of the plant operator's Preventive Maintenance program.

In 2013 and early 2014, GCS totally neglected maintenance of the plant instrumentation. Essentially nothing was running in the automatic mode and much of the instrumentation was not operable. This was much of the cause for poor combustion and environmental exceedances, and created an unsafe work environment. In December 2013, when Mr. Crellin first arrived, he requested a copy of the plant Instrument List from the GCS Electrical and Instrumentation Manager. He was told that GCS did not have such a list.

The Instrument List is essential to performing proper maintenance. Every power plant has an Instrument List and it is unheard of not to have one. The County paid for an outside firm, GRL Electric, to identify and develop the plant's Instrument List, along with inspection, repair and calibration of all existing plant instrumentation.

GRL's effort in recreating the Instrument List has cost Pinellas County approximately \$300,000. Typically in the WTE and power generation industries, this work is performed during bi-annual outages by plant E&I staff at a much lower cost (only parts for instruments that have been damaged).

Plant Lighting

GCS totally neglected maintenance of plant lighting throughout 2013 and 2014. Lighting was essentially non-existent in several critical areas of the plant (around ash expellers, platforms around boiler Unit No. 3, APC area). This created extremely dangerous working conditions in many areas of the plant and prevented plant operators from making necessary routine inspections of the operating plant during evening hours.

Lighting is typically maintained on an ongoing basis in the WTE industry by plant E&I staff. GCS did not do this. Under the guidance of Joe Cascio, CDMS's electrical engineering consultant, and with the County paying for the work, lighting has systematically begun to be repaired. GCS's neglect of plant lighting in many areas was so bad that lighting had to be replaced wholesale. This re-lamping effort has cost Pinellas County approximately \$300,000 to date, and considerably more work is needed.

Wastewater System

The plant wastewater system is designed to capture and contain rainwater, process wastewater, wash water and any liquids which are spilled. The design is for a small amount of water. Major components of the wastewater system include the contact sump at ground elevation (to capture all free liquids inside the wind walls), a 500,000-gallon wastewater tank, pumps to pump overflow from the contact sump to the wastewater tank, a blowdown sump designed to only hold industrial wastewater for future reuse or discharge to the sewer system and settling basins to trap solids from rain water outside of the windwalls before it drains to Pond A. There is also a plate and frame filter press to process the wastewater from the contact sump for removal of solids.

GCS totally neglected the entire wastewater system throughout 2013 and early 2014. By early 2014, the contact sump and the wastewater tank were full of solids, most of which was a result of ash dumped on the concrete floor under the APC equipment. There was no capacity left for new wastewater. GCS then pumped ash laden water into the blowdown sump, which eventually overflowed its containment to the stormwater side of the system and eventually into plant drainage

swales that ultimately drain to Pond A. At CDM Smith's direction, and at the County's cost, the solids were removed from the wastewater storage tank, contact sump, settling basins and the blow down sump. The pumping system for the contact water sump and blowdown sump were eventually replaced by GCS. The above scope of work was accomplished at a cost of approximately \$200,000. Restoration of the wastewater system has only returned the wastewater system to a point where it is operable. Major work is still required to repair or, most likely, replace piping, valves, and pumps that GCS has neglected to maintain.

Typically, in the WTE industry, the wastewater system is maintained on an ongoing basis. The need for the wholesale repairs required at the Pinellas Facility is not normal. This was required due to GCS's total neglect of maintenance of the system.

3.2 Scheduled and Unscheduled Combustion Unit Outages

A significant amount of work was performed during the scheduled 2014 all Outage, which was conducted over a thirteen week period from October 5 through December 31, 2014.

3.2.1 Unit No. 1 Scheduled Outage

The Unit No. 1 planned outage started on October 5, 2014 and lasted a total of 297.1 hours (12.4 days). Major activities performed during the fall outage included:

1. Unit No. 1 Boiler and Auxiliaries
 - a. Relined upper feed hopper, inspected feed chute damper limit switches, repaired feed chute dampers and brackets
 - b. Replaced all of the resistance plates which were found to be less than 4.5 inches high (shark fins) on the feed table
 - c. Refractory and tile repairs in the furnace section
 - d. Installed new view ports (2) in furnace section
 - e. Replaced first and second pass sidewalls to roof scallop plate
 - f. Repaired up to 12 locations of open membrane on roof which were left open for rigging during construction
 - g. Completed engineering design of structural steel for front and rear OFA ductwork
 - h. Installed OFA nozzle inserts and repaired refractory in area
 - i. Inspection, repairs, repacking of mineral wool and replaced refractory around rear OFA nozzles and bull nose
 - j. Replacement of tube shields in 2nd pass
 - k. Removal of old refractory in 2nd pass penthouse and repouring
 - l. UT inspection and repairs of superheaters in 3rd pass, including brush blast cleaning
 - m. Replaced superheater stringer tube shields and alignment bars

- n. Replaced economizer casing, inlet expansion joint with Corten/A588 material and associated insulation and lagging
 - o. Repaired plate work in economizer pant leg
 - p. Replaced ERV and isolation valve
 - q. Tested numerous valves and repaired steam traps
 - r. Declinkered upper and lower furnace, cleaned economizer and superheater and associated hoppers
 - s. Vacuum cleaned inlet duct, fabric filter hoppers and riddling chutes
 - t. Inspected steam drum internals (Doug Brown of ChemTreat) – issues noted were as follows:
 - i. Calcium phosphate deposits were observed inside of the steam drum, indicating there had been some level of contamination of the feed water system.
 - ii. The first three cyclone separators (cans) had fine white fragments and chip scale imbedded in the upper screen mesh.
 - iii. Four welds holding the chemical injection line in position in the steam drum were cracked and broken. There were two failed welds on the surface blowdown line at the north end of the drum also. It was noted that the No. 1 steam drum still only uses welds to hold the steam drum piping in place, whereas steam drum Nos. 2 and 3 have been modified to use U-bolt supports which allow for thermal expansion. It was recommended by Mr. Brown that steam drum No. 1 also use the U-bolt type of support in the future.
2. Stoker Grate
- a. Minor overhaul of grate and inspection / replacement of grate bars
 - b. Inspect Martin hydraulic system and repair leaks
3. Ash Handling System
- a. North ash expeller inspection, wear plate repairs, and rear water box cover repairs
 - b. South ash expeller inspection, wear plate repairs, and rear water box cover repairs
 - c. Replaced baghouse screw conveyors, inspected and repaired as needed troughs, hanger bearings, gearbox, motor and belts
 - d. Replaced all three drop chutes from superheater hoppers to ash dischargers with new slip joint
4. APC System
- a. Inspected and repaired baghouse ductwork

- b. Inspected and rebuilt SDA slide gates
- 5. Electrical System
 - a. Inspected, repaired and calibrated thermocouples and draft ports

3.2.2 Unit No. 2 Scheduled Outage

The Unit No. 2 planned outage started on November 3, 2014 and lasted a total of 325.6 hours (13.6 days).

1. Unit No. 2 Boiler and Auxiliaries
 - a. Relined upper feed hopper, including upper crown over refuse pit, inspected feed chute damper limit switches, repaired feed chute dampers and brackets
 - b. Replaced all of the resistance plates which were found to be less than 4.5 inches high (shark fins) on the feed table
 - c. Installed new view ports (2) in furnace section
 - d. Completed engineering design of structural steel for front and rear OFA ductwork
 - e. Installed OFA nozzle inserts and repaired refractory in area
 - f. Inspection, repairs, repacking of mineral wool and replace refractory around rear OFA nozzles and bull nose
 - g. Replacement of tube shields in 2nd pass
 - h. Removal of old refractory in 2nd pass penthouse and repouring
 - i. UT inspection and repairs of superheaters in 3rd pass, including brush blast cleaning
 - j. Replaced superheater stringer tube shields and alignment bars
 - k. Replaced missing and damaged alignment bars in super heater sections
 - l. Replaced economizer casing, inlet expansion joint with Corten/A588 material and associated insulation and lagging
 - m. Realignment of economizer bundle no. 5 and installation of new alignment bars in lower economizer
 - n. Repaired plate work in economizer pant leg
 - o. Replaced screws in both economizer hopper transfer conveyors
 - p. Replaced ERV and isolation valve
 - q. Tested numerous valves and repaired steam traps

- r. Declinkered upper and lower furnace, cleaned economizer and superheater and associated hoppers
 - s. Vacuum cleaned inlet duct, fabric filter hoppers and riddling chutes
 - t. Inspected steam drum internals (Doug Brown of ChemTreat) – issues noted were as follows:
 - i. Calcium phosphate deposits were observed inside of the steam drum, indicating there had been some level of contamination of the feed water system.
 - ii. Four northern-most cyclone separator units had minor amounts of chip scale in the upper demisting screens.
 - iii. A small amount of loose magnetite scale was observed on the bottom of the steam drum, indicating higher levels of suspended iron in this unit compared to Unit Nos. 1 and 2.
 - iv. Several tack welds holding the chemical injection and blowdown U-bolt supports were cracked and broken.
 - v. The north section of the chemical injection line had a major bow in the pipe which positioned the line several inches, but did not affect the functionality of the injection line.
2. Stoker Grate
- a. Major grate overhaul and inspection / replacement of grate bars
 - b. Inspected Martin hydraulic system and repaired leaks
3. Ash Handling System
- a. North ash expeller inspection, wear plate repairs, and rear water box cover repairs
 - b. South ash expeller inspection, wear plate repairs, and rear water box cover repairs
 - c. Replaced baghouse screw conveyors, inspected and repaired as needed troughs, hanger bearings, gearbox, motor and belts
 - d. Replaced all three drop chutes from superheater hoppers to ash dischargers with new slip joint
4. APC System
- a. Inspected and repaired baghouse ductwork
 - b. Replaced pipe over turning vanes on inlet ductwork
 - c. Inspected and rebuilt SDA slide gates

5. Electrical System
 - a. Inspected, repaired and calibrated thermocouples and draft ports
6. Auxiliary Equipment
 - a. Replaced FD and ID fans and refurbished the units which were removed

3.2.3 Unit No. 3 Scheduled Outage

The Unit No. 3 planned outage started on December 5, 2014 and lasted a total of 425.1 hours (17.7 days).

1. Unit No. 3 Boiler and Auxiliaries
 - a. Relined upper feed hopper, inspected feed chute damper limit switches, repaired feed chute dampers and brackets
 - b. Repaired left transition wall along chill wall
 - c. Replaced all of the resistance plates which were found to be less than 4.5 inches high (shark fins) on the feed table
 - d. Refractory and tile repairs in the furnace section
 - e. Installed new view ports (2) in furnace section
 - f. Replaced first and second pass sidewalls to roof scallop plate
 - g. Installed of OFA nozzle inserts and repaired refractory in area
 - h. Inspection, repairs, repacking of mineral wool and replace refractory around rear OFA nozzles and bull nose
 - i. Replacement of tube shields in 2nd pass
 - j. Removal of old refractory in 2nd pass penthouse and repouring
 - k. UT inspection and repairs of superheaters in 3rd pass, including brush blast cleaning
 - l. Replaced superheater stringer tube shields and alignment bars
 - m. Replaced economizer casing, inlet expansion joint with Corten/A588 material and associated insulation and lagging, and economizer roof
 - n. Replaced economizer inlet and intermediate headers
 - o. Repaired plate work in economizer pant leg
 - p. Replaced economizer outlet expansion joint
 - q. Replaced ERV and isolation valve
 - r. Replaced screws in both economizer hopper transfer conveyors

- s. Replaced north and south burner rings and reapplied refractory
 - t. Tested numerous valves and repaired steam traps
 - u. Declinkered upper and lower furnace, cleaned economizer and superheater and associated hoppers
 - v. Vacuum cleaned inlet duct, fabric filter hoppers and riddling chutes
 - w. Inspected steam drum internals (Doug Brown of ChemTreat) – issues noted were as follows:
 - i. Calcium phosphate deposits were observed inside of the steam drum, indicating there had been some level of contamination of the feed water system.
 - ii. All cyclone separators (cans) were clear and free of obstructions.
 - iii. One weld holding the blowdown line in position in the steam drum was cracked and broken.
2. Stoker Grate
- a. Minor overhaul of grate and inspection / replacement of grate bars
 - b. Inspected Martin hydraulic system and repaired leaks
3. Ash Handling System
- a. North ash expeller inspection, wear plate repairs, and rear water box cover repairs
 - b. South ash expeller inspection, wear plate repairs, and rear water box cover repairs
 - c. Replaced baghouse screw conveyors, inspected and repaired as needed troughs, hanger bearings, gearbox, motor and belts
 - d. Replaced all three drop chutes from superheater hoppers to ash dischargers with new slip joint
4. APC System
- a. Inspected and repaired baghouse ductwork
 - b. Replaced pipe over turning vanes on inlet ductwork
 - c. Inspected and rebuilt SDA slide gates
 - d. NIC completed a full internal UT survey of the SDA vessel utilizing a 2 foot by 2 foot grid. The inspection of the SDA hopper was performed externally, taking advantage of the fact that the hopper insulation had not been replaced in several years. The hopper was found to be mostly below the threshold of 0.187 inches. This value represents a 40 percent loss of metal from the original 5/16-inch thickness, which has been defined as a Covanta

action level. The original steel plate in the upper portion of the shell (elevation 44 feet to 65 feet) was found to be acceptable.

Based upon the results of the UT inspection, the following repairs were made to the No. 3 SDA.

- i. The upper 4 feet of hopper plate was replaced with $\frac{1}{4}$ inch thick A-36 steel plate around the full circumference. The existing plate was removed and new plate was fully seal welded.
- ii. Approximately 50 additional steel bent straps (originally 3 feet long by 3-inches wide by $\frac{1}{4}$ -inch thick) were welded along the circumference of the vessel between the shell and hopper, centered about the weld joint. The top section of the strap was trimmed back to a length of 19 inches along the inner support and seal welded and the sides were skip welded (4 inches on 12 inch centers). The purpose of the straps was to reinforce the circumferential welded joint to prevent the separation of the hopper from the shell.
- iii. The lower 18 inches of the shell was plated over due to deterioration. The plate was $\frac{1}{4}$ -inch thick A-36 steel and tied into the girder plate with a full penetration weld.
- iv. A 3 foot by 4 foot patch of $\frac{1}{4}$ -inch thick A-36 steel plate was also added in the girder zone.

5. Electrical System

- a. Inspected, repaired and calibrated thermocouples and draft ports.

3.3 Scheduled Turbine Generator Outages

3.3.1 TG Unit No. 1 Outage

The planned outage for TG-1 started on December 5, 2014 and continued through the month of December and into January 2015. The total outage duration in the month of December was 613.7 hours (25.6 days). The primary purpose of this outage was to replace the generator retaining rings with new rings of an upgraded stainless steel material. The disassembly of the generator was completed by Ethos Energy Turbine Services (Ethos), initially under contract to GCS, with Covanta ultimately being the responsible entity.

The generator field was sent to TAW's shop in Miami for replacement of the 18-5 alloy retaining rings with new 18-18 alloy rings, which are much less susceptible to stress cracks from corrosion. Kim Eiss, from Generator Consulting Services LLC, was brought in to provide an independent evaluation of the field and inspected the field after the original retaining rings were removed.

The work performed at TAW's shop included:

1. Removed original retaining rings
2. Removed, cleaned, reinsulated and reinstalled No. 6 coil on B pole

3. Removed copper crossover jumpers and replaced with new jumpers of the latest design
4. Performed non-destructive tests (NDT) on the original and new retaining rings with no significant anomalies discovered
5. Performed final machining of retaining rings based on dimensional data of the fit areas on the rotor forging
6. Installed new retaining rings
7. Reconditioned slip rings and repaired adjacent insulation
8. All electrical test results for the field were acceptable for long term operation

After all work was concluded at the Miami TAW Shop, the rotor was shipped to Mitsubishi's balance pit in Savannah, Georgia. The rotor underwent a full battery of balance tests including high speed and elevated field temperature tests. Upon installation of the rotor and startup of the generator, the associated bearing temperature and vibration levels were all well within industry norms.

Ethos performed a visual inspection of the stator and conducted a battery of electrical tests. Electrical test results were all within acceptable industry standards. However, visual inspection of the generator stator's end windings revealed several areas of "dusting" or "greasing" which are indications of relative movement between stationary components. Most of the aberrant conditions were found on the exciter end. All discovered "loose" areas were repaired by applying epoxy-soaked materials between the affected components and securing the joints with new binding which were also encapsulated in epoxy.

Ethos also tested the slot wedges using an automatic wedge tapper. There were reportedly only a few loose wedges found throughout the bore which correlates to a classification of tight. A spot check made by sounding the wedges with a 2 ounce brass hammer supports the Ethos conclusion that there are not a significant number of loose wedges in this machine at this time.

A spot check of the slot section with a borescope indicated that most slots were starting to show evidence of bar vibration. The amount of grease observed did not appear to be significant, but the grease was widespread and observed in almost every slot on both ends of the stator. Oil intrusion may have reduced the effectiveness of the side ripple springs. There was no evidence of partial discharge activity observed in the slots.

Additionally, Ethos completed the following work on the turbine:

1. Thrust bearing and front standard inspection – there was some indication of wear on the thrust bearing which resulted in a new GE manufactured bearing being procured and installed.
2. The oil deflectors were visually and dimensionally checked. The No. 2 oil deflector and turning gear seals were sent to Elliott (Covanta's vendor) for repair.
3. The mechanical over speed mechanism was disassembled and inspected with no issues. The bolt and trip finger were exercised and worked properly; however, an adjustment on the location of the over speed spray nozzle was made. Upon start up, the over speed functioned properly and tripped at 3,975 rpm.

4. The MSSV was disassembled, visually inspected, dimensionally checked and non-destructive examinations performed. A new valve disc to stem bushing and anti-rotation pins were pulled from plant stores and installed during reassembly.
5. The turning gear motor was replaced with a new motor from plant stores.
6. The hood spray fisher valve was replaced with a new valve.
7. Four Fisher valves were removed and replaced after they were inspected and rebuilt by Covanta's vendor.

Additional work which was performed during the outage on the turbine and related auxiliary equipment included:

1. Modification of T3 and T4 vibration probes
2. Inspection of the main steam stop valves
3. Voltage regulator PM
4. Replace inboard and outboard side of water box on main condenser
5. Annual maintenance of Turbonet control system
6. Cleaning and eddy current testing of feedwater heater
7. Turbine front standard disassembly and inspection

The following recommendations were made by Contractors which performed the major fall outage for TG-1:

- Repair or replace all four oil deflectors (seals) during the next scheduled outage.
- The clearance on all four sets of air/gas seals are at their upper tolerance limits and should be replaced during the next generator outage.
- Re-inspect the new pole-to-pole jumpers using a borescope during the next major inspection.
- Remove all the wedges and perform non-destructive examinations (NDE) on the rotor forging.
- Polish and NDE area of disturbed metal on field forging near wedge dovetail at the end of the slots for #1 coil.
- Remove the red insulating paint from creepage blocks and recoat top and bottom surfaces with four coats of Teflon.
- Increase the axial wedge clearance by machining 0.040" of material from the inboard end of each end wedge to provide ample room for thermal expansion. Reinstall wedges leaving a 0.250" gap between end wedge and retaining ring.
- If wedge migration continues, order longer end wedges for installation during next major outage to minimize wedge migration during generator operations.

- Stake all end wedges using 1/8" ball tip punch and peening gun.
 - Clean and repair collector ring insulation.
 - Order a new set of collector rings and install during the next major outage.
 - Troubleshoot and repair grounded RTD's Numbers 2 and 20.
 - Blast clean and paint the field with a lighter color paint if the field is rewound in the future.
- Turbine
- The number 2 bearing and turning gear oils seals are in need of refurbishment or replacement during the next turbine outage.
 - A new main steam stop valve stem should be procured and installed during the next scheduled turbine outage; additionally the valve assembly's spiral wound lid and pressure seal gaskets should also be replaced during the MSSV's next disassembly inspection.

3.3.2 TG Unit No. 2 Repairs During Boiler No. 3 Outage

The planned outage for boiler Unit No. 3 started on December 6, 2014 for a total outage duration of 434.2 hours (18.1 days). The next major turbine generator outage for TG-2 is scheduled for May of 2015. However, while the unit was down, Covanta did charge Nolan Power with performing a battery capacity test on the No. 2 side 125VDC battery system to confirm that the battery bank has sufficient electrical stored capacity to meet critical load demands in the event of loss of station power. The results of the test confirmed that the battery bank is able to meet critical load demands to assure a safe shutdown of the turbine generator. Additionally, inspections and repairs were made to the No. 2 bus duct as described in Section 3.5.4.

3.4 Unscheduled Turbine Generator and Combustion Unit Outages

3.4.1 TG Units

TG-1 did not have any unscheduled outages during the 1st Quarter of BY No. 1, while TG-2 experienced a total of three unscheduled outages for a total of 141.76 hours of downtime as shown in **Table 3-2**. This represents 6.2 percent of lost generator availability for the smaller (25 MW) of the two TG units. This is an improvement over the past several years, and is indicative of the benefits derived from the resumption of semi-annual planned outages which occurred in 2014.

Table 3-2 Unscheduled Turbine-Generator Outages during 1st Quarter of BY No. 1

Unit	October 2014	November 2014	December 2014
TG-1	None	None	None
TG-2	44.55 hours – no steam supply due to grate repairs on B-103	65.55 hours – no steam supply due to tube failure repairs on B-103	31.66 hours – no steam supply due to grate repairs on B-103

3.4.2 Unscheduled Combustion Unit Outages

Two of the three boilers experienced a small number of unscheduled outages in the 1st quarter of BY No. 1 as listed in **Table 3-3**. Unit No. 1 did not have any unscheduled outages, while Unit No. 2 had four for a total downtime of 118.51 hours, and Unit No. 3 had three for a total downtime of 140.14 hours. The total unscheduled boiler downtime of 258.65 hours represents 3.90 percent of lost boiler availability for the quarter. This is an improvement over the past several years, and is indicative of the benefits derived from the resumption of semi-annual planned outages which occurred in 2014.

Table 3-3 Unscheduled Outages during 1st Quarter of BY No. 1

Unit	October 2014	November 2014	December 2014
B-101	None	None	None
B-102	61.49 hours - tube failure in roof at screen wall penetration 16.22 hours - replacement of #3 feeder hydraulic cylinder 4.3 hours - replacement of FD coupling	36.5 hours – carryover of October FD fan coupling replacement	None
B-103	44.02 hours - grate repair in run 5 zone 4 (9 grate bars replaced and 3 repositioned)	65.32 hours – tube failure in roof at screen wall penetration (also replaced 3 grate bars and 10 compensation plates)	30.8 hours – grate repair in run 5 zone 3

3.5 Major Equipment Maintenance and Repairs

3.5.1 Air Pollution Control Equipment Inspections and Repairs

1. GCS replaced lime slurry metering pump No. 1-A for B-101 and B-103 (October 2014)
2. GCS performed opacity and calibration gas audits, along with GHG RATA for B-101, B-102 and B-103 (October 2014)
3. GCS replaced the “B” SNCR pump/motor unit for B-102 (October 2014)
4. GCS rebuilt the spare lime slurry metering pump (October 2014)
5. GCS replaced the SDA live bottom motor on B-101 (November 2014)
6. GCS replaced the VFD drive for the #1 SNCR pump on B-101 (November 2014)
7. GCS added compressed instrument air purge to Opacity monitor on B-103 (November 2014)
8. GCS performed quarterly PM for carbon silo bin vent (November 2014)
9. GCS replaced “B” lime slurry pump (November 2014)
10. TSI completed installation of electric heaters on all baghouse hoppers (December 2014)

3.5.2 Instrumentation and Electrical Inspections and Repairs

1. GCS installed new pyrometers on B-101 (October 2014)
2. GCS replaced the level switch on TG-2 lube oil conditioner (October 2014)
3. GCS installed new pyrometers on B-102 (November 2014)
4. GCS installed new Oxygen monitor in economizer for B-102 (November 2014)
5. GCS replaced the CEM secondary server (November 2014)
6. Duke Energy replaced the net MW Out Meter (November 2014)
7. GCS completed installation of Oxygen readout for new O2 monitors for B-101, B-102 and B-103 (November 2014)
8. Covanta performed PM on #1 and #2 UPS systems (December 2014)
9. Covanta performed monthly PM on the battery chargers and spare transformer (December 2014). The service vendor recommended that the battery room(s) be maintained at temperatures at $77^{\circ}\text{F} \pm 5^{\circ}$. If battery room temperatures is not maintained within 72° and 82°F , the batteries should undergo annual discharge tests. The use of a temperature compensated charger was recommended to insure that the batteries are not overcharged during hot weather and undercharged during cold weather. The flame arrestors on cells 22 and 26 should be replaced, and the specific gravity sampling tubs on cells 25 and 35 should be replaced.

3.5.3 Switchgear Inspections and Repairs

The following inspections and repairs were completed on the electrical switchgear:

1. Inverters are integral components of uninterruptable power systems (UPS) and support the function of converting DC power to 60 cycle AC power. The original No. 1 Inverter was replaced with a new Ametek inverter and subsequently tested and placed into service. The No. 2 Inverter was inspected and tested by Ametek and found to be in good working order.
2. S-02 Isolation (Air) Switch and SF6 breaker B-01 were examined and tested. No abnormal conditions were discovered.
3. 13kV to 4kV transformer TR 101 was inspected and tested with all test results being within acceptable standards. A small oil leak at a cooling radiator coupling was effectively tightened and arrested the leak.
4. The TR-01 neutral grounding transformer was also tested with good results. However, the radiators' oil flanges leaked when charging the transformer with 2 PSI nitrogen. During the next transformer outage the flange gaskets should be inspected, the connections tightened or the gaskets replaced. The turns ratio on the in-service TR-01 Transformer does not match the ratio listed on the nameplate. CDM Smith recommends that Covanta review the transformer voltage ratio and determine if a tap change would more closely conform to nominal low and high side voltage levels (Note: this No. 1 Generator Step-Up (GSU) Transformer TR-01 has previously been rewound by a non OEM shop).

5. Six 15 kV breakers serving TR 101, TR 102, TR 103, TR 106, No. 1 Gen, and the Bus Tie, were inspected and tested for proper operation.
6. The 13kV bus between the No. 1 generator and the 13kV switchgear was examined, cleaned and tested.
7. Transformers TR 102, 103, and 106 were successfully tested with no reported electrical anomalies. However, the low side bushings on TR 106 were leaking substantially and were subsequently replaced.
8. Nine 5kV vacuum contactors in the No. 1 MCC room were removed from their cells to facilitate inspections, cleaning, testing and lubrication.
9. Eight large motors and associated feeder cables were inspected and tested with good results.
10. Four 480 V breakers were tested and found to be in acceptable operating condition.

Although the 4kV and 13kV breakers throughout the plant are in relatively good condition, Covanta is evaluating this class of equipment to determine if upgrading or replacing some of the existing original equipment may result in higher levels of reliability and availability.

3.5.4 Bus Duct Inspection and Repairs

The bus duct systems at the Pinellas Facility are located outdoors, as compared to most power plants across the county. As such, the bus ducts are directly impacted by weather conditions, such as rain and ultraviolet light which reduce the life of applied protective coatings. The outside surface of the No. 2 bus duct from the generator lead box to the 13.8 kV switchgear room was cleaned, sanded to acquire the appropriate bonding surface, primed and painted with an industrial grade epoxy paint. Small sections of the duct were also repaired due to the effects of corrosion. Additionally, new seals were applied to all of the duct's removable inspection covers, thus insuring that moisture intrusion would not occur.

3.5.5 Relay Protection and Metering Inspections and Repairs

The plant's electrical protection relays were not tested during this outage as they were tested by a GE engineer in 2013. Covanta's relay specialist did however test the kWh energy meters in the control room and found and corrected a few wiring errors. Additionally, a few of the devices on the control board which had been abandoned in place, were removed and the control board openings sealed. This is good practice as it makes for a cleaner control panel and removes unnecessary devices which may create confusion on the part of the control room operators and plant management.

3.5.6 Boiler Cleaning and Sootblower Maintenance

1. GCS added cams to sootblower Nos. 9-13 on B-101, B-102 and B-103 to increase the arc over which steam is sprayed (October 2014)
2. GCS installed new back panel and PLC for the Unit No. sootblower panel (October 2014)

3.5.7 Cooling Tower Inspection and Repairs

1. GCS replaced the drive shaft assembly on the cell No. 3 fan, inspected and aligned remainder of cell equipment (October 2014)

2. GCS performed a full inspection of the cell No.4 fan, replaced shim packs on drive shaft, aligned pitch, and tracking of blades (October 2014)

3.5.8 RSPB Processing Equipment Inspection and Repairs

A General Kinematics (GK) technician was present on December 18, 2014 to observe repairs which were recently completed, along with additional repairs and modifications to the ash processing and metal recovery system made during the fall outage. The following repairs and modifications were made:

1. GCS replaced the electric motor on the V-10 conveyor (October 2014)
2. GCS replaced the southeast bearing on the knee pulley for the gallery inclined belt conveyor (October 2014)
3. GCS installed several new finger racks for the V-8 conveyor (October 2014)
4. GCS replaced six springs on the V-10 conveyor and the west marshmallow springs (October 2014)
5. GCS replaced the G-11 belt (October 2014)
6. Covanta installed a reversing barrel switch for the CNV-4 ash conveyor (December 2014)
7. Covanta replaced the drive shaft for the No. 2 pugmill (December 2014)

The GK technician visited the site after the fall outage on January 30, 2015 to observe the operation of the ash processing and metal recovery system under operating loads. The following comments were reported by the GK technician:

1. Rocker arms on VC-1 are worn.
2. Drive on VC-2 was knocking badly and needs to be rebuilt as soon as possible.
3. Rocker arms on VC-3 are showing wear and will need replacement.
4. Finger decks on V-13 have quite a buildup of material and need cleaned as soon as possible. It was also noted that since this unit is now a Brute Force unit, the added weight from material buildup will reduce that available stroke. The same holds true for V-2.
5. The left side motor on V-2 seemed to have an excessive amount of noise emanating from it, with the bearings being suspected of failing and in need of replacement soon.

3.5.9 Air Compressor Inspection and Repairs

1. GCS returned the "A" plant air compressor to service (November 2014)
2. Covanta inspected and replaced glycol pump check valves for the air compressor cooling system (December 2014)

3.5.10 Refuse Crane Inspection and Repairs

1. GCS replaced holding cables on the No. 2 refuse crane (October 2014)
2. Covanta replaced the Magnetorque for No. 2 refuse crane (December 2014)

3.5.11 Balance of Plant Repairs

1. GCS installed a new suction line 90 degree elbow for the No. 2 treated water makeup pump (November 2014)
2. Covanta replaced support plates for the south compensation wall on B-102 (December 2014)
3. Covanta replaced the south hydraulic cylinder on the north ash discharger for B-103 (December 2014)
4. Covanta repaired a steam leak on the B-103 water level column drain line (December 2014)
5. Covanta performed lube oil analysis for both TGs (December 2014)
6. Covanta performed EHC oil analysis on the No. 1 control oil system (December 2014)
7. Covanta repaired a body to bonnet steam leak on the manual isolation to the No. 4 steam driven boiler feed pump (December 2014)
8. Covanta repaired a body to bonnet steam leak on the 600-50 psi reducing station inlet isolation valve on Unit No. 2 50 psi header (December 2014)

3.5.11.1 Deaerator No. 1

An inspection of the interior conditions of the Deaerator was performed by Mr. Doug Brown of ChemTreat. There was a substantial amount of water leakage at the east end of the tank which was probably a result of leak-by from an isolation valve or poor seating of the spray nozzles. The overall passivation (naturally occurring shield of outer layer of base material) of the vessel was good. No deleterious conditions were noted by Mr. Doug Brown.

3.5.11.2 Deaerator No. 2

The inspection of the interior conditions of the Deaerator was performed by Mr. Doug Brown of ChemTreat. There were extensive repairs underway during the inspection. Several sections of the Deaerator tank had been cut away and were being replaced due to exterior corrosion. There was a higher concentration of tuberculation (formation of small mounds of corrosion products) on the inside steel surfaces of the feedwater storage section of the tank compared to Deaerator No. 1.

The repairs to the Deaerator No. 2 shell were in response to low metal thickness test results from a Magnetic Particle Test which was performed by Diversified Plant Services Inc. Several large panels in the upper half of the Deaerator were found to have suffered advanced corrosion on the external surfaces. The root cause of the corrosion may be attributed to the outdoor exposure to periodic rainfall which eventually resulted in damp insulation in contact with the exterior of the vessel. Repairs to several of these areas are shown in the photograph below. Covanta also replaced the water level gauge glass on Deaerator No. 2 in December 2014.

Repairs to Deaerator No. 2 Shell (December 2014)



3.5.11.3 High Pressure Steam Line Inspection

An examination of various welds along the high pressure steam line was completed during the cold iron outage in December 2014 by Ocean State Technical Services (OST Services). The examination included use of ultrasonic phased array tests directed at circumferential welds (10 locations), magnetic particle tests (14 locations), hardness tests obtained along the piping system (10 locations), through wall thickness determinations at various weld joints (3 locations) and in the vicinity of the non-return valve for Boiler No. 1, along with visual inspections. There were no significant defects in the circumferential and penetration welds associated with the steam line and valves.

There was one significant issue observed on the strut for the turbine No. 1 stop valve. There is significant distortion along the length of the rigid rod assembly (strut). This is likely the result of excessive compressive loading and/or the use of the assembly as a hoisting point during an outage or repairs in the area. The deflection allows the piping to displace to a plane that was not intended, and may result in some excessive loading on the connection to the turbine (TG-1).

There was no general evidence of any significant thinning or reduction in wall thickness values with the exception of the boiler stop valve, which was scheduled to be replaced during the fall outage. It was noted that it is important to take into consideration the weight of the new valve versus the old valve and any modifications that might be required to spring hanger loading, etc.

In summary, the inspections did not reveal the existence of any significant defects. However, recognizing the limited nature of the inspection, it was recommended by OST Services that similar work should be performed in the future to enhance reliability and safety at the Facility.

3.5.11.4 Inspection of High Energy Piping and Supports

An examination of the piping and supports for the main steam, main steam to boiler feed pumps, boiler feed suction, boiler feed discharge, and downcomer piping related to Unit Nos. 1, 2 and 3 piping systems was completed during the cold iron outage in December 2014 by Ocean State Technical Services (OST Services).

OST Services inspected and reported their findings on a total of thirty (30) supports associated with high energy piping (feedwater and steam system). OST Services did not specifically make firm recommendations on approximately 30 percent of the total pipe supports, however they did make specific statements for the remainder of the supports, including:

- No Action Required (2)
- Adjust or Test (5)
- Repair (4)
- Replace (10)

However, there were a few cautionary notes spread throughout the report, such as:

1. Information regarding hanger design data and piping isometric drawings could not be located at the plant. This data will be vital in the replacement of supports and components that are required at the plant.
2. As noted previously, there was an issue observed on the strut (H-18) for the turbine No. 1 stop valve with significant distortion along the length of the strut. This is likely the result of excessive compressive loading and/or the use of the assembly as a hoisting point during an outage or repairs in the area. The deflection allows the piping to displace to a plane that was not intended, and may result in some excessive loading on the connection to the turbine (TG-1).
3. The variable spring support (H-10) should be replaced because it is so severely packed with ash and there is no movement from hot to cold.
4. The variable spring support (H-316) on the Boiler No. 3 high pressure steam is so ash packed that baseplate has been distorted and should be replaced.
5. The variable spring support (H-319) should be replaced on a priority basis due to the extreme deterioration of the spring body..
6. A support (H-410) on the main steam to boiler feedwater pump is missing and should be replaced.
7. A variable spring support (H-437) is filled with ash and no longer movable and needs to be replaced.

8. The slide support (H3) on the Boiler feedwater discharge pipe is unsupported, with a 6-inch gap under the slide plate. Apparently it has been in this condition since construction. The support needs to be repaired to meet the intention of the original design.

OST inspected and reported on a varying number of downcomer supports for each of the boilers as noted below:

Summary of Downcomer Supports Inspected by OST

Boiler No.	Number of Downcomer Supports on North Side	Number of Downcomer Supports on South Side
1	5	6
2	7	6
3	4	5

OST Services did not specifically make firm recommendations on approximately 40 percent of the total downcomer supports which they reported on. However, there were a few cautionary notes spread throughout the report, such as:

1. Transmittal cover page letter - the inspection did not reveal the existence of any significant abnormalities that could compromise the integrity of the piping system on a short term basis (12-18 months). However, a number of issues were noted during the inspection. A number of supports were found packed with ash that most likely prevents the spring coils from moving to accommodate normal thermal movement of the piping. Such a condition would transfer stress of the piping to welds and terminal connections. It was recommended that a budget be developed to address the problems over the next 5 to 10 years. In CDM Smith's opinion, this seems to be excessive timeframe for repairs given the current condition of the supports and past observations of the boilers and support systems.
2. OST Services made the recommendation for replacing the downcomer supports on a priority basis. In CDM Smith's opinion, this seems to conflict with the statement above.
3. OST Services noted that the plant needs to stay informed of the chain fall support of structural steel on Boiler No. 1 for the variable support (No. 1-SH-11). CDM Smith has also made the recommendation that this temporary support be restored at the earliest possible time.
4. OST Services noted that variable support No. 2-SH-6 was found bottomed out and may be damaged. The position indicator is not visible, indicating that more travel and load was present than anticipated by design. In CDM Smith's opinion, this observation may help with future diagnosis of problems on Boiler No. 2. A loud popping noise and distinct movement of the south waterwall panel was reported by field technicians during the replacement of the south chill wall panel restraints on Boiler No. 2 during the fall 2013 outage.

The following table summarizes the actions recommended for a total of 33 boiler downcomer pipe supports which were addressed in the OST Services report. CDM Smith recommends that Covanta further analyze the items for which OST Services did not state a specific action. In CDM Smith's opinion, all of the boiler downcomer supports should be inspected, repaired or replaced in the near future.

Summary of Recommendations by OST

Boiler No.	Action Not Stated	No Action Required	Adjust (or test)	Repair	Replace
1	6	0	4	0	1
2	5	0	2	2	4
3	8	0	0	0	1

3.6 Facility Buildings and Structural Repairs

3.6.1 Stack Inspection and Repairs (Item 4.1 of Technical Recovery Projects included in Part A of Schedule 19)

Industrial Access repaired the gap in each of the three liners at elevation 103 feet which was first observed during their inspection in December 2011. The misfit which resulted from the original construction was bridged over with refractory type materials and was found to be deteriorating. The old refractory was removed, and new ¼-inch thick A-36 steel plate was welded in place to restore each of the three liners to its original design condition in December 2014.

Additional repairs were also made to each of the liners near the base of the stack in December 2014 to correct deficiencies which were observed by Industrial Access during their set up for the repairs at elevation 103 feet. Severe corrosion of the liners were observed along the base plate and intersection with the liner. The area was inspected by Covanta's structural engineer (Jeri Chao) and a repair plan was developed. Temporary support beams were installed along the lower elevation of the liner plate prior to flame cutting and removal of the lower 5 feet of deteriorated metal by Matrix. New sections of ¼-inch thick stainless steel plate were installed to repair the base plate and lower 5 feet of liner. The four support beams were also left in place for added support.

Industrial Access noted in their final inspection report that the "Structural integrity of the concrete shell is not in question at this time as we find the chimney to be in sound condition." There were a few additional issues which should be corrected in the future, including:

1. Repair spalls and bug holes on concrete shell exterior.
2. Seal the large opening between the liners and roof concrete slab.
3. Repair and coat liner exteriors, handrails and test ports at roof area.
4. Replace the missing bolts on the support ring at 155 feet AGL.
5. Repair damaged hardware on all breeching duct exteriors. Replace the missing bolts at gasket connections.
6. Remove or tighten loose anchor bolts on the roof concrete slab.
7. Clean and coat caged ladder system.
8. Wash down and coat liner interiors.
9. Add additional support to the base of liners.

3.6.2 Refuse Pit Front Wall Inspection and Repairs (Item 2.1 of Technical Recovery Projects included in Part A of Schedule 19)

Severe erosion of the structural concrete under four of the eight tipping bays was observed by CDM Smith in a prior punch list inspection and included as one of the Technical Recovery Projects noted in Part A of Schedule 19 in the Covanta Service Agreement. Covanta took advantage of the fall outage which allowed the receiving trench along the tipping bays to be dug out to allow the full extent of damage to be observed. A total of four bays (3, 4, 5 and 6) were confirmed to be damaged. The damaged areas have lost the concrete cover over the reinforcing steel, and many of the reinforcing steel bars were missing or exposed from the tipping floor to a depth of approximately 15 feet along the front wall of the refuse pit.

Covanta prepared a project scope for the repairs to the refuse pit front wall and a section of the tipping floor in accordance with the Service Agreement Schedule 19 page 19-3 for an estimated cost of \$189,187.81. Covanta had earlier received direction from the County during the Transition Status and December Outage Planning Update Meeting held at the County office @ 2:00 PM on November 20, 2014 that they could proceed with Schedule 19 type projects during the Early Award Period on a time and material basis. They were required to obtain competitive pricing or unit costs for the scope of work to be undertaken and provide this information to the County with their recommendation as to how to proceed. The project was approved by the County Authorized Representative on December 1, 2014.

Based upon the structural analysis performed by Covanta's Structural Engineer, Jeri Chao, Covanta determined that the damage to the refuse pit wall was still cosmetic, and had not reached the point of compromising the design integrity. Performing this repair work during the fall outage prevented the level of deterioration from reaching the point where the structural integrity of the damaged areas will be in question. The repair plan developed by Covanta included sandblast cleaning of the affected area, installation of #5 dowels on an 18-inch square grid, and installation of 3/16-inch thick welded wire fabric approximately 2 inches from the plane of the refuse pit wall.

Three contractors (Belt Constructors, GA Nichols and Premier Florida Industrial Services) were provided the opportunity to provide pricing to install 1,800 SF of 6,000 PSI Shotcrete 4 to 6 inches thick on the damaged areas of the refuse pit walls, and to replace 1,200 SF of 6,000 PSI ready mix concrete in specified areas of the tipping floor. Belt Construction declined to bid due to the short lead time schedule and manpower requirements. The quotes received were from GA Nichols at \$171,988.92 and Premier Florida Industrial Services at 268,250.00. The project was awarded to GA Nichols with a target budget for the contractor's part of the work increased by a 10 percent contingency to cover omissions, scope growth or other changes required during the repair.

The project was completed by GA Nichols for the area under tipping bays 3, 4 and 5. Although there is considerable damage to tipping bay 6, this area was not repaired at this time due to the unavailability of scaffolding. A special arrangement of scaffolding supported by the refuse crane columns along the front edge of the refuse pit, is shown in the below photographs.

Scaffolding for structural repairs to tipping bays No. 3, 4 and 5



Dowels which were installed on 18 inch centers in refuse pit front wall



**Preparation for structural repairs to tipping bays 3, 4 and 5
(Dowels and WWF installed after sandblasting of area to be repaired)**



Structural repairs to tipping bays 3, 4 and 5 (note bay 6 to right still needs repaired)



In addition to tipping bay 6 which remains to be repaired, CDM Smith observed six additional areas of damage (primarily spalled areas) to the refuse pit concrete on the opposite high wall of the refuse pit. These areas illustrated below have been noted for future repairs.

Damaged areas of Refuse Pit noted during common fall outage (December 9, 2014)

Overall view of refuse pit looking north with damaged areas noted in high wall (east)



Photo of Damaged Area No. 1 – Spall and erosion damage under Feed Hopper No. 1 (center)

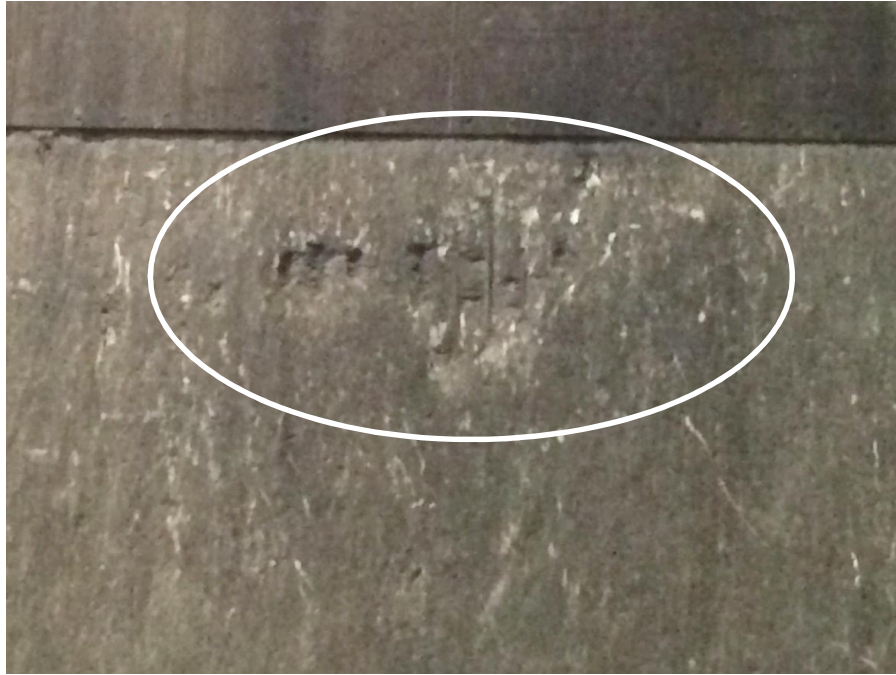


Photo of Damaged Area No. 2 – Spall damage under Feed Hopper No. 1 (north end)



Photo of Damaged Area No. 3 – Spall damage under crane pulpit (north)



Photo of Damaged Area No. 4 – Spall and erosion damage under Feed Hopper No. 2

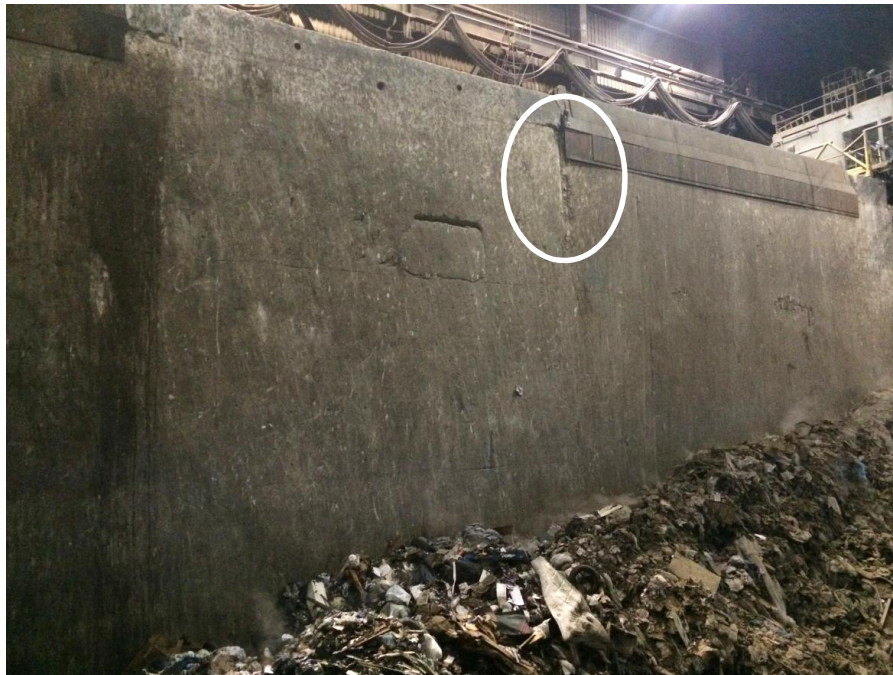


Photo of Damaged Area No. 5 – Erosion along north side of Feed Hopper No. 2

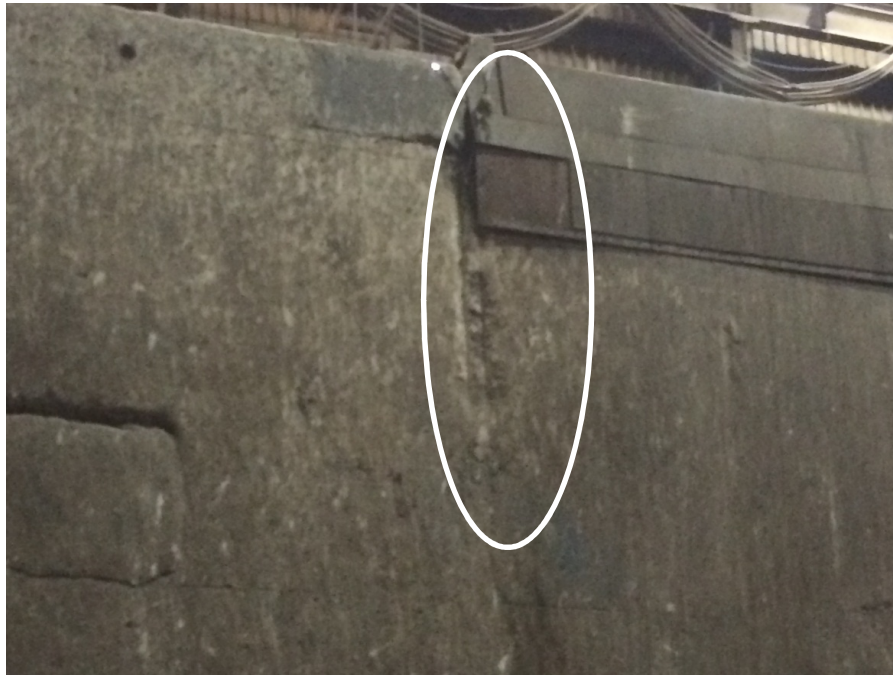


Photo of Damaged Area No. 6 – Spall/erosion along intersection of top of refuse pit, charging floor, and parapet wall on south side of Feed Hopper No. 3



3.6.3 Tipping Floor Repairs

A 20 foot by 60 foot section of the tipping floor was found to be heavily worn and created a “birdbath” for standing water from waste which was discharged to the floor on and after rainy days. Covanta also decided to repair this area of the floor during the fall outage. The work scope was included in the repairs for the refuse pit wall discussed above, and performed by the same contractor (GA Nichols).

Approximately 1,200 SF of 6,000 PSI ready mix concrete (with granite aggregate and poly fibers) was installed after the eroded section of concrete was demolished and removed. The area which was repaired, along with a close-up of the finished concrete surface, is shown below.

Section of new concrete tipping floor (opposite of bays 4 and 5)



Close-up of new concrete tipping floor (opposite of bays 4 and 5)



3.6.4 Elevator

Otis Elevator performed the annual inspection and 5-year load test in October 2014.

3.6.5 Cooling Tower

EvapTech of Ocala Florida conducted a thorough inspection of the Cooling Tower during the 2014 fall outage and identified a significant number of deficiencies. The following areas of the cooling tower were inspected:

- Structure
- Fill and PVC Drift Eliminators
- Distribution System (Hot Water Basins)
- Motors / Gearbox Torque Tube Assemblies
- Fan Blades and Center Fan Hub
- Exterior (Fan stack, deck and hand/knee/toe board rails)
- Tower Casing and Louvers
- Stairs / Ladders / Platforms
- Cold Water Basin
- Miscellaneous

Many of the deficiencies which were identified were repaired or replaced during the fall outage, including:

1. Cell No. 1 – Endwall casing was replaced along with nineteen (19) columns, forty (40) girts, one (1) door and all nailers on the endwall. The endwall was removed and replaced with new 12 oz. FRP casing material. Additionally, a significant number of mechanical repairs were made to the unitized mechanical support and C-channel longitudinal support beams. Motor and gearbox oil was replaced, along with a new drive shaft assembly and fan assembly, including alignment. Two (2) new stainless steel control valves were installed along with two (2) FRP prefabricated distribution boxes to replace the deteriorated wood boxes. A new distribution riser valve was installed. A new FRP emergency escape ladder and mid-landing was relocated to the south endwall to replace the heavily deteriorated wood structure, with all new stainless steel hardware.
2. Cell No. 2 – Four (4) columns were replaced, along with a new distribution riser valve.
3. Cell No. 3 – Three (3) columns and two (2) transverse girts were replaced, along with a new distribution riser valve.
4. Cell No. 4 – Eight (8) columns and eight (8) longitudinal girts were replaced, along with a new distribution riser valve.

5. Cell No. 5 - Endwall casing was replaced along with ten (10) columns, forty one (41) girts, one (1) door and all nailers on the endwall and partition wall. The endwall was removed and replaced with new 12 oz. FRP casing material. A new distribution riser valve was also installed. The existing Marley ladder fill was replaced with EvapTech ArchBar fill and TufLock grids. All of the drift eliminators and trays were removed and replaced with DriAir 150 drift eliminators (an upgrade over existing materials). A new FRP stair case was installed to replace the heavily deteriorated wood staircase. GCS provided a new concrete pad of 14 foot by 8 foot dimension for the new stair case.
6. The partition wall between cells No. 4 and 5 was replaced with ½-inch pressure treated wood.

Recommendations for future repairs and replacements identified by EvapTech include:

Scope of Recommended Future Repairs	Cell No. 1	Cell No. 2	Cell No. 3	Cell No. 4	Cell No. 5
Replace louver columns, louver supports, and louvers	Yes	Yes	Yes	Yes	Yes
Replace fill / support system	Yes	Yes	Yes	Yes	
Replace hot water basins, support joists, nozzles, ladders and platforms	Yes	Yes	Yes	Yes	Yes
Replace distribution boxes with FRP prefabricated units		Yes	Yes	Yes	Yes
Replace unitized mechanical supports and C-channel supports		Yes			Yes
Replace FRP structure under unitized mechanical support (9 vertical FRP 4" by 4" columns by 36' high, 3 vertical FRP 4" by 4" by 16' long top sections, and middle of support frame, 304 SS)	Yes	Yes	Yes	Yes	Yes
Replace fans / hub assemblies and drive shafts		Yes			Yes
Replace fill / support system with ArchBar fill and TufLock grids	Yes	Yes	Yes	Yes	
Replace drift eliminators with DriAir 80 drift eliminators	Yes	Yes	Yes	Yes	
Replace missing toe board on fan deck over Cell No. 5					Yes
Coat fan deck with Outlast Deck Oil	Yes	Yes	Yes	Yes	Yes
Replace cracked fan deck joists	Yes	Yes	Yes	Yes	Yes
Replace longitudinal windwall on both west and east side along with plenum access doors / hinges	Yes	Yes	Yes	Yes	Yes
Replace cross-over header saddles	Yes	Yes	Yes	Yes	Yes
Replace partition wall between Cell Nos. 1-2, 2-3, and 3-4.	Yes	Yes	Yes	Yes	
Monitor gear boxes oil leaks, inspect and repair / replace as needed	Yes	Yes	Yes	Yes	Yes
Consider lightning protection on fan stacks and fan deck hand rails	Yes	Yes	Yes	Yes	Yes

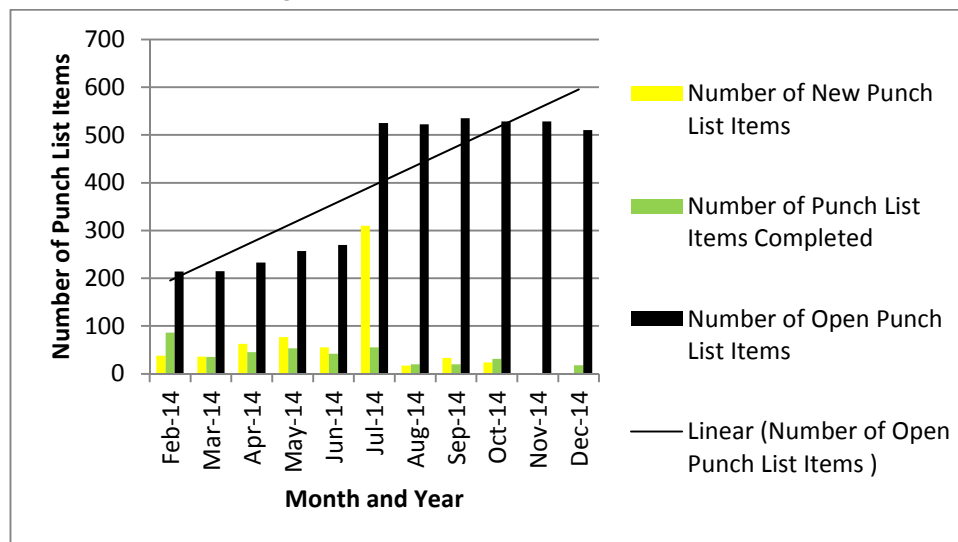
3.7 Summary of CEIR / CRR Lists

As a result of Amendment No. 6 that was executed in early December 2013, the County and its consultants have had direct involvement in decision making for Facility operation, maintenance, repair, replacement and capital projects. Due to this revised management and oversight strategy and

since the Inspection Report titled Pinellas County WTE Facility Consulting Engineer's Inspection Report – Punch List Items – Revision 62 (dated 12/5/13) was issued, a new process was implemented and there were two separate lists developed to track punch list items and projects to be completed at the Facility. The Consulting Engineer's Inspection Report (CEIR) List includes punch list items identified by CDM Smith during monthly inspections and by others that are under a \$10,000 maximum cost to complete. The Capital Projects (CRR) List includes repair or replacement items that will cost in excess of the \$10,000 maximum that has been selected to differentiate the punch list items from those considered to be capital projects.

CDM Smith continued to perform monthly inspections of the Facility during the 1st Quarter and issued reports documenting the new punch list items identified during the inspections. Two inspections were performed to identify new punch list items and verify completed items on October 8 and December 5, 2014. A total of 24 new punch list items were identified during the inspections, with 18 punch list items reported by GCS and verified by CDM Smith as complete. At the end of the 1st Quarter, there were 510 open items, a small decrease from the 535 open items at the end of the 4th Quarter. **Figure 3-1** presents an overview of the new, completed and open punch list items by month since the changes associated with Amendment No. 6 went into effect and through the 1st Quarter of BY No. 1.

Figure 3-1 Overview of Punch List Items



The trend line shows that the number of open punch list items has been steadily increasing since Amendment No. 6 became effective. The 510 open items on the CEIR list as of the end of the 1st Quarter was more than twice the original number, with most of the increase occurring during the 4th Quarter. While some of the open items on the punch list are related to aesthetic and housekeeping issues, a large number of the open items adversely affect the performance of the Facility. The large increase in the number of open items on the CEIR List since February 2014 can be attributed to several factors. Amendment No. 6, among other things, eliminated the prior contractual penalties for failure to complete open punch list items on a timely basis. The number of new items identified during July 2014 was unusually large compared to other months since the normal one-day inspection was expanded to several days at the request of the County in order to undertake a detailed review of the Facility's electrical systems. Furthermore, GCS was not selected as one of the two Qualified Respondents under the County's procurement process that began in March 2014 to select a long-term Facility operator. This meant that GCS would likely no longer be the Facility operator as of the end of

the 1st Quarter of Billing Year No. 1, thus removing any incentive to complete the open CEIR items in a timely manner.

3.8 Summary of Approved CRR Projects

The Capital Repairs and Refurbishment Projects (CRR) List includes repair or replacement items that will cost in excess of the \$10,000 maximum that has been selected to differentiate the punch list items from those considered to be projects.

Through the 1st Quarter, a total of 46 individual requests had been submitted to the County for approval. 36 of these requests were approved by the County at an estimated total cost of approximately \$5.8 million. **Table 3-4** presents a summary of the CRR projects that were submitted and approved through the 1st Quarter. All of the approved requests had been completed as of the end of the 1st Quarter and are highlighted in green. Approval for three requests representing a total of approximately \$168,720 were still pending.

Table 3-4 Capital Repairs and Refurbishment Project Tracking

Request Number	CRR Item No.	Date Originated	Date Approved	Description of Scope of Work	Contractor	Estimated Total Cost
001	5058	1/22/2014	2/7/2014	B102 Major Grate Overhaul	Pogany Construction (\$211k) and TISKA GMBH (\$384k)	\$623,873.01
002 ¹	5012	1/22/2014	2/19/2014	Dewatering and filter press service to clean wastewater tank and contact sump of all solids	Veolia	\$196,921.20
003	5054	1/24/2014	1/30/2014	Miscellaneous OGPL items repair as required on a time and material basis	DCR Industrial and MJM (\$32k) Electric	\$214,983.51
0003 R1	5054	1/24/2014	3/26/2014	Miscellaneous OGPL items repair as required on a time and material basis	DCR Industrial	\$90,386.21
0003 R2	5054	5/15/2014	5/16/2014	Miscellaneous OGPL items repair as required on a time and material basis	DCR Industrial	\$180,772.41
0003 R3	5054	6/17/2014	6/18/2014	Miscellaneous OGPL items repair as required on a time and material basis	DCR Industrial	\$180,772.41
0003 R4	5054	8/12/2014	9/16/2014	Miscellaneous OGPL items repair as required on a time and material basis	DCR Industrial	\$90,386.21
0003 R5	5054	8/12/2014	9/26/2014	Miscellaneous OGPL items repair as required on a time and material basis	DCR Industrial	\$90,386.21
004	5007 5008 5009	1/24/2014	1/30/2014	Sootblower repair on Unit Nos. 1, 2 and 3 – all retractable and rotary blower units	Pogany Construction (\$343k) and MidSouth (\$420k)	\$904,919.64
005	5059	1/27/2013	2/7/2014	Purchase new spare crane grapple	Mack Manufacturing	\$73,147.20
006	5060	1/27/2014	Not approved	Upgrade maintenance management system software from version 8.3 to new version 11.1	INFO Services	N/A
007	5064	1/28/2014	2/5/2014	Miscellaneous structural repairs from OGPL based on firm bid prices per job	Belt Construction Corp of Tampa	\$31,752.00
008	5074 5075 5076	1/28/2014	2/12/2014	Purchase set of replacement baghouse bags for change out before stack test in April	Midwesco	\$270,462.78

¹Green is approved/completed requests.

Request Number	CRR Item No.	Date Originated	Date Approved	Description of Scope of Work	Contractor	Estimated Total Cost
009	5040 5041	1/31/2014	Cancelled	Services to investigate TG1 vibration and oil leaks and discuss outage repair requirements	Separated jobs for two trips and two scopes of work and put on CEIR List	N/A
0010	5080 5081 5082	1/31/2014	2/3/2014	Repair or replace all boiler growth pointers on three boilers	DCR Industrial	\$36,928.50
0011	5063	2/1/2014	Cancelled	Now part of 0015 baghouse hopper heaters and level detectors	Thermo Fisher Scientific	N/A
0012	5062	2/21/2014	3/15/2014	Cooling tower cell 3 & 4 repairs; new fan, gear box, HDG frame and repair wood	Star Cooling Towers	\$210,185.98
0013	5018	2/11/2014	2/11/2014	Purchase conveyors for B101 economizer hopper discharge ash system	Kaman Industrial	\$29,229.99
0013 R1	5018	6/3/2014	6/11/2014	Installation of three screw conveyors on Unit No. 1	PPM	\$21,992.50
0014	5007 5008 5009	2/7/2014	2/7/2014	Purchase additional retractable and rotary sootblower parts to complete the overhaul	MidSouth Power Equipment Co.	\$201,364.80
0015	5030 5031 5032	4/30/2014	6/11/2014	Install of level detectors (replacing nuclear) for Baghouses 1-3, Pugmills and SDAs 1-3	Gilson Engineering, Thermo Fischer Scientific	\$147,390.60
0016	5092	2/21/2014	3/3/2014	Relocate power panels and transformers to the outside of the baghouse windwall	GRL Electric, Inc.	\$72,519.30
0017	5036	2/12/2014	2/12/2014	E&I services to inspect, repair/replace, calibrate, & loop check all Instruments	GRL Electric, Inc.	\$282,362.58
0018	5091	2/12/2014	2/12/2014	Purchase and Install new A/C in CEMS trailer to maintain proper temperature	Tampa Bay Trane	\$11,151.00
0019	5074 5075 5076	2/12/2014	2/12/2014	Furnish all labor and equipment to install new bags and make thimble repair in all 3 units	Southern Environmental, Inc.	\$624,712.65
0020	5042	2/18/2014	2/25/2014	New CEMS server, installation and programming	Nexus Solutions, Inc.	\$41,690.00
0021	5017	2/18/2014	Cancelled	Furnish and install new FRP siding on baghouse walls (work completed under 007)	Belt Construction Corp of Tampa	N/A
0022	5011	3/18/2014	3/14/2014	Repair damaged concrete divider wall at the charger	Kimmins	\$12,106.50

Request Number	CRR Item No.	Date Originated	Date Approved	Description of Scope of Work	Contractor	Estimated Total Cost
				deck		
0023	5089	3/18/2014	3/26/2014	Install new concrete push wall in the NW corner of baghouse windwall	Belt Construction Corp of Tampa	\$15,246.00
0024	5107	3/3/2014	3/14/2014	Replace liner in sulfuric acid secondary containment area	JSJ Specialty Coatings	\$27,862.80
0025	5046	3/18/2014	3/20/2014	Purchase 184 LED light fixtures and brackets. Labor for installation will be submitted under a different work authorization form	Rexel	\$110,174.23
0026	5105	4/10/2014	4/10/2014	Install concrete pushwall under filter press area	Belt Construction Corp of Tampa	\$17,388.00
0027	5112	4/10/2014	4/18/2014	Fabricate and install platforms for boiler viewports	Belt Construction Corp of Tampa	\$90,565.65
0028	5046	4/30/2014	5/6/2014	Installation of upgraded plant lighting	Electrical Engineering Enterprises, Inc.	\$78,845.98
0029	5004	5/19/2014	Cancelled	Concrete floor and support beams	JSJ Specialty Coatings	N/A
0030	5090	5/13/2014	5/15/2014	Install additional O2 analyzers at economizer outlets	Power Process Corporation	\$42,307.65
0031	5113	5/13/2014	9/16/2014	Replace 15 ton AC systems in MCC-1 and MCC-3	Tampa Bay Trane	\$36,015.00
0032	5114	5/28/2014	6/11/2014	Replace TG#1 UPS system	Classic Controls Inc.	\$48,938.40
0033	5100 5101 5102	6/5/2014	6/11/2014	Ash house conveyor guarding	SEMCO	\$134,400.00
0034	5027 5028 5029	7/2/2014	7/22/2014	Baghouse Hopper Heaters	TSI	\$492,147.22
0035	5119	7/2/2014	Pending	Upgrade and replace the secondary carbon system	Filter Sense	\$34,896.75
0036	5120	7/8/2014	Cancelled	Inspecting, surveying and producing initial drawings in reference to CRR 5004, concrete floor repairs	Belt, JSJ, SEMCO	N/A
0037	5123	7/23/2014	Cancelled	Burner component replacements on Unit Nos. 1, 2, 3 (seal air fans No. 3 burners, gas valves, main skid valves and strainers, burner barrel on south burner only, local skid manual valves)	Forney, Kaman, Maxon (Vendors) DCR (Installation)	N/A

Request Number	CRR Item No.	Date Originated	Date Approved	Description of Scope of Work	Contractor	Estimated Total Cost
0038	5027	8/27/2014	Pending	Compressor room ventilation upgrade	Blume Mechanical	\$99,487.50
0039	5138	9/23/2014	Pending	New B101 bus	EEE	\$34,335.00
0040	5039	10/1/2014	10/1/2014	Refurbish TG2 bus duct	Double Eagle	\$23,590.11
Total Approved						\$5,757,878

Many of the CRR projects involved existing equipment and systems that had fallen into disrepair due to improper operation and/or lack of maintenance. For example, approximately \$1.1M or nearly 20% of the approved budget was spent to repair the steam soot blowing systems on all three boilers (CRR Request Nos. 0004 and 0014). These systems, which are critical to the performance and upkeep of the boilers, were largely inoperable due to lack of maintenance over the past couple of Billing Years. The second largest capital investment on the CRR List at \$0.9M was for the purchase and installation of new bags on all three baghouses and replacement of corroded thimbles that hold the bags in place (CRR Request Nos. 0008 and 0019). This investment was needed despite the fact that all of the bags had been replaced in all three baghouses four times in less than two years, with the latest change out occurring in August 2013. The bags have experienced premature deterioration due to poor operating and maintenance practices. The performance improvement during the last year was due in part to County funding of the CRR projects that prior to Amendment No. 6 would have been the sole responsibility of GCS.

Appendix A

Daily Reports

Pinellas WTE Daily Report

Edition: 202 - 10.01.14

Date of Report: Wednesday, 10/01/14

Tons Received: No data for Tuesday, 09/30/14 – the scale house has been slow with reports of deliveries lately

Tons Processed: 2,494 on 09/30/14

Pit Level: 5,029 tons @ midnight

Weather: We had more rain overnight, but none so far today. However, it is clouding up, and the forecast is for more rain late afternoon/evening. Everyone think “no rain, no rain.”

Boiler 1 Steam Flow set point (lbs/hr): 200,000

Boiler 2 Steam Flow set point (lbs/hr): Offline due to tube rupture

Boiler 3 Steam Flow set point (lbs/hr): 180,000

TG 1 Power Produced (MW-Hrs): 820 (daily gross 09/30/14)

TG 2 Power Produced (MW-Hrs): 446 (daily gross 09/30/14)

Net Power Exported (MW-Hrs): 1,050 (net for 09/30/14)

Safety:

No accidents reported.

Rob noted that a break area similar to what I discussed will be set up for fall outages; tarps with plywood over the tarps to form a roof over an open area on the south side of unit 1. Picnic tables have been ordered; bottled water to be provided in iced down coolers.

Rob also found a structural bolt that had corroded in half from the stairwell at the Lime Prep Bldg. Brian O said he found another badly corroded long beam in the boiler structure. Mark to look at these areas with Belt Eng'rg.

Rob said he had sent the County a quote for security guards during the outages.

Environmental Compliance:

No exceedances reported. The hard shutdown of unit 2 last night was clean, good job by OP's.

Becky noted that there has been no response from FDEP re: the County's request to allow testing of only 1 unit (unit 3) for annual PM 2.5 compliance.

Thermo Fischer has completed removal of all nuclear level detectors from the site. Becky is looking for the paperwork from them.

Operations:

The fuel is still very wet. Trucks are still gushing water out on the tipping floor when they lift their beds. It is making combustion tough. It is difficult to maintain steam loads with this fuel.

We discussed my suggestion for requiring trucks to dump water before entering the building. It seems the consensus was to ride this wet period out. A few days from now it will probably be clear. Before the next rainy season, though, I really feel the plant needs to have a plan in place. One idea is to have an area dedicated for trucks to dump their water at the entrance to the landfill. A bed of mulch could be put down every day, removed to dry, and eventually be brought to the pit. More thought should go into this prior to next summer.

GCS is blowing soot today. In the past this was big news. Now this has become a daily event, and I will no longer report on it, unless there are issues to discuss.

Unit 1 – is online at a set point of 200,000 pounds of steam per hour. Economizer outlet temp is 521 F. Baghouse pressure differential is 7.7". UFA temp is 281 F.

Unit 1 is scheduled be taken offline Sunday night, 10/05/14, just before midnight for its fall outage. However, there are ongoing discussions of flip-flopping the unit 1 and unit 2 outages

Unit 2 – came down last night, 09/30/14, @ 1922 due to tube rupture. The tube is in the roof just barely into the 2nd pass, close to the furnace. This was a hard shut down, not a slow controlled shut down. Precision has already blasted the furnace. The repair will require scaffold. We are currently discussing making this the start of the unit 2-scheduled

outage, and flip-flopping with unit 1. Parts are not an issue, but the availability of contractors may be. GCS is contacting contractors now & we will meet @ 1600 to discuss again & hopefully make a decision.

Unit 3 – is online at a set point of 180,000 pounds of steam per hour. Economizer outlet temp is 567 F. Baghouse pressure differential is 8.8". UFA temp is 217 F.

TG 1 - is online at reduced load due to the boiler 2 un-scheduled outage.

Joe Cascio was on site this morning and he reviewed TG 1 operating data. Joe said thrust-bearing temps looked good; everyone touch wood (an Irish saying).

TG 2 – is on line.

The east condensate pump was experiencing high vibration this morning.

Waste Forecast - There were a few trucks returning waste from landfill this morning, but per Elwyn that has been cut off. I observed water pouring out of packer trucks in waves again today.

Balance of Plant –Chuck submitted info from Mack re: grapple re-builds. Chris S and I need to sit down and evaluate the info before decisions are made on grapple repairs/replacements.

Elwyn stated that GCS will bring Atlas Copco on site to test A air compressor and look for a glycol leak that is hampering operations.

Cleaning – outside of a large pile of ash between the containment walls under the filter press, and some ash under the #1 dischargers the plant is relatively clean today. The charging floor around the feed hoppers and the crane cab was very clean today. Kudos to whomever cleaned that area up.

Maintenance

Chris S reports the following GCS Maintenance activities:

- Supporting boiler 2 work; tube repair, repairing hydraulic leaks, grate & undergrate inspection, installing gauges on the lime-metering pump, stroking the attemperator control valves.
- CAT loader repairs (broken hydraulic hose).
- Performing monthly PM's on sootblowers.
- TSI and DCR are installing level detectors as part of the baghouse hoppers project. They have 3 hoppers on unit 3 stripped of insulation & lagging.
- Installing new pyrometers.

The following contractors are working on site today and logged in at the CR:

- PPM – (9) on days –cleaning and Maintenance support
- PPM – (9) on night shift last night
- Semco – (2) baghouse dampers
- MJM – (2) electrical support
- DCR – (10) – (5) are on temporary structural repairs @ elevation 46' 8" – (5) are working through TSI on baghouse rod out ports & instrumentation ports
- Safeway (1)
- TSI (3) – baghouse hopper project
- EEE (2) – electrical support
- ITR (1)
- Precision (4) – dynamite blasting unit 2
- Gaffin (5) + a vac truck

(48) total Contractors working on site today

General Comments:

Sam from Belt Eng'rg was on site this morning. He inspected the damaged structural steel in the boiler structure, and will write a repair plan.

Sam from Belt Eng'rg also delivered a preliminary drawing showing elevations and proposed drainage in the entire area from the wall behind (west) the SCAH's out to the contact sump. They have done a nice job, and had many more elevation shots than I envisioned. It appears as if the area can be transformed to gravity drain to the contact

sumps without any U-troughs needed. They will design wide swales with only a slight depth in lieu of U-troughs. This should make cleaning this area much easier, and eliminate a lot of tripping hazards.

Mark submitted a CRR Approval form for coating transformer control boxes, bus duct, switchgear boxes, and 120' of conduit. This is to try and avoid any further faults of the 13.8 kV system due to water intrusion.

Pinellas WTE Daily Report

Edition: 203 - 10.02.14

Date of Report: Thursday, 10/02/14

Tons Received: No data for several days now – the scale house has been slow with reports of deliveries lately

Tons Processed: 1,931 on 10/01/14

Pit Level: 5,366 tons @ midnight

Weather: No rain yesterday, none as of 1230 today; forecast is 10% chance of rain, high 87, low 74

Boiler 1 Steam Flow set point (lbs/hr): 210,000

Boiler 2 Steam Flow set point (lbs/hr): Offline due to tube repairs

Boiler 3 Steam Flow set point (lbs/hr): 220,000

TG 1 Power Produced (MW-Hrs): 473 (daily gross 10/01/14)

TG 2 Power Produced (MW-Hrs): 470 (daily gross 10/01/14)

Net Power Exported (MW-Hrs): 733 (net for 10/01/14)

Safety:

No accidents reported.

Rob reported that a Belt engineer on site yesterday reviewed the storage of grate bars and tube shields on the shelving at the south side of RSPB. I had previously expressed concern that this was a safety hazard. The shelving has been condemned and is being removed from service.

I noted that the new LED lights installed in the baghouse area were not lit this morning, and that the unit 3 area where hopper project work is ongoing was as dark as a cave. Apparently the timer had been adjusted recently. GCS will check and assure that the lights are on.

Site Security and the GCS quote for security guards during the outages will be discussed today @ 1300 during the monthly site Operations Meeting. Rob and I have been invited to attend.

Environmental Compliance:

No exceedances reported.

Operations:

The fuel is still wet. However, I observed that trucks are no longer gushing water out on the tipping floor when they lift their beds. Hopefully the weather dries out and the fuel conditions return to normal.

Unit 1 – is online at a set point of 210,000 pounds of steam per hour. Loads are still drifting due to wet fuel, though, and unit 1 averaged 202k yesterday. Economizer outlet temp is 542 F. Baghouse pressure differential is 7.5". UFA temp is 283 F.

Discussions of flip-flopping the unit 1 and unit 2 outages did not pan out. Contractors were not able to commit to the change in schedule. Unit 1 is therefore still scheduled be taken offline Sunday night, 10/05/14, just before midnight for its fall outage.

Elwyn noted that 1 bag was replaced in module 1-9 and that 7 more thimbles were plated over in module 1-6. Chuck is checking on delivery of pre-fabbed floor plates for the modules. Thimbles are on site and will be welded to the plates prior to installation during the fall outage.

Unit 2 – came down Tuesday 09/30/14, @ 1922 due to a tube rupture. The ruptured tube was in the roof just barely into the 2nd pass, just behind the screen tubes that separate the furnace and the 2nd pass. A Dutchman was cut in to replace the ruptured tube. Upon hydro testing 3 more leaks were found in the roof in same area, along with 9 leaks in the steam wall (3rd pass rear wall). Repairs are underway, and a 2nd hydro will be attempted. Spot UT readings were taken in the 2nd pass roof, and reportedly are not very good. I have requested copies of the UT readings.

Unit 3 – is online at a set point of 220,000 pounds of steam per hour. Loads are still drifting due to wet fuel, though, and unit 1 averaged 192k yesterday. Economizer outlet temp is 562 F. Baghouse pressure differential is 7.8". UFA temp is 221 F.

TG 1 - is online at reduced load due to the boiler 2 un-scheduled outage.

TG 2 – is on line.

Waste Forecast - There is no waste returning waste from landfill today. As discussed above, the waste does appear to be drying out.

Balance of Plant –Chuck submitted info from Mack re: grapple re-builds. Chris S and I need to sit down and evaluate the info before decisions are made on grapple repairs/replacements.

Cleaning – outside of a large pile of flyash between the containment walls under the filter press, and some ash under the #3 dischargers the plant is relatively clean today.

Maintenance

Chris S reports the following GCS Maintenance activities:

- Supporting boiler 2 work; tube repairs, repairing hydraulic leaks, undergrate inspection, functional testing UFA dampers, changed out the run 1 grate drive cylinder, which was leaking.
- Performing monthly PM's on sootblowers, blowing soot.
- TSI and DCR are installing level detectors and rod out ports as part of the baghouse hoppers project. They have 3 hoppers on unit 3 stripped of insulation & lagging.
- Inspecting cell 3 of the cooling tower. Yesterday GCS noticed that the drive shaft for the cell 3 fan was missing. This is very strange. Cell 3 was re-built earlier this year with a new fan, driveshaft, gearbox, and a re-built motor. The drive shaft is a composite material, and Chris said that a different type of shaft possibly should have been used for the length of the Pinellas shafts. Chris is looking into whether Star Cooling Tower made a mistake during the re-build.
- Removing broken bolts on the crane 2 holding gearbox. Kone Crane has been called in.
- Performing daily CEMS PM's.
- Replaced a level switch on the TG 2 oil conditioner.
- Organizing unit 1 outage PM work orders. I asked Chris if he gets an automatic print out of all outage work orders from EAM. Apparently it is not set up that way presently. I suggested that someone should look into this. PM work orders that can only be

performed during outages should be flagged for all 3 boilers and both TG's. It makes organizing this work much easier.

- The monthly Maintenance Team Building Meeting will be held today at 1700.

The following contractors are working on site today and logged in at the CR:

- PPM – (13) on days –cleaning and Maintenance support
- PPM – I did not see the night shift sign in log ??
- Semco – (2) baghouse dampers
- MJM – (2) electrical support
- DCR – (8) – (5) are on temporary structural repairs @ elevation 46' 8" – (3) are working through TSI on baghouse rod out ports & instrumentation ports
- Safeway (1)
- Safeway (13) – night shift last night, scaffold
- TSI (3) – baghouse hopper project

(45) Total Contractors working on site today + however many PPM had on night shift

General Comments:

Sam from Belt Eng'rg was on site yesterday and inspected the damaged structural steel in the boiler structure. Today he issued a signed & sealed memo blessing the temporary supports at elevation 46' 8" that had been installed by DCR.

Marc asked if the County would approve his request for fall outage appropriations of ~ \$12m. I told Marc I am reviewing that request and should get my opinion to the County today.

Pinellas WTE Daily Report

Edition: 204 - 10.05.14

Date of Report: Sunday, 10/05/14

Tons Received: My last report was 3,008 tons on 10/02/14 + add'l 0 returned from landfill– the scale house has been slow with reports of deliveries lately

Tons Processed: 2,298 on 10/04/14

Pit Level: 4,357 tons @ midnight

Weather: Beautiful, Paradise season has begun – High: 74 – Low: 64 – sunny, 0% chance of rain

Boiler 1 Steam Flow set point (lbs/hr): 200,000

Boiler 2 Steam Flow set point (lbs/hr): 200,000

Boiler 3 Steam Flow set point (lbs/hr): 200,000

TG 1 Power Produced (MW-Hrs): 632 (daily gross 10/04/14)

TG 2 Power Produced (MW-Hrs): 496 (daily gross 10/04/14)

Net Power Exported (MW-Hrs): 922 (net for 10/04/14)

Safety:

No accidents reported.

Environmental Compliance:

No exceedances reported.

Operations:

Good weather has returned, hopefully the fuel will be good for a long period.

There are no abnormal activities on site today, except for preparation for the unit 2 fall outage.

Unit 1 – is online at a set point of 200,000 pounds of steam per hour. Economizer outlet temp is 555 F. Baghouse pressure differential is 8". UFA temp is 283 F.

Unit 1 is still scheduled be taken offline tonight, Sunday, 10/05/14, just before midnight for its fall outage.

Unit 2 – is online at a set point of 200,000 pounds of steam per hour. Economizer outlet temp is 485 F. Baghouse pressure differential is 6". UFA temp is 189 F.

Unit 2 came down Tuesday 09/30/14, @ 1922 due to a tube rupture. The ruptured tube was in the roof barely into the 2nd pass, just behind the screen tubes that separate the furnace and the 2nd pass. A Dutchman was cut in to replace the ruptured tube. Upon the 1st hydro test, 3 more leaks were found in the roof in same area, along with 9 leaks in the steam wall (3rd pass rear wall). After multiple leaks and several hydros, unit 2 coded back online Saturday, 10/04/14 around 2000 hours. Unit 2 was offline ~ 4 days for this repair.

Unit 3 – is online at a set point of 200,000 pounds of steam per hour. Economizer outlet temp is 548 F. Baghouse pressure differential is 9". UFA temp is 214 F.

TG 1 - is online.

TG 2 – is on line.

Waste Forecast - Even with unit 2 offline for 4 days for tube repair, the plant has kept up with normal deliveries. The pit should be well below 2,000 tons tomorrow morning when the 1st trucks roll in. Waste being returned from landfill will continue to be shut down, as unit 2 comes offline tonight for its fall outage. Deliveries have been lower lately, so hopefully GCS will be able to complete the unit 2-outage without diverting.

Balance of Plant –

Cleaning – I am not on site today and have no report of plant cleanliness today.

Maintenance

I am not on site today and have no report of Maintenance activities today, outside of preparation for the unit 2 fall outage.

General Comments:

Pinellas WTE Daily Report

Edition: 205 - 10.07.14

Date of Report: Tuesday, 10/07/14

Tons Received: 4,206 on Monday, 10/06/14 + 0 from landfill;
0 on Sunday, 10/05/14

Tons Processed: 2,066 on Monday, 10/06/14
2,868 on Sunday, 10/05/14

Pit Level: 5,366 tons @ midnight on 10/06/14
2,728 @ midnight on 10/05/14

Weather: cloudy, 20% chance of rain, high 83, low 72

Boiler 1 Steam Flow set point (lbs/hr): Offline for fall outage

Boiler 2 Steam Flow set point (lbs/hr): 225,000

Boiler 3 Steam Flow set point (lbs/hr): 225,000

TG 1 Power Produced (MW-Hrs): 468 (daily gross 10/06/14)

TG 2 Power Produced (MW-Hrs): 509 (daily gross 10/06/14)

Net Power Exported (MW-Hrs): 772 (net for 10/06/14)

TG 1 Power Produced (MW-Hrs): 963 (daily gross 10/05/14)

TG 2 Power Produced (MW-Hrs): 499 (daily gross 10/05/14)

Net Power Exported (MW-Hrs): 1,246 (net for 10/05/14)

Safety:

No accidents reported.

The Bales Security guard is on duty. His primary duty is to monitor vehicles entering the site on 110th Ave. during the outages, allowing only those with passes or making deliveries to drive on site.

Rob noted to be aware of the dangers from explosive blasting that is occurring today.

Environmental Compliance:

No exceedances reported.

Operations:

OP's is fully engaged in B 101 cleaning activities; clearing hoppers at the economizer, pantlegs, superheaters, & SDA. Also, cleaning activities at the dischargers will start today.

Unit 1 – coded offline for its fall outage @ 2353 on Sunday, 10/05/14. This is Day 2 of the outage.

Explosive blast cleaning is winding down, major cleaning activities everywhere. Ice is being delivered around 1000 for cleaning the dischargers.

Modules 1-5 and 1-6 at the baghouse have been fully stripped and cleaned. GCS is inspecting thimbles, but expects for most to be bad. If so, they will replace the entire floors with pre-drilled plates with thimbles welded on.

Unit 2 – is online at a set point of 225,000 pounds of steam per hour. Loads are still drifting due to wet fuel, and actual load has been a little less. Economizer outlet temp is 526 F. Baghouse pressure differential is 7.5". UFA temp is 239 F.

I observed a significant stream of water running out of the north side unit 2, just above elevation 30'. The leak appears to be coming from the steam wall or the crossover tubes. It is a significant leak(s).

OP's is fighting a plug in the unit 2-south discharger.

Unit 3 – is online at a set point of 225,000 pounds of steam per hour. Loads are still drifting due to wet fuel, and actual load has been a little less. Economizer outlet temp is 534 F. Baghouse pressure differential is 7.6". UFA temp is 218 F.

TG 1 - is online at reduced load due to the boiler 1 fall outage.

TG 2 – is on line.

Waste Forecast - There is no waste returning from landfill today due to the unit 1 fall outage. Elwyn noted that the fuel is good for combustion.

Balance of Plant – The entire ash removal system is down this morning. I am not sure what the troubles are.

Chuck noted that Precision Overhead Door would be on site tomorrow to repair the roll-up door covers above bays 2 and 3 on the face of the Tipping Bldg.

Chris S and I still need to evaluate info received from Mack on grapple re-builds before decisions are made on grapple repairs/replacements.

Mark noted that repairs are starting today on the siding that was crashed into on the north side of RSPB.

Cleaning – There is a lot of flyash under SDA #1, where it appears the hopper was dumped, ash inside the containment walls under the filter press, quite a lot of ash under the gallery belt conveyor, and ash under the units 2 and 3 dischargers.

Gaffin is on site with their vac truck assisting in cleaning activities.

Maintenance

Chris S reports the following GCS Maintenance activities:

- Supporting boiler 1 fall outage work; repairing hydraulic leaks, starting grate work.
- Performing PM's on unit 2; the Martin hydraulic skid, burners, FD Fan, Deflation Fan.
- TSI and DCR are installing level detectors and rod out ports as part of the baghouse hoppers project. The new level detectors at the pug mills have been installed, but need sensitivity tweaking.
- Replaced the unit 2 run 5 ram feeder hydraulic hose.
- Inspected cell 3 of the cooling tower. Last week GCS noticed that the drive shaft for the cell 3 fan was missing. They looked, but could not find the drive shaft. The thought is that it exploded into many pieces since it was a composite material. GCS is still looking into whether Star Cooling Tower made a mistake during the re-build, and if this is a warranty issue with Star. Cell 3 remains out of service.
- Investigating hot spots found on the cooling tower cell 2-fan motor.

- Sending the crane 2 gearbox that was removed last week out for re-hab.
- Performing daily CEMS PM's.
- Performing calibrations on the unit 2 instruments used for HHV calcs & the SDA instruments.
- Performing the unit 2 opacity audit.

The following contractors are working on site today and logged in at the CR:

- PPM – (18) on days –cleaning and Maintenance support
- PPM – (9) on night shift
- Bales Security (2) – days and nights
- Semco – (6) baghouse dampers
- MJM – (2) electrical support
- DCR – (7) – (5) are on temporary structural repairs @ elevation 46' 8" – (2) are working through TSI on baghouse rod out ports & instrumentation ports
- Safeway (1)
- Trane (1)
- NIC (2) – UT
- Atlas Copco (2) – air compressors
- Matrix (9) – unit 1 boiler outage work
- Precision (6) – explosive cleaning
- TSI (3) – baghouse hopper project

(68) Total Contractors working on site today + however many PPM had on night shift

General Comments:

Sam from Belt Eng'rg is on site today to pick up drawings of structural steel at elevation 46' 8". Belt will develop a repair plan for the damaged/badly corroded steel in that area near the elevator.

Marc noted that the County did approve his request for fall outage appropriations of ~ \$13m.

Marc also noted that GCS needs a plan for repairs on the units 2 and 3 SDA vessels. There have been several Emails flying back & forth on the issue. I said I would talk to the County and try to set up a meeting with the County and GCS to discuss.

Elwyn asked Sam if GCS could reject bed springs, as they are causing pluggage problems. Sam said they should not be receiving bed springs, but apparently they are. Sam stated that they definitely could reject them; just keep them segregated.

Val will be on site tomorrow for the monthly CEIR inspection. The focus will be on completing the platform, grating, handrail inspection started last month.

Russ has scheduled a meeting for this Thursday, 10/09/14, @ 1000 in the Classic Admin Bldg with TSI to discuss progress and the schedule for the baghouse hopper project (hopper heaters, level detectors, UT measurements on the hopper walls, and re-insulation & lagging). All are welcome to attend.

There will be a unit 1 fall outage meeting every day at 1500 during the outage in the Classic Admin Bldg. All are invited to attend.

Pinellas WTE Daily Report

Edition: 206 - 10.08.14

Date of Report: Wednesday, 10/08/14

Tons Received: 3,770 on Tuesday, 10/07/14 + 0 from landfill

Tons Processed: 2,182 on Tuesday, 10/07/14

Pit Level: 5,951 tons @ midnight on 10/07/14

Weather: sunny, 10% chance of rain, high 86, low 73

Boiler 1 Steam Flow set point (lbs/hr): Offline for fall outage

Boiler 2 Steam Flow set point (lbs/hr): 225,000

Boiler 3 Steam Flow set point (lbs/hr): 225,000

TG 1 Power Produced (MW-Hrs): 507 (daily gross 10/07/14)

TG 2 Power Produced (MW-Hrs): 525 (daily gross 10/07/14)

Net Power Exported (MW-Hrs): 828 (net for 10/07/14)

Safety:

No accidents reported.

The Bales Security guard has a vehicle to sit in today, to get out of the sun.

Rob noted GCS has set up the break area for outage workers. Brian O noted that OP's would be tightening up the area on 20' elevation in front of unit 1, now that major cleaning efforts are complete.

Environmental Compliance:

No exceedances reported.

Operations:

Elwyn noted that a non-Fe load would ship out tomorrow.

Unit 1 – coded offline for its fall outage @ 2353 on Sunday, 10/05/14.
This is Day 3 of the outage.

Explosive blast cleaning is complete, and major cleaning activities are nearly complete.

Modules 1-5 and 1-6 at the baghouse have been fully stripped and cleaned. Plates with pre-drilled holes, to replace floors, arrived, but the contractor made a mistake on the hole pattern. GS expects new plates on site tomorrow; this should not affect the outage end date.

Unit 2 – is online at a set point of 225,000 pounds of steam per hour. Loads are still drifting a little due to wet fuel, and actual load has been a little less (211k average yesterday). Economizer outlet temp is 506 F. Baghouse pressure differential is 7.0". UFA temp is 243 F.

The stream of water I observed running out of the north side unit 2 yesterday has stopped??? I cannot explain.

Elwyn noted that lime use was up on unit 2. He felt it was a function of how the system reacts when a boiler is taken out of service.

Unit 3 – is online at a set point of 225,000 pounds of steam per hour. Loads are still drifting a little due to wet fuel, and actual load has been a little less (222k average yesterday, almost dead on 225k). Economizer outlet temp is 538 F. Baghouse pressure differential is 7.7". UFA temp is 222 F.

Baghouse modules 3-5 and 3-11 are isolated for cleaning. Yesterday a torn bag was replaced in module 3-12. Opacity has been slightly high in unit 3.

TG 1 - is online at reduced load due to the boiler 1 fall outage.

TG 2 – is on line.

Waste Forecast - There is no waste returning from landfill today due to the unit 1 fall outage, and there probably will be none returning throughout the outage.

Balance of Plant – The ash removal system was down yesterday morning. GCS stated that the overload of material coming out of unit 1 cleaning activities caused problems.

Chris S and I still need to evaluate info received from Mack on grapple re-builds before decisions are made on grapple repairs/replacements.

Cleaning – There is ash everywhere around unit 1, not a lot, not piled up, just Day 3 of an outage ash.

Gaffin is on site with their vac truck assisting in cleaning activities.

Maintenance

Chris S reports the following GCS Maintenance activities:

- Supporting boiler 1 fall outage work; repairing hydraulic leaks, starting grate work tonight.
- Completed the unit 1 martin hydraulic skid PM, and the deflation fan PM.
- Performing PM's on unit 1 burners and FD Fan.
- Blowing soot.
- TSI and DCR continue installing level detectors and rod out ports as part of the baghouse hoppers project.
- Last week GCS noticed that the drive shaft for the cell 3 fan was missing. They looked, but could not find the drive shaft. The thought is that it exploded into many pieces since it was a composite material. I asked this morning if a new shaft was on order. It is not, apparently there are still questions as to the type of material to select. I advised that this should be ordered ASAP.
- Still investigating hot spots found on the cooling tower cell 2-fan motor.
- Performing daily CEMS PM's.
- Continuing to perform calibrations on the unit 2 instruments used for HHV calcs & the SDA instruments. DCS is doing this work with in house E&I techs. This is an encouraging milestone.
- E&I will stroke the unit UFA dampers and riddling flaps today.
- Greasing the UFA dampers and riddling flaps.
- Atlas Copco determined that the coolers on A compressor were bad. New coolers have been ordered, and are on site. Atlas Copco is installing them today.

The following contractors are working on site today and logged in at the CR:

- PPM – (19) on days –cleaning, Maintenance support, outage support
- PPM – (11) on night shift
- Bales Security (2) – days and nights
- Semco – (6) baghouse dampers
- MJM – (2) electrical support
- DCR – (7) – (5) are on temporary structural repairs @ elevation 46' 8" – (2) are working through TSI on baghouse rod out ports & instrumentation ports
- Safeway (6) – scaffold
- Corrosion Control (7) – sand blasting
- NIC (2 on days, 1 last night) – UT
- Atlas Copco (2) – air compressors
- Matrix (9) – unit 1 boiler outage work
- Maxim, formerly Pogany – will be starting grate work tonight, not sure of the crew size
- Precision Doors (2) – overhead door repair
- TSI (3) – baghouse hopper project

(79) Total Contractors working on site today + however many Maxim has on night shift

General Comments:

I am meeting with the County today to discuss SDA repair plans, and steam wall repairs.

Val is on site today for the monthly CEIR inspection. The focus is on completing the platform, grating, handrail inspection started last month.

Russ has scheduled a meeting for this Thursday, 10/09/14, @ 1000 in the Classic Admin Bldg with TSI to discuss progress and the schedule for the baghouse hopper project (hopper heaters, level detectors, UT measurements on the hopper walls, and re-insulation & lagging). All are welcome to attend.

There will be a unit 1 fall outage meeting every day at 1500, during the outage. The meetings will be held in the Classic Admin Bldg. All are invited to attend.

Pinellas WTE Daily Report

Edition: 20 - 10.09.14

Date of Report: Thursday, 10/09/14

Tons Received: 2,332 on Wednesday, 10/08/14 + 0 from landfill

Tons Processed: 2,127 on Tuesday, 10/08/14

Pit Level: 6,116 tons @ midnight on 10/08/14

Weather: sunny, not a cloud in the sky - 0% chance of rain - high 90 - low 72

Boiler 1 Steam Flow set point (lbs/hr): Offline for fall outage

Boiler 2 Steam Flow set point (lbs/hr): 225,000

Boiler 3 Steam Flow set point (lbs/hr): 225,000

TG 1 Power Produced (MW-Hrs): 522 (daily gross 10/08/14)

TG 2 Power Produced (MW-Hrs): 501 (daily gross 10/08/14)

Net Power Exported (MW-Hrs): 818 (net for 10/08/14)

Safety:

No accidents reported.

Rob noted that he is pleased with the outage contractors' safety performance so far.

Environmental Compliance:

No exceedances reported.

I noted that unit 3 NOx is not indicating on the large screen in the CR. They have the data on other screens, but have lost the indication on the big screen, which, I feel is a good tool for the CRO. This parameter was out earlier in the year, repaired by the Instrumentation Project team, and is now out again.

Operations:

Elwyn noted that a non-Fe load would ship out today.

Unit 1 – coded offline for its fall outage @ 2353 on Sunday, 10/05/14.

This is Day 4 of the outage.

Outage activity has now fully switched to the work phase, cleaning is essentially complete. The outage is progressing well, and is on schedule (scheduled to be back on line 10/18/14).

New plates with pre-drilled holes, to replace floors in modules 1-5 and 1-6 at the baghouse, had not arrived as of 0900. GCS expects them here today.

Elwyn noted the drum is being opened and cooled today. It will be inspected tomorrow.

Unit 2 – is online at a set point of 225,000 pounds of steam per hour. Economizer outlet temp is 546 F. Baghouse pressure differential is 6.9". UFA temp is 217 F.

Unit 3 – is online at a set point of 225,000 pounds of steam per hour. Economizer outlet temp is 573 F. Baghouse pressure differential is 7.2". UFA temp is 241 F.

Opacity has been running a little high, 1.8% this morning. I have not seen a plume.

TG 1 - is online at reduced load due to the boiler 1 fall outage.

TG 2 – is on line.

Waste Forecast - There is no waste returning from landfill today due to the unit 1 fall outage, and there probably will be none returning throughout the outage.

Balance of Plant –

Chris S and I still need to evaluate info received from Mack on grapple re-builds before decisions are made on grapple repairs/replacements.

Precision Doors was on site yesterday, and again today, repairing the roll-up door covers above the doors on bays 3 and 4.

Chuck noted that request for quotes have been sent to 3 vendors for the drive shaft for the cooling tower cell 3 fan.

Cleaning – There is still some ash around unit 1. It is not bad for Day 4 of an outage.

Gaffin is still on site with their vac truck assisting in cleaning activities.

Maintenance

Chris S reports the following GCS Maintenance activities:

- Supporting boiler 1 fall outage work; repairing hydraulic leaks, grate work started last night. Maxim's night shift got the 2 end bars of runs 3, 4, 5, and 6 stripped out along with most of the compensation plates and division blocks. Matrix is working on re-plating the feed hopper.
- Performing PM's on unit 1 burners and FD Fan. Pulling the FD fan motor and the inboard bearing on the fan, which had been running hotter than design.
- Blowing soot.
- TSI and DCR continue installing level detectors and rod out ports as part of the baghouse hoppers project.
- Still investigating hot spots found on the cooling tower cell 2-fan motor/electrical supply.
- Performing daily CEMS PM's.
- Continuing to perform calibrations on the unit 2 instruments.
- Greased the UFA dampers and riddling flaps.
- Atlas Copco is installing new coolers on A compressor today.
- Trane is installing the new 15-ton AC unit in MCC Room 3. They will have a crane on site today.
- The liner plate of VC 1 has separated at a weld seam. GCS has a complete new liner, but is weighing the options of making a repair vs. a replacement.

The following contractors are working on site today and logged in at the CR:

- PPM – (18) on days –cleaning, Maintenance support, outage support

- PPM – (10) on night shift
- Bales Security (2) – days and nights
- Semco – (6) baghouse dampers
- MJM – (2) electrical support
- DCR – (6) – (4) are on temporary structural repairs @ elevation 46' 8" – (2) are working through TSI on baghouse rod out ports & instrumentation ports
- Safeway (1) – scaffold
- NIC (2 on days, 2 last night) – UT
- Atlas Copco (2) – air compressors
- Matrix (9) – unit 1 boiler outage work
- Maxim, formerly Pogany (12 on days, 13 last night) –grate work
- Precision Doors (2) – overhead door repair
- Trane (2) – MCC Room 3 AC unit
- TSI (3) – baghouse hopper project

(92) Total Contractors working on site today

General Comments:

I am met with the County yesterday, and Chris Neu today to discuss SDA repair plans, and steam wall repairs. The County will issue a memo soon to GCS.

Val performed the monthly CEIR inspection yesterday. The focus was on completing the platform, grating, handrail inspection started last month. Val said she identified about a dozen new items, none of which will require major repairs.

A meeting was held this morning with TSI to discuss progress and the schedule for the baghouse hopper project (hopper heaters, level detectors, UT measurements on the hopper walls, and re-insulation & lagging). Minutes from this meeting will be distributed separately.

There will be a unit 1 fall outage meeting every day at 1500, during the outage. The meetings will be held in the Classic Admin Bldg. All are invited to attend.

Pinellas WTE Daily Report

Edition: 208 - 10.10.14

Date of Report: Friday, 10/10/14

Tons Received: 2,787 on Thursday, 10/09/14 + 0 from landfill

Tons Processed: 2,221 on Thursday, 10/09/14

Pit Level: 7,266 tons @ midnight on 10/09/14

Weather: sunny - 0% chance of rain - high 90 - low 73

Boiler 1 Steam Flow set point (lbs/hr): Offline for fall outage

Boiler 2 Steam Flow set point (lbs/hr): 170,000

Boiler 3 Steam Flow set point (lbs/hr): 170,000

TG 1 Power Produced (MW-Hrs): 546 (daily gross 10/09/14)

TG 2 Power Produced (MW-Hrs): 525 (daily gross 10/09/14)

Net Power Exported (MW-Hrs): 875 (net for 10/09/14)

Safety:

No accidents reported.

There was a Near Miss recorded last night. Matrix employees working on re-plating the unit1 feed hopper sent sparks into the pit. The OP's staff, including the crane drivers, reportedly did a nice job feeding smoldering waste into the other units, and controlling the situation.

Environmental Compliance:

No exceedances reported.

Operations:

Boiler loads are reduced today because the entire ash system is down, except for the VC's. V 2, the vibrator under the head of the gallery belt failed due to electrical problems. The plant is on by-pass for bottom ash, dumping it to the floor and moving it to RSPB via bobcats and loaders. They are holding flyash.

Unit 1 – coded offline for its fall outage @ 2353 on Sunday, 10/05/14. This is Day 5 of the outage; scheduled end date is 10/18/14.

New plates with pre-drilled holes, to replace floors in modules 1-5 and 1-6 at the baghouse, did arrive yesterday. The plan to weld thimbles to the plates outside the unit did not work. The plates began to warp from the heat. Now the thimbles will be welded out in place, inside the unit.

The steam drum will be inspected today. An FM Global inspector, Richard Mork, is on site

Unit 2 – is online at a set point of 170,000 pounds of steam per hour. Economizer outlet temp is 546 F. Baghouse pressure differential is 7.0". UFA temp is 220 F.

Unit 3 – is online at a set point of 170,000 pounds of steam per hour. Economizer outlet temp is 543 F. Baghouse pressure differential is 11.0". UFA temp is 244 F.

Opacity has been running a little high. It was 3.0 this morning. I have not seen a plume. GCS has 2 modules isolated for inspection and bag replacement, if necessary. This is the reason for the higher baghouse DP today.

TG 1 - is online at reduced load due to the boiler 1 fall outage.

TG 2 – is on line at reduced load due to unit 3 running at reduced load.

Waste Forecast - There is no waste returning from landfill today due to the unit 1 fall outage, and there probably will be none returning throughout the outage.

Elwyn noted that the plant should be able to keep up with normal deliveries for the next week. By next weekend, though, there could be issues. Hopefully the unit 1 outage finishes early.

Balance of Plant –

Chris S and I still need to evaluate info received from Mack on grapple re-builds before decisions are made on grapple repairs/replacements.

Chuck noted that he has received 1 quote for the drive shaft of the cooling tower cell 3 fan. The price is \$4,800 with a 3-week delivery. GCS is ordering 2 shafts, so that there will be a spare in the warehouse.

Cleaning – Bypassing ash is creating the mess you would normally expect. GCS is doing a good job keeping it localized.

Flyash was pouring out of the pug mill doors this AM.

Gaffin is still on site with their vac truck assisting in cleaning activities.

Maintenance

Chris S reports the following GCS Maintenance activities:

- Repairing V 2; at first this was thought to be a motor failure. Russ said that he megger tested the motor and doesn't think that was it. He has found a conduit completely corroded in half at a junction box. E&I is trouble shooting.
- Supporting boiler 1 fall outage work; repairing hydraulic leaks, all grate bars, comp plates, and division blocks have been removed. Measurements are being taken today. The wear pattern on the sides looked normal. It appears as if the grates were moving square with the support structure. Matrix continues work on re-plating the feed hopper.
- Performing a PM on the ID fan
- Pull the FD fan motor; both fan bearings are being replaced. Chuck reported that there was misalignment. GCS is looking for a new base plate, but may have to mill the existing one.
- Blowing soot.
- TSI and DCR continue installing level detectors and rod out ports as part of the baghouse hoppers project.
- Still investigating hot spots found on the cooling tower cell 2-fan motor/electrical supply. Russ' E&I group is busy in other areas of the plant today, and have not been able to get to this problem
- Performing daily CEMS PM's.
- Continuing to perform calibrations on the unit 2 instruments. Three LDW and 1 GRL employees are on site to assist.
- Atlas Copco installed new coolers on A compressor. It is back in service. Atlas Copco will have to return in November to perform PM work.

- Trane continues installing the new 15-ton AC unit in MCC Room 3.
- The liner plate of VC 1 has separated at a weld seam. GCS has a complete new liner, but is weighing the options of making a repair vs. a replacement. It appears as if they will replace the liner plate. There was a discussion in the morning meeting re: weld overlay for these liner plates. I have seen an alloy put on these liner plates that greatly increased the life. I will research, and hopefully be able to let all know what that alloy was.
- Semco is performing PM's on the baghouse screw conveyors; measuring the flights, checking couplings, hangers, and bearings.

The following contractors are working on site today and logged in at the CR:

- PPM – (22) on days –cleaning, Maintenance support, outage support
- PPM – (10) on night shift
- Bales Security (2) – days and nights
- Semco – (10) baghouse dampers, screw conveyors
- MJM – (2) electrical support
- DCR – (7) – (5) are on temporary structural repairs @ elevation 46' 8" – (2) are working through TSI on baghouse rod out ports & instrumentation ports
- Safeway (1) – scaffold
- NIC (2 on days, 2 last night) – UT
- Matrix (3 + 5 on nights) – unit 1 boiler outage work, feed hopper re-plating
- Maxim, formerly Pogany (15 on days, 12 last night) –grate work
- Trane (1) – MCC Room 3 AC unit
- GRL (1) – instrument cals
- LDW (3) – instrument cals
- TSI (3) – baghouse hopper project

(101) Total Contractors working on site today

General Comments:

There will be a unit 1 fall outage meeting every day at 1500, during the outage. The meetings will be held in the Classic Admin Bldg. All are invited to attend.

Pinellas WTE Daily Report

Edition: 209 - 10.13.14

Date of Report: Monday, 10/13/14

Tons Received: 0 on Sunday, 10/12/14 + 0 from landfill

Tons Processed: 2,250 on Sunday, 10/12/14

Pit Level: 5,651 tons @ midnight on 10/12/14

Weather: mostly sunny, hot, breezy - 20% chance of rain - high 92 - low 74

Boiler 1 Steam Flow set point (lbs/hr): Offline for fall outage

Boiler 2 Steam Flow set point (lbs/hr): 200,000

Boiler 3 Steam Flow set point (lbs/hr): 225,000

TG 1 Power Produced (MW-Hrs): 546 (daily gross 10/12/14)

TG 2 Power Produced (MW-Hrs): 538 (daily gross 10/12/14)

Net Power Exported (MW-Hrs): 894 (net for 10/12/14)

Safety:

No accidents reported throughout the weekend.

I reported that there was a piece of loose lagging on the unit 3 economizer roof flapping in the breeze. Rob was going to take a look, and have it removed.

Environmental Compliance:

No exceedances reported throughout the weekend.

Operations:

All major equipment was in service throughout the weekend, excluding unit 1, which is in its fall outage.

Bay 5 in the pit was rotated over the weekend.

Unit 1 – coded offline for its fall outage @ 2353 on Sunday, 10/05/14. This is Day 8 of the outage; scheduled end date is Saturday, 10/18/14.

All work seems to be going well and either on schedule, or slightly ahead of schedule. The grate measurements and inspections were good. The grates should be back together today with functional testing starting soon after. The feed hopper re-plating is going well. The VC 1 liner plate was being arc-gouged out this morning. Chris Neu noted that more shield work was found in the 3rd pass than anticipated.

The SCAH coils were tested and leaks were found in 3 of the 14 coils. All leaks were found in upper coils, and all leaks were near the header. This is discouraging as all of the unit 1 coils are new, installed during the Spring Outage. The coils and their supports reportedly look good. GCS is investigating whether this is a warranty claim.

Unit 2 – is online at a set point of 200,000 pounds of steam per hour, but the load is being bumped up towards 225k. Economizer outlet temp is 571 F. Baghouse pressure differential is 10.1". UFA temp is 224 F.

Baghouse DP is high today. I asked if modules were isolated, but they are not.

Unit 3 – is online at a set point of 225,000 pounds of steam per hour. Economizer outlet temp is 593 F. Baghouse pressure differential is 13.4". UFA temp is 247 F.

Opacity has been running a little high, but was .3% this AM. GCS has 2 modules isolated for inspection and bag replacement, if necessary. This is the reason for the higher baghouse DP today.

The economizer screw shaft broke in half yesterday. It is being welded today. A new conveyor is on order and expected on site late this month.

TG 1 - is online at reduced load due to the boiler 1 fall outage.

TG 2 – is on line.

Waste Forecast - There is no waste returning from landfill today due to the unit 1 fall outage, and there probably will be none returning throughout the outage.

Elwyn noted that it will be close on having to divert waste by the weekend. He is projecting the pit (and floor storage) to be at 10,500 tons by Friday. GCS is currently stacking waste at the north and south ends of the tipping floor.

Balance of Plant –

Chuck noted that he has received several quotes for the drive shaft of the cooling tower cell 3 fan. They will be evaluated and 2 shafts purchased soon, 1 as a spare.

Cleaning – There is a pile of ash in the containment area under the filter press, and minor amounts of ash around unit 1. Other than that, the plant is relatively clean today.

Gaffin is still on site with their vac truck assisting in cleaning activities.

Maintenance

Chris S reports the following GCS Maintenance activities:

- Supporting boiler 1 fall outage work; repairing hydraulic leaks, finishing grate work.
- Matrix continues work on re-plating the #1 feed hopper.
- Performing a PM on the ID fan; Chris S noted that the bearings are being checked closely as the grease lines to the bearing were plugged.
- Both the FD fan motor and the ID fan motor are in TAW's shop for re-furbishment.
- Blowing soot.
- TSI and DCR continue installing level detectors and rod out ports as part of the baghouse hoppers project.
- Still investigating hot spots found on the cooling tower cell 2-fan motor/electrical supply. Russ' E&I group is busy in other areas of the plant, and have not been able to get to this problem
- Performing daily CEMS PM's.
- E&I Tech Gus is pulling TG tends.
- Continuing to perform calibrations on the unit 2 instruments.
- Trane is installing the new 15-ton AC unit in MCC Room 1.
- The liner plate of VC 1 has separated at a weld seam. GCS is installing a complete new liner. I am still researching an alloy to

overlay these liner plates with that greatly increases the life. I will hopefully be able to let all know what that alloy is soon. If possible, it would be good to have this overlay applied to the VC 3 liner plate scheduled to be replaced during the December common outage.

- Semco is performing PM's on the baghouse screw conveyors; measuring the flights, checking couplings, hangers, and bearings.
- Test firing the unit 2 burners.
- Repairing the B slaker grit screen.
- Repairing a small leak on the diesel fuel tank.

The following contractors are working on site today and logged in at the CR:

- PPM – I could not find the PPM day shift sign in log, I assume there are (22) on days again –cleaning, Maintenance support, outage support
- PPM – (10) on night shift
- Bales Security (2) – days and nights
- Semco – (4) baghouse dampers, screw conveyors
- MJM – (2) electrical support
- DCR – (6) – (4) are on temporary structural repairs @ elevation 46' 8" – (2) are working through TSI on baghouse rod out ports & instrumentation ports
- Safeway (1) – scaffold
- Matrix (17 on day shift + 18 on nights) – unit 1 boiler outage work, tube shields, feed hopper re-plating
- Maxim, formerly Pogany (18 on days, 28 last night) –grate work
- Trane (3) – MCC Room 1 AC unit

(~131) Total Contractors working on site today

General Comments:

There will be a unit 1 fall outage meeting every day at 1500, during the outage. The meetings will be held in the Classic Admin Bldg. All are invited to attend.

Pinellas WTE Daily Report

Edition: 210 - 10.14.14

Date of Report: Tuesday, 10/14/14

Tons Received: 3,792 on Monday, 10/13/14 + 0 from landfill

Tons Processed: 2,214 on Monday, 10/13/14

Pit Level: 7,441 tons @ midnight on 10/13/14

Weather: cloudy, light rain started at 0930, harder rain forecasted for the afternoon/evening - high 89 - low 75

Boiler 1 Steam Flow set point (lbs/hr): Offline for fall outage

Boiler 2 Steam Flow set point (lbs/hr): 225,000

Boiler 3 Steam Flow set point (lbs/hr): 225,000

TG 1 Power Produced (MW-Hrs): 529 (daily gross 10/13/14)

TG 2 Power Produced (MW-Hrs): 528 (daily gross 10/13/14)

Net Power Exported (MW-Hrs): 865 (net for 10/13/14)

Safety:

No accidents reported.

Environmental Compliance:

No exceedances reported.

GCS was re-booting the DCS server this morning. This cleared the unit 3 NOx reading on the big screen in the CR; it is now showing NOx emissions

Operations:

Unit 1 – coded offline for its fall outage @ 2353 on Sunday, 10/05/14. This is Day 9 of the outage; scheduled end date is Saturday, 10/18/14.

The status of major outage work is listed below;

- The grates were run successfully last night, no problems reported. Grate work is complete.
- Scaffold is going in the furnace this AM for refractory repair.

- The glaze of solidified ash must be scraped off the refractory surface before a final scope is determined. Chris N says that worst case it will be 300 square feet of repairs.
- Scaffold is going in at the pantlegs today for repairs.
- Matrix is finishing tube shield replacements.
- ID fan bearings are being inspected and may need to be replaced, as the grease lines were found to be plugged.
- TAW inspected the FD fan base plate and rails. Materials and a contractor will be ready for the December outage, to mill or replace the base plate and install new rails. GCS is planning on inspecting the FD fan on unit 2 during its fall outage. They suspect the same work may need to be done.
- The thermocouples on the attemperators were replaced. Nozzles were inspected and found to be in good condition. Welds in the area were dye penetrant tested, no problems found.
- A hydro was performed last night and reached 600 psi. Nine new leaks were found on the steam wall at various elevations. Repairs on the steam wall are in progress.
- The new thimbles and floor have been installed in baghouse module 1-6; new bags have been installed and tensioned. The new floors and thimbles are being welded out in module 1-5. They are expected to complete tomorrow. New bags will then be installed and tensioned.
- GCS is waiting on U-bots to re-attach the loose blow down line inside the steam drum. This is a minor amount of work, but must be done before the drum is secured.
- The feed hopper re-plating continues. It is coming along well, but will run into the end of the week. There is a lot of welding to do.
- PPM is replacing the VC 1 liner plate.
- Semco is performing PM's on the baghouse double dump valves.

Unit 2 – is online at a set point of 225,000 pounds of steam per hour. It averaged 215k yesterday. Economizer outlet temp is 539 F. Baghouse pressure differential is 7.1”.

Unit 3 – is online at a set point of 225,000 pounds of steam per hour. It averaged 224k yesterday. Economizer outlet temp is 593 F. Baghouse pressure differential is 8.3”.

Elwyn noted that unit 3 may need to be explosive blasted before the start of the November 30 fall outage. Sootblowing is not keeping economizer outlet temps low enough. GCS has ordered new cams for the economizer rotary sootblowers that will allow a 270-degree blowing arc. The feeling is that the blowers are not blowing upward, and that ash is building up on the top of the economizer banks

Opacity has been running a little high, it was 1.5% this AM.

The economizer screw shaft broke in half Sunday was repaired/welded and broke again yesterday. A new conveyor is on order and expected on site late this month. Chuck said he would double check the delivery and see if it can be expedited.

TG 1 - is online at reduced load due to the boiler 1 fall outage.

There was a minor blip in the thrust-bearing temp yesterday. During the last thrust incident in early September an alarm was installed to signal any temp increase >5 degrees. Yesterday the alarm came in; the bearing temp went from 156 F to 162F. The GE rep, Alex Murphy, was called. He was not concerned and said he had seen minor blips on the machine at low load. No difference in axial movement was seen and there was no change in vibration readings.

TG 2 – is on line.

Waste Forecast - There is no waste returning from landfill today due to the unit 1 fall outage, and there will be none returning throughout the outage.

Elwyn has changed his forecast on having to divert waste. He is not calling for a diversion, yet, but thinks it is very possible before the end of the week.

Balance of Plant –

Chuck noted that the phone in the crane cab is out. He is calling someone to investigate.

Cleaning - The plant is relatively clean today.

Gaffin is still on site with their vac truck assisting in cleaning activities.

Maintenance

Besides the unit 1 fall outage activities listed above, Chris S reports the following GCS Maintenance activities:

- Blowing soot.
- TSI and DCR continue installing level detectors and rod out ports as part of the baghouse hoppers project.
- Still investigating hot spots found on the cooling tower cell 2-fan motor/electrical supply. Russ' E&I group is busy in other areas of the plant, and have not been able to get to this problem
- Performing daily CEMS PM's.
- E&I are re-booting the DCS server.
- Trane continues installation of the new 15-ton AC unit in MCC Room 1.
- Repairing a hydraulic leak on one of the loaders.
- Repairing the unit 3-economizer screw conveyor.
- E&I is tweaking the new level detectors at the pug mills.
- Re-installing the #2 pug mill rotary feeder; the shaft had broken.
- Repairing a leak on a unit 3-sootblower steam line.

The following contractors are working on site today and logged in at the CR:

- PPM – (20) on days –cleaning, Maintenance support, outage support
- PPM – (11) on night shift
- Gaffin (4) - cleaning
- Bales Security (2) – days and nights
- Semco – (9) baghouse dampers, screw conveyors, double dump valves
- MJM – (2) electrical support
- DCR – (7) – (5) are on temporary structural repairs @ elevation 46' 8" – (2) are working through TSI on baghouse rod out ports & instrumentation ports
- Safeway (12) on day shift – scaffold
- Safeway (3) – on night shift

- Matrix (17) on day shift– unit 1 boiler outage work, tube shields, feed hopper re-plating
- Matrix (18) on night shift
- Maxim, formerly Pogany (11) on days –grate work
- Maxim (15) on night shift
- TEI (1) – baghouse hopper project
- Trane (3) – MCC Room 1 AC unit

(135) Total Contractors working on site today

General Comments:

There will be a unit 1 fall outage meeting every day at 1500, during the outage. The meetings will be held in the Classic Admin Bldg. All are invited to attend.

Sam noted that the County received a preliminary report from FM Global's inspection last Friday, and that it was favorable.

Pinellas WTE Daily Report

Edition: 211 - 10.15.14

Date of Report: Wednesday, 10/15/14

Tons Received: 3,299 on Tuesday, 10/14/14 + 0 from landfill

Tons Processed: 2,159 on Tuesday, 10/14/14

Pit Level: 8.545 tons @ midnight on 10/15/14

Weather: Cloudy, light rain during the evening and early morning, rain ceased by 0600 am. Cooler weather forecasted for the afternoon/evening (high 81 -- low 68).

Boiler 1 Steam Flow set point (lbs/hr): Offline for fall outage

Boiler 2 Steam Flow set point (lbs/hr): 225,000

Boiler 3 Steam Flow set point (lbs/hr): 225,000

TG 1 Power Produced (MW---Hrs): 554 (daily gross 10/14/14)

TG 2 Power Produced (MW---Hrs): 532 (daily gross 10/14/14)

Net Power Exported (MW---Hrs): 894 (net for 10/14/14)

Safety:

No accidents reported. Minor issues noted by Robert included a new section of diamond deck plate which replaced a deteriorated section of grating on the north side of Boiler No. 3. The repair resulted in a slippery and uneven surface with a 1" drop (tripping hazard). This issue will be resolved today.

Environmental Compliance:

No exceedances reported. Purchase order for new shutters for the opacity monitors was issued yesterday. Rain knocked out the Fabric Filter No. 2 differential pressure transmitter yesterday, suspected problem is corroded conduit. Opacity readings were 0.5 for Unit 2 and 1.1 for Unit 3 (recorded around noon).

Operations:

Unit 1 – coded offline for its fall outage @ 2353 on Sunday, 10/05/14. This is Day 10 of the outage; scheduled end date is Saturday, 10/18/14.

The status of major outage work is listed below;

- Scaffold is being removed from the 2nd and 3rd passes today. Scaffolding in the furnace will remain for refractory repairs.
- ID and FD fan motors were in Tampa's TAW repair shop for cleaning, inspection, and bearing replacements. The motors were returned today for installation and re-wiring.
- A hydro was performed last night, with one additional leak found in a crossover tube and successfully repaired.
- GCS inspected all modules in Baghouse No. 1 last night to establish the count of original thimbles which still remain to be replaced (in future outages).
- The feed hopper re-plating continues with approximately six welders observed to be working in the morning. Abrasion resistant plate is being installed. Fire water is being sprayed below the work area into the refuse pit every 8-10 minutes as a precaution.
- New thimbles are being installed in baghouse compartment 1-5.
- Feed table linkages and bearings under feed table were all lubricated today. There were several areas of delaminated steel observed in the roof above this area which will need to be addressed in the future.

Unit 2 – online at a set point of 225,000 pounds of steam per hour. It averaged 225k yesterday. Economizer outlet temp is 560 F. Baghouse pressure differential is not known due to instrument failure (suspected moisture due to rainfall). Soot blowing will likely be performed today.

Unit 3 – online at a set point of 225,000 pounds of steam per hour. It averaged 225k yesterday. Economizer outlet temp is 577 F. Baghouse pressure differential is 7.6". Soot blowing will likely be performed today.

TG 1 – online at reduced load (19.3 MW) due to the Boiler 1 fall outage.

Minor blip in the thrust bearing temperature yesterday has subsided. installed to signal any temp increase >5 degrees. The bearing temperature ranged from 148-152 (observed at noon).

TG 2 - on line (19.4 MW recorded at noon).

Waste Forecast - There is no waste returning from landfill today due to

the Unit 1 fall outage, and there will be none returning throughout the outage. No diversion is planned for today (typically a light delivery day). Elwyn noted that a level 3 diversion will be scheduled for tomorrow between 0700 and noon.

Balance of Plant

1. The support assembly for ash expeller No. 1 was being welded to an adjacent vertical beam on both sides of each discharger in the general area under the horizontal drive shaft. Chris S. decided to reinforce this area after observing a broken structural weld and movement in the support system recently.
2. Repairs were being made to flow turning vanes in crossover duct at inlet to SDA No. 1.
3. Installation of several new sections of AR plate liner commenced today on VC-1 near ash expeller No.1. Only one section of plate remains to be installed.

Cleaning - The plant is relatively clean today. I have not been at the plant for several months and was impressed with the lack of ash on the concrete floor. There was a crew cleaning the accumulated ash from the U-trenches under FF Unit No. 1 in the morning. Gaffin is still on site with their vac truck assisting in cleaning activities.

Maintenance

Besides the unit 1 fall outage activities listed above, the following GCS Maintenance activities are being performed today:

- TSI and DCR continue installing level detectors and rod out ports as part of the baghouse hoppers project.
- There was a torn belt on main inclined conveyor inside of RPSB that was being repaired due to a partial tear at one of the belt splices. Suspected cause of the tear may have been due to a buildup of hard ash at the bottom of the conveyor, which may have caused the protruding belt splice to catch and tear. The torn area was approximately 24" long.
- GCS maintenance staff was exploring options for removing hardened grease in lubrication lines to inlet vane damper bearings. Very tight clearances between the fan housing surfaces

will make this task quite difficult. This work will need to be completed during a future outage. The dampers were stroked for several minutes and the motion was observed to be smooth.

- TAW and another contractor were invited to quote replacement of No. 1 FD fan base plate / rails; possibly with use of stainless steel rails (aka sole plates). Similar work may need to be done for unit No. 2 based upon upcoming outage inspection. None of this work will be performed during this outage.

The following contractors are working on site today and logged in at the CR:

- Zampell (10) on day shift and (9) on night shift (refractory demo and repairs)
- PPM – (20) on days – cleaning, maintenance support, outage support
- PPM – (11) on night shift
- Gaffin (1) --- cleaning
- Bales Security (2) – days and nights
- Semco – (6) baghouse dampers, screw conveyors, double dump valves
- MJM – (2) electrical support
- DCR – (7) punchlist structural repairs and baghouse rod out and instrumentation ports
- Safeway (12) on day shift – scaffold
- Safeway (3) – on night shift
- Matrix (17) on day shift– unit 1 boiler outage work, tube shields, feedhopper re-plating
- Matrix (28) on night shift
- Maxim, formerly Pogany, (11) on days – grate work and boiler repairs
- Maxim (6) on night shift

(145) Total Contractors working on site today

General Comments:

There will be a unit 1 fall outage meeting every day at 1500, during the outage. The meetings will be held in the Classic Admin Bldg. All are invited to attend.

Sam noted that the County has started to survey the pavements in

need of repair in the WTE parking lot and access driveways intersecting with the service road which accumulate “birdbath” pools of rainwater.

Pinellas WTE Daily Report

Edition: 212 - 10.16.14

Date of Report: Thursday, 10/16/14

Tons Received: 2,468 on Wednesday, 10/15/14 (level 3 bypass until noon today)

Tons Processed: 2,040 on Wednesday, 10/15/14

Pit Level: 8.906 tons @ midnight on 10/16/14

Weather: Scattered clouds but mostly clear; High of 83 - Low of 66

Boiler 1 Steam Flow set point (lbs/hr): Offline for fall outage

Boiler 2 Steam Flow set point (lbs/hr): 225,000 (avg. of 208,000)

Boiler 3 Steam Flow set point (lbs/hr): 225,000 (avg. of 217,000)

TG 1 Power Produced (MW---Hrs): 512 (daily gross 10/15/14)

TG 2 Power Produced (MW---Hrs): 514 (daily gross 10/15/14)

Net Power Exported (MW---Hrs): 828 (net for 10/15/14)

Safety:

No accidents reported. There was a minor incident where the temporary maintenance lights in the boiler were momentarily deenergized due to someone wanting to use the drop cord serving those lights. Power was promptly restored with Robert following up with the respective supervisor on proper methods to tie into power circuits.

Robert reported that all contractors are doing a good job in assuring that their employees are following GCS's safe work practices.

The plant's LOTO software program was updated last week and will facilitate better integration of safety issues into maintenance and operational work orders as well as better tracking of confined space and other permit issuances.

The plant is considering installing a washing machine in the old shower area; however, due to safety concerns, another access/exit door may be needed. Robert to investigate.

Environmental Compliance:

No exceedances reported.

Operations:

Unit 1 – coded offline for its fall outage @ 2353 on Sunday, 10/05/14.
This is Day 10 of the outage; scheduled end date is Saturday, 10/18/14.

The status of major outage work is listed below;

- Scaffolding in the furnace will remain for refractory repairs.
- Zampel is applying 1.5" to 2" of SC75 refractory to the front and rear bullnose areas and will complete all work on Friday.
- ID and FD fan motors are being aligned, coupled, and electrically connected today.
- The last hydro (performed just after noon today) revealed seven weeper leaks (3 each on the front and rear walls near studs and one small leak where the 1st and 2nd pass meet).
- The feed hopper re-plating continues with approximately six welders observed to be working in the morning. Abrasion resistant plate is being installed. Hopper work will be completed on Friday.
- New thimbles are being installed in baghouse compartment 1-5.
- Grate work has been completed.
- There were three failed coils in the SCAH. Plant to contact AirFin for warranty considerations. The Plant will replace the defective coils with 3 rebuilt coils on hand.

Unit 2 – online at a set point of 225,000 pounds of steam per hour.
Economizer outlet temp is 583 F.

Unit 3 – online at a set point of 225,000 pounds of steam per hour.
Economizer outlet temp is 533 F. Soot blowing will likely be performed today.

TG 1 – online at reduced load (22 MW) due to the Boiler 1 fall outage.

Plant Control Room Operators are logging TG-1 and TG-2 thrust bearing temperatures and corresponding steam loads each hour. Highest TG-1 thrust bearing temperature was 155° F on pad 3 of the active face.

TG 2 - on line (22 MW recorded at noon).

Waste Forecast - There is no waste returning from landfill today due to the Unit 1 fall outage, and there will be none returning throughout the outage. Elwyn noted that a level 3 diversion was implemented today from 0700 to noon.

Balance of Plant

1. The support assembly for ash expeller No. 1 was being welded to an adjacent vertical beam on both sides of each discharger in the general area under the horizontal drive shaft. Chris S. decided to reinforce this area after observing a broken structural weld and movement in the support system recently.
2. Repairs were being made to flow turning vanes in crossover duct at inlet to SDA No. 1.
3. Installation of several new sections of AR plate liner commenced today on VC-1 near ash expeller No.1. Only one section of plate remains to be installed.

Cleaning - The plant is relatively clean today. Contractor and GCS employees acknowledged the significant improvements in plant cleanliness and lighting.

Maintenance

Besides the unit 1 fall outage activities listed above, the following GCS Maintenance activities are being performed today:

- TSI and DCR have completed installation of rod out ports and ash level detector holders on all 12 hoppers on Number 3.
- Thimble installations on Number 1 Baghouse (chambers 5 & 6) have been completed.
- New 15T HVAC systems supporting MCC Rooms 1 & # have been installed and commissioned.
- #1 SDA & FF instrumentation calibrations
- Unit 1 (offline) instrument calibrations
- Disconnected instrumentation on #1 South Burner to accommodate replacement of slide gate
- Repairing limit switches on #1 Feed Chute
- Annual IR testing was recently performed on the plants electrical systems. This testing revealed that the contractor for

the #2 Cooling Tower Motor (200hp) was exhibiting abnormally high temperatures. A new contactor has been ordered with delivery expected in two weeks. The tests also including a survey of the Switchyard equipment with no aberrant conditions discovered.

- Burner PM's have been completed.
- Cams to be installed on #3 sootblowers 9 through 13.
- #3 Economizer screw repaired (again).

On Site Contractors and Support Personnel

The following contractors are working on site today and logged in at the CR:

- Zampell (10) on day shift and (8) on night shift (refractory demo and repairs)
- PPM – (18) on days – cleaning, maintenance support, outage support
- PPM – (4) on night shift
- Bales Security (2) – days and nights
- Semco – (6) baghouse dampers, screw conveyors, double dump valves
- DCR – (6) punchlist structural repairs and baghouse rod out and instrumentation ports
- Safeway (7) on day shift – scaffold
- Safeway (1) – on night shift
- Matrix (21) on day shift– unit 1 boiler outage work, tube shields, feedhopper re-plating
- Matrix (22) on night shift
- Maxim (4) on night shift
- TSI (1) baghouse
- GRL (1) short survey of planned electrical work
- Jason Crum (4) #1 boiler grease clean-up

(115) Total Contractors working on site today

General Comments:

There will be a unit 1 fall outage meeting every day at 1500, during the outage. The meetings will be held in the Classic Admin Bldg. All are invited to attend.

Pinellas WTE Daily Report

Edition: 213 - 10.17.14

Date of Report: Thursday, 10/17/14

Tons Received: 1,622 on Thursday, 10/16/14 with level 3 diversion of 1,300t from 0700-1300hrs.

Tons Processed: 2,042 on Thursday, 10/16/14

Pit Level: 7,985 tons @ midnight on 10/17/14

Weather: Sunny with highs around 80° and a low of 69°. Northeast winds around 5 mph shifting to the northwest in the afternoon.

Boiler 1 Steam Flow set point (lbs/hr): Offline for fall outage

Boiler 2 Steam Flow set point (lbs/hr): 225,000 (avg. of 205,000)

Boiler 3 Steam Flow set point (lbs/hr): 225,000 (avg. of 220,000)

TG 1 Power Produced (MW---Hrs): 506 (daily gross 10/16/14)

TG 2 Power Produced (MW---Hrs): 524 (daily gross 10/16/14)

Net Power Exported (MW---Hrs): 842 (net for 10/16/14)

Safety:

No accidents reported.

A Matrix “hole watch” employee was observed to be sleeping by the night shift safety coordinator and was discharged from the job.

A GFCI (ground fault current interrupter) circuit which feeds a Unit camera was found to be inoperative. The plant will investigate and will assess whether a this level of protection is warranted for a circuit which is not accessible for contractors to tie into.

A bee hunter has been called in to look into possible bee infestation in the maintenance building.

Environmental Compliance:

No exceedances reported.

Opacity on Units 2 and 3 were 0.7 and 1.8% respectively.

Operations:

Unit 1 – coded offline for its fall outage @ 2353 on Sunday, 10/05/14. This is Day 11 of the outage; scheduled end date is Saturday, 10/18/14.

The status of major outage work is listed below;

- Post outage clean-up had commenced on all Unit 1 platforms.
- ID and FD fan motors are being aligned, coupled, and leads made up today.
- The last hydro (performed 0614hrs.) was successful.
- There were three coils replaced in the SCAH. Plant may try to pressurize the coils to check for leaks prior to securing the air heater.

Unit 2 – online at a set point of 225,000 pounds of steam per hour. Economizer outlet temp is 582°F.

Unit 3 – online at a set point of 225,000 pounds of steam per hour. Economizer outlet temp is 552°F. Soot blowing will likely be performed today.

TG 1 – online at reduced load (23 MW) due to the Boiler 1 fall outage.

Plant Control Room Operators are logging TG-1 and TG-2 thrust bearing temperatures and corresponding steam loads each hour. Highest TG-1 thrust bearing temperature was 154° F on pad 3 of the active face.

TG 2 - online (21 MW recorded before noon). Highest thrust bearing temperature was documented at 168° on the active face.

Waste Forecast - There is no waste returning from landfill today due to the Unit 1 fall outage, and there will be none returning throughout the outage.

Balance of Plant

1. Baghouse 2 had a ΔP of 7.6
2. Baghouse 3 had a ΔP of 7.5
3. Repairs were being made to flow turning vanes in crossover duct

at inlet to SDA No. 1.

4. Installation of several new sections of AR plate liner commenced yesterday on VC-1 near ash expeller No.1. Work will be completed today.

Cleaning - The plant has develop a nice consistency of being relatively clean with little to no ash on the floor in the Discharger, SDA, and Baghouse areas.

Maintenance

Besides the unit 1 fall outage activities listed above, the following GCS Maintenance activities are being performed today:

- TSI and DCR have completed installation of rod out ports and ash level detector holders on all 12 hoppers on Number 3 and most hoppers on Baghouse 1. Installation of the poke holes and level probe holders for Unit 2 will commence during the upcoming scheduled outage. UT work on hoppers where the insulation and lagging has been removed will begin this Monday.
- Recirc Pps are being PM'd today as are the burner systems.
- #1 SDA & FF instrumentation calibrations
- Unit 1 (offline) instrument calibrations
- Limit switches on #1 Feed Chute are functional.
- Cams which allow greater rotational operations have been installed on Unit 3 sootblowers 9 through 13. The modified sootblowers will be tested later today. The Plant expects to follow up with similar improvements for Units' 1 & 2 sootblowers.
- The cooling water Pp motor is being PM'd today.
- A third contractor is at the plant today to provide a cost and work scope estimates to effect repairs on the fans' foundations.
- Number 2 feed pump vent pipe will be repaired today.

On Site Contractors and Support Personnel

The following contractors are working on site today and logged in at the CR:

- Zampell (6) refractory application and clean-up
- PPM – (17) on days – cleaning, maintenance support, outage support

- PPM – (10) on night shift
- Bales Security (2) – days and nights
- Semco – (3) baghouse dampers, screw conveyors, double dump valves
- DCR – (7) punchlist structural repairs and baghouse rod out and instrumentation ports
- Safeway (20) on day shift – scaffold
- Safeway inspector (1) – on night shift – one on day shift
- Matrix (19) on day shift– unit 1 boiler outage work, tube shields, feedhopper re-plating
- Matrix (21) on night shift
- Epperson (2)
- Sims Crane (1) setting FDF
- Atlas Compressor (1) – compressor PM
- Coverall (2) -

(115) Total Contractors working on site today

Pinellas WTE Daily Report

Edition: 214 - 10.19.14

Date of Report: Monday, 10/20/14

Prepared by: Paul Hauck

Tons Received: 0 on Sunday, 10/19/14 + 0 from landfill

Tons Processed: 2,988 on Sunday, 10/19/14

Pit Level: 5,665 tons @ midnight on 10/19/14 (5,000 tons @ 0500 Monday)

Weather: Clear, weather forecasted for afternoon/evening (high 84 - low 69)

Boiler 1 Steam Flow set point (lbs/hr): 180,000

Boiler 2 Steam Flow set point (lbs/hr): 180,000

Boiler 3 Steam Flow set point (lbs/hr): 180,000

Note: Steam rates will be increased during the day

TG 1 Power Produced (MW---Hrs): 1,065 (daily gross 10/19/14)

TG 2 Power Produced (MW---Hrs): 504 (daily gross 10/19/14)

Net Power Exported (MW---Hrs): 1,357 (net for 10/19/14, equivalent to 454 kWh/ton of waste processed)

Safety:

No accidents reported. According to Robert, only one minor first aid (cut finger) occurred during the fall outage.

Environmental Compliance:

No exceedances reported by Elwyn. Opacity readings were 0.3, 0.5, and 1.4 for Units 1, 2 and 3.

Operations:

Unit 1 – online at a set point of 180,000 pounds of steam per hour. Economizer outlet temp is 443 F. Baghouse pressure differential is 7.4 inches.

The status of major post-outage work is listed below:

- FD fan #1 inboard bearing is being cooled with compressed air.
Reportedly, there is a 20 F disagreement between RDT and infrared

thermometer readings for this bearing. GCS will investigate this condition today and re-evaluate the need for air cooling.

- Insulation and lagging is being replaced on duct work for ID fan #1.

Unit 2 – online at a set point of 185,000 pounds of steam per hour. Economizer outlet temp is 565 F. Baghouse pressure differential is 7.0 inches. Soot blowing will likely be performed today.

Unit 3 – online at a set point of 186,000 pounds of steam per hour. Economizer outlet temp is 568 F. Baghouse pressure differential is 7.6". Soot blowing will likely be performed today.

TG 1 – online at reduced load (40.2 MW recorded at 0700). Greg Mester visited the plant over the weekend and reportedly found nothing abnormal with TG-1.

TG 2 - on line at reduced load (18.4 MW recorded at 0700). Greg Mester visited the plant over the weekend and reportedly found nothing abnormal with TG-2.

Waste Forecast - There is no waste returning from landfill today due to the upcoming Unit 2 fall outage, and there will be none returning throughout the outage. No diversion is planned for today (typically a light delivery day). Elwyn noted that the goal is to essentially be out of waste just prior to the Unit #2 outage. No pit rotation was performed over this past weekend.

Balance of Plant

1. The north air compressor went out of service on Friday (10/17/14) at 1700 hours. A portable diesel powered air compressor was brought in by Sunbelt on Saturday to help with backup duties. Reportedly, there is a leak in the air cooler which will need to be replaced.
2. The inclined belt on C-1 conveyor required tensioning adjustment in the early morning. Considerable amount of bottom ash was stored on vibrating conveyors and grates. The beds are being thinned out this morning to remove the excess accumulated ash.
3. There were three steam coiler air heater units removed from SCAH # 1 due to leaks in the headers. The units are stored outside near the Conax storage units. GCS is pursuing a warranty claim on these units which were installed during the spring outage.

Cleaning - The plant inside the wind walls remains relatively clean today. There is a light coating of ash on the pavement north of the switchyard, in spite of the evidence that a vacuum truck had cleaned other portions of the interior driveways earlier.

Maintenance

The following GCS Maintenance activities are being performed today:

- TSI and DCR continue installing level/draft detectors and rod out ports on FF unit #2 as part of the baghouse hoppers project.
- Access door on pugmill #1 will be repair/replaced.
- Grease lines on VC bearings will be replaced.
- Carbon brushes will be adjusted on TG-1 and TG-1 as part of normal PM.
- Trouble shooting of OFA damper for Unit 1 to allow system to operate in automatic control.
- Trouble shooting of SDA #2 slide gate to allow the unit to operate

General Comments:

1. A new warehouse clerk started to work today for GCS.
2. GCS will arrange for a roll off container to allow old grate bars to be removed from the site and sold as scrap.

Pinellas WTE Daily Report

Edition: 214 - 10.21.14

Date of Report: Tuesday 10/22/14

Prepared by: Paul Hauck

Tons Received: 3,877 on Monday, 10/21/14 + 0 from landfill

Tons Processed: 2,869 on Monday, 10/21/14

Pit Level: 6,692 tons @ midnight on 10/19/14 (5,000 tons @ 0500 Monday)

Weather: Clear, weather forecasted for afternoon/evening (high 86 - low 70)

Boiler 1 Steam Flow set point (lbs/hr): 225,000

Boiler 2 Steam Flow set point (lbs/hr): 225,000

Boiler 3 Steam Flow set point (lbs/hr): 225,000

TG 1 Power Produced (MW---Hrs): 1029(daily gross 10/21/14)

TG 2 Power Produced (MW---Hrs): 475(daily gross 10/21/14)

Net Power Exported (MW---Hrs): 1293(net for 10/21/14)

Safety:

No report. However, I did observe that the emergency stop safety cord was broken and lying on the grating along the upper portion of the inclined ash conveyor (C-1).

Environmental Compliance:

No report.

Operations:

Unit 1 – online at a set point of 225,000 pounds of steam per hour Economizer outlet temp is 483 F.

The status of major post-outage work is listed below:

- FD fan #1 inboard bearing is no longer being cooled with compressed air.
- Insulation and lagging is being replaced on duct work for ID fan #1.

Unit 2 – online at a set point of 225,000 pounds of steam per hour Economizer outlet temp is 591 F.

Unit 3 – online at a set point of 225,000 pounds of steam per hour Economizer outlet temp is 544 F.

TG 1 – online at full load (51.3 MW recorded at 1200)

TG 2 - on line at full load (21.8 MW recorded at 1200)

Waste Forecast – No report.

Balance of Plant

1. The temporary air compressor remains on-site to serve as a backup for the North compressor, which went out of service on Friday (10/17/14) at 1700 hours. Reportedly, there is a leak in the air cooler which will need to be replaced. No estimate on the cost /schedule for repairs of this component. Chris Schukert mentioned in the monthly operations meeting that the replacement part may originate from Belgium.

Cleaning

1. The plant inside the wind walls remains very clean today.
2. The interior of the ash building has several areas in need of a thorough cleaning of accumulated ash (around grizzly scalpers, magnet and ECS system, and along inclined conveyors).

Maintenance

The following GCS Maintenance activities are being performed today:

1. TSI and DCR continue installing level/draft detectors and rod out ports on FF unit #2 as part of the baghouse hoppers project. As of noon today, all of the rod out ports and draft ports were installed on Fabric Filter Units No. 1 and No. 3, and four of twelve compartments on Fabric Filter Unit NO. 2

General Comments:

1. Otis elevator was on-site performing the 5 year testing.
2. The following contractors were logged in at the control room for Tuesday:
 - a. Coverall (2) - cleaning of 3rd floor (1 hour)
 - b. Chem-Aqua (2) - water treatment
 - c. Safeway (5) - insulation restoration on ID Fan No. 1

- d. Otis (3) - Five year maintenance (3 hours)
- e. TSI (4) – Insulation and heater pads on Fabric Filters
- f. Semco (3) – Baghouse preventive maintenance
- g. DCR (4) – Ports in Fabric Filter units
- h. MOR PPM (12)

End of report

Pinellas WTE Daily Report

Edition: 216 - 10.22.14

Date of Report: Thursday, 10/22/14

Tons Received: 3,533 on Tuesday, 10/22/14

Tons Processed: 3,173 on Tuesday, 10/22/14

Pit Level: 7,220 tons @ midnight on 10/21/14

Weather: Partly cloudy, highs in the mid-80s; lows in the mid-60s; winds out of the north and northeast at 5 to 15 mph.

Boiler 1 Steam Flow set point (lbs/hr): 225,000 (avg. 222,000)

Boiler 2 Steam Flow set point (lbs/hr): 225,000 (avg. of 219,000)

Boiler 3 Steam Flow set point (lbs/hr): 225,000 (avg. of 220,000)

TG1 Power Produced (MWHrs): 1,180 (dailygross 10/21/14)

TG 2 Power Produced (MWHrs): 527 (daily gross 10/21/14)

Net Power Exported (MWHrs): 1491 (net for 10/21/14)

Safety:

No accidents reported. 525 Days without a lost time accident. SEMCO is installing safety netting on the crane handrails.

Also of note, some time ago, GCS added a safety requirement that high visibility vests are to be worn while visiting or working on the charging deck. This is an appropriate enhancement as it provides greater awareness of personnel to refuse crane operators.

Environmental Compliance:

No exceedances reported.

Opacity on Units 1, 2 and 3 were 0.6, 0.6 and 1.3% respectively.

The new opacity monitor on Unit 3 is not performing consistently so Spectrum was called and will look into the matter later today. The problem is thought to be insufficient purge air.

Operations:

Unit 1 –online at a set point of 225,000 pounds of steam per hour.
Economizer outlet temp is 480° F.

Unit 2 – online at a set point of 225,000 pounds of steam per hour.
Economizer outlet temp is 588°F. Sootblowers (SB) will be operated today. Threshold for initiating SB operations is 550°F.

Unit 3 – online at a set point of 225,000 pounds of steam per hour.
Economizer outlet temp is 557°F. Sootblowers will be operated today.

TG 1 – online at 50MW. Thrust bearing temperatures are running at 184° F with the machine operating at full capacity. The increase from recently observed temperatures is due to the additional steam loading on the turbine. The thrust bearings are running substantially cooler compared to similar loading prior to the last thrust bearing incident. Vacuum is running at 26.5” Hg.

TG 2 - online at 24 MW recorded before noon. Highest thrust bearing temperature was observed to be 171° F. Vacuum is running at 26.2” Hg.

Waste Forecast – No report.

Balance of Plant

1. Baghouse 1 had a ΔP of 6.0
2. Baghouse 2 had a ΔP of 7.7 (will recheck after sootblowing)
3. Baghouse 3 had a ΔP of 8.4 (will recheck after sootblowing)

Maintenance

The following GCS Maintenance activities are being performed today:

- TSI and DCR have completed installation of rod out ports and ash level detector holders on all 12 hoppers on Numbers 1 and 3 Baghouse; similar installations for Baghouse 2 should be completed by weeks end. Ultrasonic testing (UT) commenced on Monday; results have not been published but will report on general findings in tomorrow’s Daily Report.
- The Ash Dischargers (expellers) are being PM’d today.

- The rotor on #2 Pug Mill has been removed due to a bent shaft. The cause was attributed to an alignment tool having been left in the pug mill during operations. Rotor will be replaced.
- The cell 3 Cooling Tower driveshaft (between the motor and fan gearbox) is anticipated to be installed today.
- Weld supports for new receptacles in the RSPB are being installed. The original electrical receptacle have deteriorated due to corrosion from fugitive ash.
- Crane PMs are being performed today.
- No. 2 SB pressure control valve is not functioning properly and will be repaired today.
- Baghouse dampers found to be mis-operating (identified from the nightly Fabric Filter inspection PM) are being addressed today.
- New Pug Mill level detectors are working well.
- DSC data is undergoing weekly download today.
- Otis elevator inspection revealed four deficiencies: absence of fire instructions and capacity signage, need for an additional electrical receptacle in the elevator's control room and an inoperable phone (communications) system in the elevator.

On Site Contractors and Support Personnel

The following contractors are working on site today and logged in at the CR:

- PPM – (12) on days – cleaning and maintenance support
- SEMCO – (3) baghouse
- DCR – (8) baghouse rod out and instrumentation ports
- Safeway (5) scaffold, insulation and lagging
- Safeway inspector (1) – on night shift – one on day shift
- Matrix (3) outage prep, tool clean-up, and staging
- Coverall (2) – cleaning on 3rd floor
- Renegade Testing (1) UT for Baghouse Hoppers

(35) Total Contractors on site today

General Comments:

An outage meeting is scheduled for 1000 hrs. in the Classic Building's

conference room. Interested parties are welcome to attend.

Russ Waldbesser will be on vacation starting Thursday, October 22, 2014; returning Monday, November 3, 2014. The Plant will commence laying out plywood on the boiler platforms in preparation for the upcoming Unit outage.

Photo of the Day:

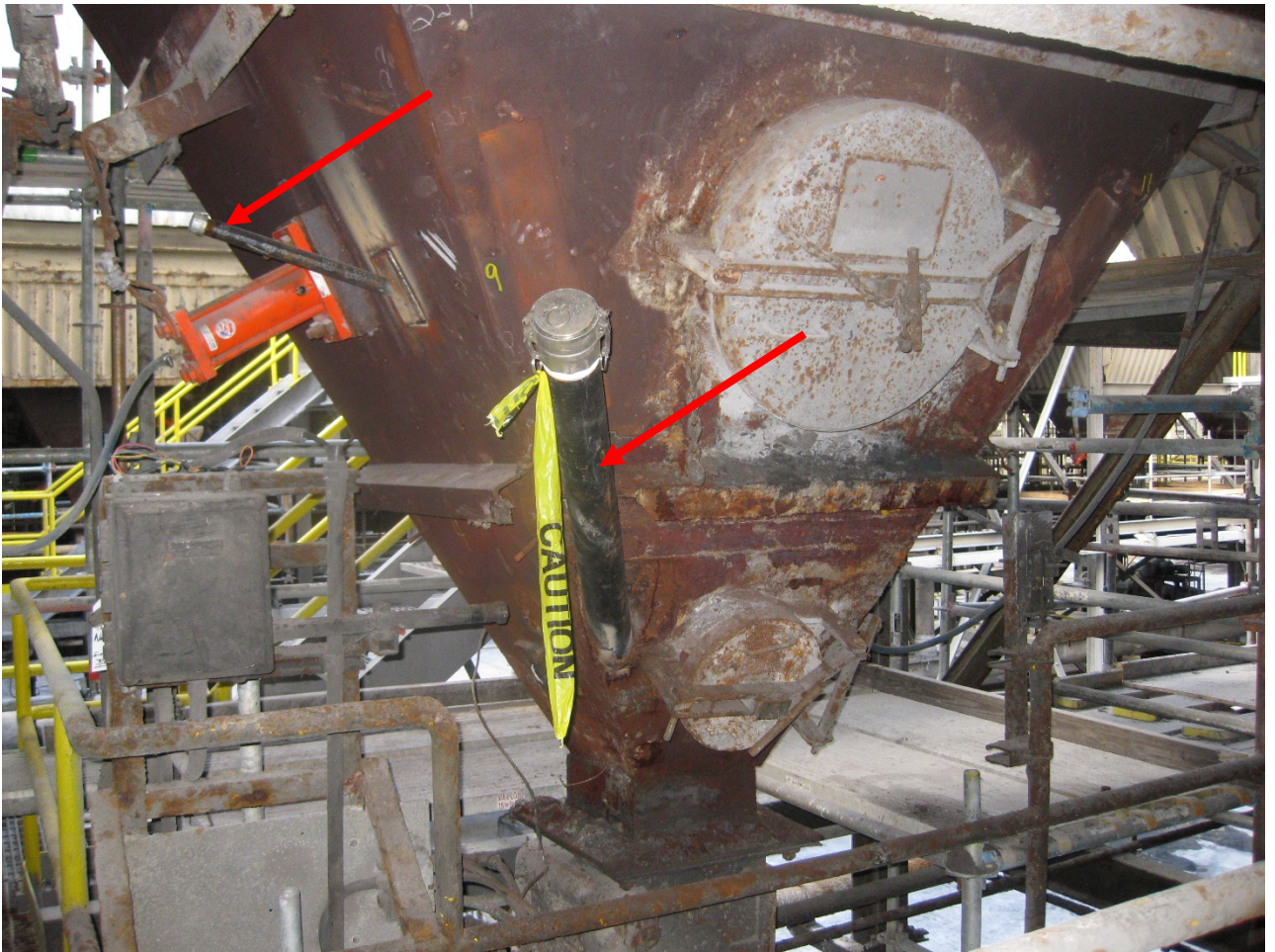


Figure 1 Typical arrangement for the Poke Hole and Level Probe Mounting Pipe (top pointer)

Pinellas WTE Daily Report

Edition: 217 - 10.23.14

Date of Report: Thursday, 10/23/14

Tons Received: 2,191 on Wednesday, 10/22/14

Tons Processed: 3,163 on Wednesday, 10/22/14

Pit Level: 7,040 tons @ midnight on 10/22/14

Weather: Sunny with highs in the low 80s; lows in the low 60s

Boiler 1 Steam Flow set point (lbs/hr): 225,000 (avg. 218,000)

Boiler 2 Steam Flow set point (lbs/hr): 225,000 (avg. of 219,000)

Boiler 3 Steam Flow set point (lbs/hr): 225,000 (avg. of 222,000)

Note: Set points for all three Units will be lowered to 200k lbs. /hr. today

TG1 Power Produced (MWHrs): 1,186 (daily gross 10/22/14)

TG 2 Power Produced (MWHrs): 537 (daily gross 10/22/14)

Net Power Exported (MWHrs): 1504 (net for 10/22/14)

Safety:

A GCS employee received an electric shock while working near the gallery belt. At the time of this writing, the suspected cause was a possible short in the conveyor's safety cable junction box. Robert and other GCS employees are looking into the possible causes and will effect a solution upon root cause determination.

High visibility tape has been applied to areas which were reported to have low head clearance.

Environmental Compliance:

No exceedances reported.

Opacity on Units 1, 2 and 3 were 0.8, 0.8 and 1.4% respectively.

Spectrum corrected the issue with the opacity monitor on Unit 3 by running a larger diameter airline to the instrument.

Stack testing (PM 2.5) for Units 1 and 2 will be scheduled by Rebecca before December.

Operations:

Unit 1 –online at a set point of 225,000 pounds of steam per hour.
Economizer outlet temp is 516° F.

Unit 2 – online at a set point of 225,000 pounds of steam per hour.
Economizer outlet temp is 548°F.

Unit 3 – online at a set point of 225,000 pounds of steam per hour.
Economizer outlet temp is 571°F. Sootblowers will be operated today.

TG 1 – online at 43MW. Thrust bearing temperatures are running at 179° F.
Vacuum is running at 27.0” Hg.

TG 2 - online at 24 MW recorded before noon. Highest thrust bearing temperature was observed to be 168 F. Vacuum is running at 27.0” Hg.

Waste Forecast – No report.

Balance of Plant

1. Baghouse 1 had a ΔP of 7.80
2. Baghouse 2 had a ΔP of 8.5
3. Baghouse 3 had a ΔP of 9.0 (will recheck after sootblowing)

Maintenance

The following GCS Maintenance activities are being performed today:

- TSI and DCR have completed installation of rod out ports and ash level detector holders on all 12 hoppers on Numbers 1 and 3 Baghouse; similar installations for Baghouse 2 should be completed by weeks end. Ultrasonic testing (UT) commenced on Monday; results have not been published but some initial indications are showing thinned areas which may require patch repairs.
- The cell 3 Cooling Tower driveshaft (between the motor and fan gearbox) has been installed. Additional alignment investigations revealed that the gearbox and motor base are at different

elevations. The Plant will attempt to resolve the issue by installing 0.150" shims under the gear box. Additionally the face to face (coupling halves) positions will need to be adjusted to acquire a parallel fitment.

- C1 belt to be replaced.
- A diverter plate is being installed on VC3
- The southeast bearing on the gallery belt's head pulley will be replaced.
- Gallery belt to be inspected.
- Repairs in economized drop chute.
- Chains on retractable sootblowers will be inspected.
- Brackets are being installed to accommodate mounting of the new O2 analyzer displays.
- Installing a new control power transformer for the PLC which controls sootblowers.
- Turbine oil analysis were received; the report's results were favorable with no aberrant conditions noted.

On Site Contractors and Support Personnel

The following contractors are working on site today and logged in at the CR:

- PPM – (12) on days – cleaning and maintenance support
- SEMCO – (3) baghouse
- DCR – (10) baghouse rod out and instrumentation ports
- Safeway (10) scaffold, insulation and lagging
- Safeway inspector (1) – on night shift – one on day shift
- Renegade Testing (1) UT for Baghouse Hoppers
- Unitherm (2) – hopper heaters
- Gaffin (5) – vacuum and water blasting

(44) Total Contractors on site today

General Comments:

An outage meeting was held in the Classic Admin. Building from 1000 to 1300 hrs.. Chris Neu will electronically issue the hand out materials which included Gantt charts and spreadsheets outlining the outage work activities and schedules for performing major outage tasks.

Pinellas WTE Daily Report

Edition: 218 - 10.23.14

Date of Report: Friday 10/24/14

Prepared by: Paul Hauck

Tons Received: 2,804 on Thursday 10/23/14 + 0 from landfill

Tons Processed: 2,915 on Thursday, 10/23/14

Pit Level: 7,392 tons @ midnight on 10/23/14

Weather: Clear, weather forecasted for afternoon/evening (high 80 - low 61)

Boiler 1 Steam Flow set point (lbs/hr): 206,000

Boiler 2 Steam Flow set point (lbs/hr): 195,000

Boiler 3 Steam Flow set point (lbs/hr): 206,000

TG 1 Power Produced (MW---Hrs): 1090(daily gross 10/23/14)

TG 2 Power Produced (MW---Hrs): 497(daily gross 10/23/14)

Net Power Exported (MW---Hrs): 1374(net for 10/21/14)

Safety:

Robert Tilley added information on the electrical shock incident which occurred yesterday afternoon. GCS investigated the incident thoroughly in search of the source of stray current / voltage, but was not able to find anything conclusive. The incident occurred in the vicinity of the handrail at the top of C-1 inclined ash conveyor while reconnecting the emergency safety stop cord along the south side of C-1. The GCS employee (Tim) was driven to the local hospital where an EKG exam was performed and his condition was deemed satisfactory. He received minor burns on the inside of his upper arm (two places). The lighting circuit and power circuit have not been re-energized as they are the leading suspected sources of stray currents. GCS also reported that the inclined conveyor support structure was not directly connected via conductors to the plant grounding system, and they were planning to do this in several locations today prior to re-energizing the above two circuits.

Environmental Compliance:

Nothing to report.

Operations:

Unit 1 – online at a set point of 206,000 pounds of steam per hour Economizer outlet temp is 471 F. Baghouse differential pressure is 7.5 inches, CO at 17 ppm, and opacity at 1.3 ppm.

Unit 2 – online at a set point of 195,000 pounds of steam per hour Economizer outlet temp is 515 F. Baghouse differential pressure is 7.0 inches, CO at 42 ppm, and opacity at 1.1 ppm.

Unit 3 – online at a set point of 206,000 pounds of steam per hour Economizer outlet temp is 576 F. Baghouse differential pressure is 7.5 inches, CO at 58 ppm, and opacity at 1.4 ppm. Precision Blasting is on site this morning to conduct controlled blasting in the economizer since GCS is having difficulty with operation of the soot blowers.

TG 1 – online at full load (44.5 MW recorded at 0815)

TG 2 - on line at full load (22.5 MW recorded at 0815)

Waste Forecast – No diversion anticipated over weekend.

Balance of Plant

1. The temporary air compressor remains on-site to serve as a backup for the North compressor, which went out of service on Friday (10/17/14) at 1700 hours. Reportedly, there is a leak in the air cooler which will need to be replaced.
2. Economizer No. 2 screw conveyor is shipping today from Atlanta area.

Cleaning

1. The plant inside the wind walls was not very clean today.
 - a. Bottom ash was diverted to the floor yesterday during the replacement of the C-1 and C-4 belts, and then temporarily transferred to the RSPB. Loads of the bypassed bottom ash is being re-introduced to the VC-2 by use of bobcat to process for metal recovery. This process may take several days.
 - b. There was a light dusting of flyash under the bag houses, and Gaffin was

on-site vacuuming out the flyash silo due to the diversion and storage of flyash during the belt replacements.

- c. There was evidence of recent cleaning of ash from various gratings/decks in the RSPB, however there is still a considerable amount of ash which has accumulated around the grizzly scalper and upper drive end of the C-1 conveyor.

Maintenance

The following GCS Maintenance activities are /have been performed today:

- Replacement of C-1 and C-4 belts
- Bi-monthly PMs on the soot blowers
- Loader repairs
- Walk down inspection of drag conveyors
- Walk down inspection of vibrating conveyors
- Walk down inspection of carbon system
- Inspection / repairs on west ash discharger #1 pump
- Electrical repairs on soot blower controls for Unit 2 (new control power transformer for the PLC)
- Archiving of DCS data
- Maintenance will attempt to resolve the issue of the cooling tower fan alignment today.

General Comments:

1. The following contractors were logged in at the control room for Friday:
 - a. Semco (3) – Baghouse preventive maintenance
 - b. DCR (5) – Ports in Fabric Filter units
 - c. MOR PPM (16 day and 8 night)

End of report

Pinellas WTE Daily Report

Edition: 219 - 10.27.14

Date of Report: Monday, 10/27/14

Tons Received: 0 on Sunday, 10/26/14 + 0 from landfill
1,057 on Saturday, 1/25/14 + 0 from landfill

Tons Processed: 2,892 on Sunday, 10/26/14

Pit Level: 2,935 tons @ midnight on 10/26/14

Weather: sunny, 10% chance of rain - high 82 - low 67

Boiler 1 Steam Flow set point (lbs/hr): 200,000 early, but coded offline around 0930 due to grate problems

Boiler 2 Steam Flow set point (lbs/hr): 200,000

Boiler 3 Steam Flow set point (lbs/hr): 200,000

TG 1 Power Produced (MW-Hrs): 1,089 (daily gross 10/26/14)

TG 2 Power Produced (MW-Hrs): 490 (daily gross 10/26/14)

Net Power Exported (MW-Hrs): 1,355 (net for 10/26/14)

Safety:

No accidents reported.

In the morning meeting there was a discussion re: personnel receiving electrical shocks due to faults in various circuits. It has happened this year in the baghouse area, the boiler area, and most recently in the gallery for the C 1 belt conveyor. We discussed a possible effort led by Joe & Russ, to systematically test all circuits in the facility and make repairs where needed. This is a possible future CRR project. For the short term GCS has added more grounding straps to structures in the gallery and locked out the 2 circuits that could have caused the most recent shock incident.

Environmental Compliance:

There was a 4-hour CO exceedance on unit 3 on Friday. The 24-hour limit was not exceeded.

The Green House Gas RATA is being performed by ACG.

Operations:

Elwyn noted that bays 1 and 2 of the pit were turned over on the weekend.

Unit 1 – is online at a set point of 200,000 pounds of steam per hour. It averaged 200k yesterday. Economizer outlet temp is 505 F. Baghouse pressure differential is 7.5.

GCS is blowing soot today.

Unit 2 – is online at a set point of 200,000 pounds of steam per hour. It averaged 199k yesterday. Economizer outlet temp is 524 F. Baghouse pressure differential is 7.5”.

GCS is blowing soot today.

Safeway is on site staging scaffold for the upcoming fall outage. Unit 2 is scheduled to come off line late Sunday night, 11/02/14, for its fall outage. Brian O noted that the scaffold in the SDA will go up 20’ from the bottom of the hopper.

The new economizer screw conveyors are expected to be delivered today. They should be installed during the fall outage next week.

Unit 3 – coded offline around 0930 this morning due to grate problems. GCS reported damage in run 5 - zone 4 from large material. This seems somewhat odd as damage from large heavy objects usually occurs in zone 1 or 2, where the objects fall off the feed table. They should be able to get in the furnace tomorrow AM, so we’ll definitely see what it is then.

Precision will be on site tomorrow at 0400 for dynamite blast cleaning. GCS expects unit 3 to be offline for 36 to 48 hours for grate repairs.

TG 1 - is online.

TG 2 – tripped shortly after unit 3 came down this AM.

Waste Forecast - There is no waste returning from landfill today due to the unit 3 unscheduled outage. There will probably be no waste returning from landfill throughout the rest of this week, as the unit 2 fall outage starts late Sunday night.

Balance of Plant –

I observed a loud squealing noise coming from crane 1. It may be a brake issue, it sounded like metal rubbing against metal.

The entire flyash system was out of service this AM, reportedly due to problems in RSPB. The bottom ash removal system was in service, though.

Cleaning - The plant is not clean today. There are large piles of ash in the containment area under the filter press, at the push wall near the base of the gallery belt, and under the gallery belt. There is also quite a bit of ash/slop under the dischargers and around VC 2.

Maintenance

Chris S. noted the following GCS Maintenance activities today;

- Blowing soot.
- TSI and DCR continue installing level detectors and rod out ports as part of the baghouse hoppers project. UT readings on the hopper walls reportedly will be completed today.
- The cooling tower cell 3 fan is back in service. The alignment was off in elevation by .150" as reported last week. Also, the holes in the gear box frame were 1" OD, and the bolts used to secure the gear box frame were considerably < 1". Apparently the gearbox moved because of this gap in the boltholes. That coupled with the difference in elevation may have caused the failure of the shaft. GCS is still reviewing data to determine if this is a warranty issue against the sub-contractor, Star Cooling Tower.
- GCS will inspect the cooling tower cell 4-gear box to motor alignment. It was done at the same time as cell 3 earlier this year by Star Cooling Tower, and is therefore suspect.
- Performing daily CEMS PM's. Performing TG 1 and TG 2 brush PM's.
- Over the weekend added 7 more grounding straps in the gallery belt area.

- Inspecting the C 4 belt conveyor.
- Investigating a leak on the B slurry pump.
- Making repairs on unit 3 during the un-scheduled outage; hydraulic leaks & riddling hopper patching.
- Installed cams on the units 2 and 3 rotary sootblowers at the top bank of the economizers. This will allow these sootblowers to blow steam in a 270-degree arc, and hopefully keep build-up of ash off the top of the upper economizer bundle. The cams will be installed on unit 1 tomorrow.

The following contractors are working on site today and logged in at the CR:

- PPM – (10) on days –cleaning
- PPM – (7) on night shift cleaning
- Coverall – (2) – cleaning
- Atlas Copco – (1) – air compressor maintenance
- Unitherm – (2) - insulators
- Safeway – (9) – scaffold
- Safeway – (2) – scaffold on night shift
- Safeway – (1) – certified scaffold inspector
- ACG – (3) – GHG RATA
- Semco – (3) - baghouse dampers, screw conveyors, double dump valves
- DCR – (3) –working through TSI on baghouse rod out ports & instrumentation ports
- TEI (1) – baghouse hopper project

(44) Total Contractors working on site today

General Comments:

There is a meeting scheduled for tomorrow @ 1000 with TSI to discuss progress on the baghouse project. I have been requesting raw data from the TSI UT techs, but have received nothing so far. TSI has promised to submit that data tomorrow. Joe noted that, as of last Thursday, TSI/DCR had only 4 hoppers left to complete installation of all rod out ports and ports for new level detectors. As of this morning they had made no more progress, and TSI/DCR stated that there were problems

getting access to the last 4 hoppers from OP's. This will be sorted out tomorrow during the meeting.

Pinellas WTE Daily Report

Edition: 220 - 10.28.14

Date of Report: Tuesday, 10/28/14

Tons Received: 3,894 on Monday, 10/27/14 + 0 from landfill

Tons Processed: 2,378 on Monday, 10/27/14

Pit Level: 5,110 tons @ midnight on 10/27/14

Weather: sunny, clear, 0% chance of rain - high 82 - low 69

Boiler 1 Steam Flow set point (lbs/hr): 225,000

Boiler 2 Steam Flow set point (lbs/hr): 225,000

Boiler 3 Steam Flow set point (lbs/hr): Offline due to grate problems

TG 1 Power Produced (MW-Hrs): 1,177 (daily gross 10/27/14)

TG 2 Power Produced (MW-Hrs): 200 (daily gross 10/2/14)

Net Power Exported (MW-Hrs): 1,159 (net for 10/27/14)

Safety:

No accidents reported.

Environmental Compliance:

No exceedances reported.

The Green House Gas RATA is being performed by ACG (Air Compliance Group).

Operations:

Elwyn noted that a non-Fe load is scheduled to ship out Thursday.

Unit 1 – is online at a set point of 225,000 pounds of steam per hour. Economizer outlet temp is 538 F. Baghouse pressure differential is 8.6.

Unit 2 – is online at a set point of 225,000 pounds of steam per hour. Economizer outlet temp is 552 F. Baghouse pressure differential is 7.0”.

Chuck noted that the new economizer screw conveyors are expected to be delivered today; they did not arrive yesterday as planned. They will be installed during the fall outage, starting next week.

Unit 3 – coded offline at 0942 yesterday, 10/27/14, due to grate problems. The damage was found in run 5 - zone 4. Five grate bars were replaced along with several over/under compensation plates.

Unit 3 had run for 118 days consecutively, outside of a 16-hour period when TG 2 tripped due to a fault in the generator bus.

Precision was on site last night for dynamite blast cleaning. GCS expects unit 3 to be offline for 36 to 48 hours.

OP's is checking the baghouse today. Brian O noted that GCS did not dynamite blast the SDA, even though there was build-up on the walls. They were afraid that possible cracks in the hopper could be a problem if dynamite was used.

TG 1 - is online.

TG 2 – tripped off the grid at 0949 yesterday, 10/27/14, after unit 3 came down.

Brian O noted that the thrust position indicators were errant. GCS is checking electrical connections today.

Waste Forecast - There is no waste returning from landfill today due to the unit 3 unscheduled outage. There will probably be no waste returning from landfill throughout the rest of this week, as the unit 2-fall outage starts late Sunday night.

Balance of Plant –

GCS checked into the loud squealing noise coming I heard coming from crane 1 yesterday. They could not find any problems. On my trip through the charging floor this afternoon I did not hear the noise??

Cleaning - There is a small pile of ash in the containment area under the filter press, and ash/slop under the dischargers of units 2 and 3 Other than those areas, the plant is relatively clean today.

Maintenance

Chris S. noted the following GCS Maintenance activities today;

- Blowing soot.
- TSI and DCR continue installing level detectors and rod out ports as part of the baghouse hoppers project. UT readings on the hopper walls are complete.
- Making repairs on unit 3 while it is offline; repairing hydraulic leaks, repairing several small holes in the hoppers under the feed table, replaced 5 grate bars & several compensation plates, repairing the feed table scrapers.
- Inspected cooling tower cell 4. Replaced the fan flex couplings because they appeared to be worn/stressed.
- Performing daily CEMS PM's.
- E&I replaced switches on the units 1 and 2 SDA live bottoms.
- Performing the PM on the spare step-up transformer.

The following contractors are working on site today and logged in at the CR:

- PPM – (13) on days –cleaning & Maintenance support
- PPM – (9) on night shift cleaning
- Coverall – (2) – cleaning
- Chem Aqua – (1) – water treatment
- Atlas Copco – (2) – air compressor maintenance
- Safeway – (8) – scaffold
- ACG – (3) – GHG RATA
- Semco – (3) - baghouse dampers, screw conveyors, double dump valves
- DCR – (3) –working through TSI on baghouse rod out ports & instrumentation ports
- Precision - (4) on night shift explosive blast cleaning
- TSI (4) – baghouse hopper project

(52) Total Contractors working on site today

General Comments:

There was a meeting held with TSI to discuss progress on the baghouse project. Joe Cascio & I attended with 2 TSI managers. I will distribute minutes separately.

Mark noted that DCR's contract to make CEIR List repairs expired on 10/20/14.

Pinellas WTE Daily Report

Edition: 221 - 10.29.14

Date of Report: Wednesday, 10/29/14

Tons Received: 3,477 on Tuesday, 10/28/14 + 0 from landfill

Tons Processed: 2,077 on Tuesday, 10/28/14

Pit Level: 6,385 tons @ midnight on 10/28/14

Weather: mostly sunny, clear, 0% chance of rain - high 83 - low 69

Boiler 1 Steam Flow set point (lbs/hr): 225,000

Boiler 2 Steam Flow set point (lbs/hr): 225,000

Boiler 3 Steam Flow set point (lbs/hr): 225,000

TG 1 Power Produced (MW-Hrs): 1,185 (daily gross 10/28/14)

TG 2 Power Produced (MW-Hrs): 0 (daily gross 10/28/14)

Net Power Exported (MW-Hrs): 1,028 (net for 10/28/14)

Safety:

No accidents reported.

Environmental Compliance:

No exceedances reported. The unit 3 start-up was clean.

The unit 3 Green House Gas RATA is being performed today by ACG (Air Compliance Group). They should complete all their work today.

Operations:

Elwyn noted that a non-Fe load is scheduled to ship out Thursday.

Unit 1 – is online at a set point of 225,000 pounds of steam per hour. Economizer outlet temp is 590 F. Baghouse pressure differential is 8.5". UFA temp is 197 F.

Unit 2 – is online at a set point of 225,000 pounds of steam per hour. Economizer outlet temp is 525 F. Baghouse pressure differential is 7.4". UFA temp is 234 F.

Chris noted that the new economizer screw conveyors have been delivered. They will be installed during the fall outage, starting next week.

Unit 3 – coded offline at 0942 on 10/27/14 due to grate problems. Last night at 2120 the south burner was lit. This morning at 0543 the unit coded back online. Unit 3 was offline for about 44 hours; a good turn around.

The damage was found in run 5 - zone 4. Twelve grate bars, not 5 as previously reported, were replaced along with several over/under compensation plates. GCS reported 5 bars yesterday, but after further review, 12 were replaced. I asked if GCS could tell what caused the damage. No one knew.

This afternoon I noticed water pouring out of the SDA access door on elevation 14', southwest portion of the vessel. I notified the CRO. I looked at dilution water flow. It was at 33 gpm, while units 1 and 2 were at 8 and 13 gpm. The CRO checked the SDA outlet temp; it was right on the set point of 320 F. The CRO was calling others to investigate.

Brian O reported that there was only minimal build-up of ash in the baghouse inlet duct, ~ 1" deep. For the long run (118 days) unit 3 had been on, this is encouraging.

Brian O is to send me photos he has of cracks in the SDA hopper. I will forward to the County and CDMS staffs. Marc noted that GCS would soon be giving us their plan for repairs of the SDA vessel during the common outage.

TG 1 - is online.

TG 2 – tripped off the grid at 0949 on 10/27/14, after unit 3 came down. TG 2 was back online this morning at 0622. It was offline for 44.5 hours.

Brian O noted that the 1 of the 2 thrust position indicators was still errant. It will be repaired during the major outage starting November

30. The other position indicator is operating properly, and will take the unit offline if movement is detected above the set point.

Waste Forecast - There is no waste returning from landfill today due to the unit 3 unscheduled outage. Elwyn's forecast is for 1,500 tons in the pit Monday morning. There will probably be no waste returning from landfill throughout the rest of this week, as the unit 2-fall outage starts late Sunday night. However, GCS will watch pit levels and request waste from the landfill, if it looks as if they will be in jeopardy of shutting a unit down.

Balance of Plant -

Crane 2 is down today due to trolley brake problems and cooling fan issues. Crane 3 holding is not working well, so crane 3 has limited capabilities. This situation is causing problems for the crane drivers. They are not able to keep a decent trench dug and to back stack trash. After deliveries shut down this evening they should be able to play catch up. Hopefully GCS gets crane 2 back on track, and can look at crane 3's issues tomorrow.

In the morning meeting I asked if GCS had pursued a warranty claim against Aerofin for the 3 SCAH coils that were removed during the unit 1 fall outage. No one in the meeting new. Elwyn thought Chris Neu was checking into it.

Also, in the morning meeting I asked if there was any further news about the failure of the cell 3-fan shaft, and a possible warranty claim against Star Cooling Tower. There was no further news.

Cleaning - There is a large pile of flyash in the containment area under the filter press, ash under the gallery belt conveyor, and a pile of ash in front of the unit 3 Martin doors on elevation 20'. The cleaning crew was shoveling the area out under the gallery conveyor.

Maintenance

Chris S. noted the following GCS Maintenance activities today;

- Blowing soot on units 1 and 2; performing sootblower PM's.
- TSI and DCR continue installing level detectors and rod out ports as part of the baghouse hoppers project. UT readings on the

hopper walls are complete. The rod out ports and level detector ports should complete today.

- Cooling tower cell 4 is ready for service.
- Making repairs to crane 2.
- Performing daily CEMS PM's.
- E&I continues to work on switches on the units 1 and 2 SDA live bottoms.
- Installing fall protection on the crane 3 trolley.
- Unloading and reviewing parts for the units 2 and 3 economizer screw conveyors that just arrived.
- Repaired a hydraulic leak on unit 3-north discharger.
- Supporting the RATA testing.
- TAW is on site reviewing fan base/pedestal work for the common outage.
- Atlas Copco is on site for air compressor maintenance. They performed a hydro test of the A compressor cooling coil.

The following contractors are working on site today and logged in at the CR:

- PPM – (15) on days –cleaning & Maintenance support
- PPM – (7) on night shift cleaning
- Coverall – (2) – cleaning
- Trane – (1) – AC maintenance
- Belt – (1)
- Atlas Copco – (4) – air compressor maintenance
- Safway – (6) – scaffold
- Safway – (1) – certified scaffold inspector
- ACG – (3) – GHG RATA
- Semco – (3) - APC dampers, conveyors, double dump valves
- DCR – (4) –working through TSI on baghouse rod out ports & instrumentation ports
- TSI (5) – baghouse hopper project

(52) Total Contractors working on site today

General Comments:

Pinellas WTE Daily Report

Edition: 222 - 10.30.14

Date of Report: Thursday, 10/30/14

Tons Received: 2,138 on Wednesday, 10/29/14 + 0 from landfill

Tons Processed: 2,876 on Wednesday, 10/29/14

Pit Level: 5,831 tons @ midnight on 10/29/14

Weather: mostly sunny in the AM –started clouding up around noon - 20% chance of rain as a cold (all things are relative) front approaches - high 80 - low 68

Boiler 1 Steam Flow set point (lbs/hr): 225,000

Boiler 2 Steam Flow set point (lbs/hr): 225,000

Boiler 3 Steam Flow set point (lbs/hr): 225,000

TG 1 Power Produced (MW-Hrs): 1,202 (daily gross 10/29/14)

TG 2 Power Produced (MW-Hrs): 378 (daily gross 10/29/14)

Net Power Exported (MW-Hrs): 1,367 (net for 10/29/14)

Safety:

No accidents reported.

Environmental Compliance:

No exceedances reported.

Chuck noted that he has issued the P.O. to Testar for PM 2.5 testing, which is scheduled for the week of November 17. A note for all to consider; the bags will be 7 months old at that time.

Operations:

Elwyn noted that the non-Fe truck is loading and will ship out today.

Brian O noted that OP's is cleaning out cable tray on elevation 46' 8".

I noted that around 0820 a large plume of smoke was rising into the sky out of the boiler structure. Brian O said it was probably unit 3, because they were experiencing combustion problems on unit 3.

Unit 1 – is online at a set point of 225,000 pounds of steam per hour. Economizer outlet temp is 510 F. Baghouse pressure differential is 7.0”.

Unit 2 – is online at a set point of 225,000 pounds of steam per hour. Economizer outlet temp is 538 F. Baghouse pressure differential is 8.5”.

While I was making rounds this AM smoke was pouring out of the feed table area. I was on the firing aisle and had to scoot outside to breathe. I went to the CR, and the CRO said they were having weird fuel issues. It cleared up quickly.

A contractor, PPM I believe, was staging the new economizer screw conveyors up on elevation 20’. They will be installed during the fall outage, starting Sunday night.

Brian O stated that riddling chutes are spilling out ash. Chris S said that he would look into having new chutes fabricated, but that due to bends and twists in the chutes it may be better to have straight runs fabbed and make adjustments in the field.

Unit 3 – is online at a set point of 225,000 pounds of steam per hour. Economizer outlet temp is 548 F. Baghouse pressure differential is 7.8”.

Marc further clarified grate repairs done in the past 2 days. The damage was found in run 5 - zone 4, as stated. Nine grate bars, not 5 or 12 as previously reported, were replaced along with several over/under compensation plates. Additionally, 3 grate bars were re-positioned. Marc stated that the cause for the damage was over/under compensation plates that just wore out.

The water I noticed pouring out of the SDA access door yesterday, on elevation 14’, southwest portion of the vessel, was caused by a nozzle plugging in the top of the SDA. Instead of atomizing, a straight stream of water pouring in. GCS stated that they had the problem taken care of quickly.

Brian O did send me photos of cracks in the SDA hopper. I forwarded them to the County and CDMS staffs.

TG 1 - is online.

TG 2 – is online.

Waste Forecast - There is no waste returning from landfill today due to the unit 3 unscheduled outage just completed & the unit 2 fall outage starting Sunday night. Elwyn's forecast remains at 1,500 tons in the pit Monday morning. There will probably be no waste returning from landfill throughout the rest of this week. GCS will watch pit levels and request waste from the landfill, if it looks as if they will be in jeopardy of shutting a unit down.

Balance of Plant –

Crane 2 is back in service today. Yesterday GCS addressed trolley brake problems and cooling fan issues. Crane 3 holding is being worked on today. The crane drivers are having a much easier time maintaining a proper pit today.

Cleaning - There is a large pile of flyash in the containment area under the filter press, and ash under the gallery belt conveyor. Also, the roads on the RSPB exit and through the breezeway under the gallery belt are trashed out with ash and wet slop. This ash will flow directly into drainage swales that drain to Pond A.

Maintenance

Chris S. noted the following GCS Maintenance activities today;

- Repairing the poppet valve on rotary sootblower #9 on unit 3..
- TSI and DCR continue work on the baghouse hoppers project. UT readings on the hopper walls are complete. The rod out ports and level detector ports are also complete. TSI is welding studs to hopper walls to support the new heaters and to keep wiring off the hopper walls. The TSI foreman said that they found several wires burned because they were against the walls. I asked TSI to prepare 2 costs for repairing hopper walls that are thin; 1 by scab welding new plate over old plate, and 1 by cutting in new plate. They said they would have that pricing to us by mid-next week.
- Making repairs to crane 3 & installing fall protection on the trolley.
- Performing daily CEMS PM's.

- Walking down hydraulic leaks on unit 2 in preparation for the fall outage starting Sunday night.
- Repairing a hydraulic leak on unit 3-discharger skid.
- Atlas Copco is on site again today for air compressor maintenance.
- Performing ID fan PM's
- Replacing the electrical disconnect on conveyor CNV 4 in RSPB.
Chris said all disconnects in RSPB are in poor shape & that GCS is systematically replacing all of them.

The following contractors were logged in at the CR today;

- PPM – (16) on days –cleaning & Maintenance support
- PPM – (8) on night shift cleaning
- Coverall – (2) – cleaning
- Belt – (2) – repairing the hole in RSPB siding
- Atlas Copco – (3) – air compressor maintenance
- Safway – (2) – scaffold
- Semco – (3) - APC dampers, conveyors, double dump valves
- DCR – (4) -working through TSI on stud welding
- USA – (1) -
- TSI (2) – baghouse hopper project

(43) Total Contractors working on site today

General Comments:

Chris S stated that he is pursuing a warranty claim against Aerofin for the 3 SCAH coils that were removed during the unit 1 fall outage. Still no resolution, but Chris S has started the conversation with Aerofin.

Chris S stated that he is pursuing a warranty claim against Star Cooling Tower for the failure of the cell 3-fan shaft. Still no resolution, but Chris S has started the conversation with Star Cooling Tower.

Pinellas WTE Daily Report

Edition: 223 - 10.31.14

Date of Report: Friday, 10/31/14

Tons Received: unknown

Tons Processed: 3,027 tons processed, Thursday 10/30/2014

Pit Level: 6,601 tons @ midnight on 10/30/14

Weather: Halloweenish – cool, high of 77°, low of 62°

Boiler 1 Steam Flow set point (lbs/hr): 225,000 (avg. 217,000)

Boiler 2 Steam Flow set point (lbs/hr): 225,000 (avg. of 219,000)

Boiler 3 Steam Flow set point (lbs/hr): 225,000 (avg. of 212,000)

TG1 Power Produced (MWHrs): 1,180 (daily gross 10/30/14)

TG 2 Power Produced (MWHrs): 494 (daily gross 10/30/14)

Net Power Exported (MWHrs): 1455 (net for 10/30/14)

Safety:

No major safety issues noted. Be careful on the drive home - watch out for trick-or-treaters.

Environmental Compliance:

CEMS reports didn't print out last night – Gus is working on it. There was a 4 hr. CO exceedance yesterday on B103 due most likely to overfeeding of waste. The ID fan had worked its way to 100% somehow but was corrected. The 24 hr. average was not elevated above the limit.

Opacity on Units 1, 2 and 3 were 1.0, 0.9 and 1.6% respectively.

Baghouse cleaning cycles remain acceptably low.

The effects of GCS pushing back the outage start day to November 4 were discussed. Stack testing (PM 2.5) on Units 1 and 2 are scheduled to begin on November 17, only one day after the outage ends. The impact of this is that there is no leeway in the schedule for the Unit 2 outage to go long. There is very little time to condition Unit 2 before performing the test.

The County expressed concern with the tight timeline and the potential for additional costs. Marc said that GCS will closely monitor the timeline and they don't foresee an issue. However, Becky will be respond to the emails going back and forth to see if Testar can be pushed back a day.

The PO to Testar was issued yesterday.

Operations:

Unit 1 –online at a set point of 225,000 pounds of steam per hour.
Economizer outlet temp is 500° F.

Unit 2 – online at a set point of 225,000 pounds of steam per hour.
Economizer outlet temp is 566°F.

Unit 3 – online at a set point of 225,000 pounds of steam per hour.
Economizer outlet temp is 553°F.

Sootblowers will be operated on all units today.

TG 1 – no data for this report.

TG 2 – no data for this report.

Waste Forecast – Several hundred tons were returned from the landfill yesterday in anticipation of the weekend. The Sunday numbers were looking low.

Balance of Plant

1. Baghouse 1 had a ΔP of 7.7
2. Baghouse 2 had a ΔP of 7.2
3. Baghouse 3 had a ΔP of 7.8

Maintenance

The following GCS Maintenance activities are being performed today; this is not an exhaustive list because Beth is a slower note taker than Bill:

- The suction air box on the Air Compressor is rotted out. GCS will need to make a new box. The silencer assembly was disassembled – some foam is missing and degradation of the materials inside was noted.
- Atlas Copco noted in excess of \$20,000 for a new air suction assembly. Chris will get another quote as this is an

unreasonable price. GCS will leave it apart until repairs are complete to prevent potential damage of the compressor.

- The air inlet assembly will be rebuilt – a piece of metal broke off and got jammed. Repairs are in progress. Advanced deterioration is noted in this assembly as well. Next week is the expected completion date for the above.
- FloTec is onsite to walk down the valves
- Steam trap walk down is today
- Repairs on the #2 riddling chutes will begin today
- There is a holding problem on the #3 refuse crane shaft
-

On Site Contractors and Support Personnel

On site contractors were not verified today.

General Comments:

After completion of the C-1 gallery work, the area around it was cleaned, as was the area of ash tracking noted outside the RSPB building. The end of month numbers are as follows:

Boiler availability – 81% overall

B101 – 60%

B102 – 90%

B103 – 94%

Turbine Generator Availability – 97% overall

TG1 – 100%

TG2 – 94%

Pinellas WTE Daily Report

Edition: 224 - 11.03.14

Date of Report: Monday, 11/03/14

There was no morning O&M meeting today. I do not have performance data; this is a limited Daily Report. I hope to double up tomorrow, and fill in the missing data.

Tons Received: 0 on Sunday, 11/02/14 + 0 from landfill

1,013 on Saturday, 11/01/14, + 0 from landfill

Tons Processed: No data for Sunday, 11/02/14

Pit Level: No data @ midnight on 11/02/14 – the crane drivers did say the pit was very low this morning

Weather: sunny & beautiful - 0% chance of rain - high 72 - low 50

Boiler 1 Steam Flow set point (lbs/hr): 180,000

Boiler 2 Steam Flow set point (lbs/hr): 180,000

Boiler 3 Steam Flow set point (lbs/hr): 180,000

TG 1 Power Produced (MW-Hrs): No data for (daily gross 11/02/14)

TG 2 Power Produced (MW-Hrs): No data for (daily gross 11/02/14)

Net Power Exported (MW-Hrs): No data for (net for 11/02/14)

Safety:

No info.

Environmental Compliance:

No info.

Operations:

OP's was having problems today due to crane issues (discussed below).

Unit 1 – is online at a set point of 180,000 pounds of steam per hour.

Economizer outlet temp is 519 F. Baghouse pressure differential is 6.0".

Opacity is .7%.

The SCAH is valved out today.

Unit 2 – is online at a set point of 180,000 pounds of steam per hour. Economizer outlet temp is 488 F. Baghouse pressure differential is 7.4". Opacity is .6%.

Unit 2 is now scheduled to come offline late tonight for its fall outage. GCS delayed the outage by 1 day late last week.

Precision was on site this morning blasting the economizer online, in preparation for the outage.

Unit 3 – is online at a set point of 180,000 pounds of steam per hour. Economizer outlet temp is 552 F. Baghouse pressure differential is 8.6". Opacity is 1.3%.

OP's did a good job-keeping unit 3 online earlier today. Cranes 2 and 3 were down. The crane drivers were only able to load fuel into the south corner of the unit 3 feed hopper. Load was dropped, and crane 3 was repaired.

TG 1 - is online.

TG 2 – is online.

Waste Forecast - There is no waste returning from landfill today due to the unit 2-scheduled outage, planned to begin late tonight.

Balance of Plant –

Crane issues are causing problems today. Crane 2 is out of service & parked out of the way, between hoppers. When the crane driver opens the bucket, the grapple falls into the pit.

The holding brake on crane 3 fried. A new card and brake shoes were installed. Crane 3 is running OK now.

Cleaning - There is a small pile of flyash in the containment area under the filter press, and small piles of ash under the gallery belt conveyor. Also, the roads on the RSPB exit and through the breezeway under the gallery belt have a small amount of dried ash on them; the street sweeper should be able to pick this up. There are white stains

everywhere under the unit 1 SDA vessel, running from the penthouse down to ground elevation. Obviously, a lime slurry spill occurred.

Maintenance

- TSI & DCR are continuing on the baghouse hopper project.
- Performing daily CEMS PM's.
- Made repairs noted above on the crane 3 holding brake.

The following contractors were logged in at the CR today;

- PPM – (9) on days –cleaning & Maintenance support
- PPM – (5) on night shift cleaning
- Coverall – (2) – cleaning
- Safway – (1)- certified scaffold inspector
- Semco – (2) - APC dampers, conveyors, double dump valves
- DCR – (4) –working through TSI on stud welding
- USA – (1) – Street sweeper
- Magnus (Jim Hasselbauer) – (1) – DCS
- MJM – (2) – plant E&I support
- Precision – (5) – dynamite blasting
- Matrix – (12) – unit 2 outage prep
- Bales – (2) – site security for outages
- Safety Training & Consultants – (1) – night shift safety manager
- TSI (6) – baghouse hopper project

(53) Total Contractors working on site today

General Comments:

Pinellas WTE Daily Report

Edition: 225 - 11.04.14

Date of Report: Tuesday, 11/04/14

Tons Received: 3,946 on Monday, 11/03/14 + 0 from landfill

Tons Processed: 2,598 on Monday, 11/03/14

Pit Level: 5,145 tons @ midnight on 11/03/14

Weather: sunny & beautiful - 0% chance of rain - high 80 - low 60

Boiler 1 Steam Flow set point (lbs/hr): 225,000

Boiler 2 Steam Flow set point (lbs/hr): offline for the fall outage

Boiler 3 Steam Flow set point (lbs/hr): 225,000

TG 1 Power Produced (MW-Hrs): 1,037 (daily gross 11/03/14)

TG 2 Power Produced (MW-Hrs): 463(daily gross 11/03/14)

Net Power Exported (MW-Hrs): 1,279 (net for 11/03/14)

Safety:

No accidents reported.

Environmental Compliance:

No exceedances reported.

Operations:

Unit 1 – is online at a set point of 225,000 pounds of steam per hour. Economizer outlet temp is 551 F. Baghouse pressure differential is 7.6". Opacity is .9%.

Unit 2 – came offline last night, Monday, 11/03/14, at 2350 hours. This is day 1 of the fall outage, scheduled to complete on 11/19/14.

Cleaning & prep work are the outage focus for today.

Precision was on site this morning de-clinkering the furnace.

Elwyn noted that there is no baghouse worked planned for this outage, outside of normal visual inspections.

Unit 3 – is online at a set point of 225,000 pounds of steam per hour. Economizer outlet temp is 556 F. Baghouse pressure differential is 7.8". Opacity is 1.7%.

TG 1 - is online at reduced load due to the unit 2 fall outage.

TG 2 – is online.

Waste Forecast - There is no waste returning from landfill today due to the unit 2-scheduled outage.

Balance of Plant –

Maintenance is working on the crane 2 holding brake today.

Mark noted that Belt has been repairing the crash damage on the north exterior wall of RSPB. They have replaced damaged purlins, but not the siding.

Cleaning - There is a small pile of flyash in the containment area under the filter press, and small piles of ash under the gallery belt conveyor. The white stains on and under the unit 1 SDA vessel are still there. There is ash/water/slop on the floor under the unit 1 and unit 2 dischargers.

Maintenance

- TSI & DCR are continuing on the baghouse hopper project.
- Performing daily CEMS PM's.
- Working on the crane 2 holding brake.
- Outage PM's are being performed on the unit 2 burners, dischargers, and stoker.
- E&I are repairing a damaged welding receptacle and setting up temporary power for outage contractors.
- Chris S noted that TAW would start repairs on the unit 2 FD fan pedestal and base plate Thursday.
- Chris S noted that the unit 2 FD fan coupling had become out of round, and had to be repaired last Friday night. Unit 2 was down for those repairs.

- Chris S noted that GCS would inspect the Cooling Tower today with Evap Tech.

The following contractors were logged in at the CR today;

- PPM – (16) on days –cleaning & Maintenance support
- PPM – (6) on night shift cleaning
- Coverall – (2) – cleaning
- Safway – (1)- certified scaffold inspector
- Semco – (3) - APC dampers, conveyors, double dump valves
- DCR – (4) –working through TSI on stud welding for baghouse hopper heaters
- Magnus (Jim Hasselbauer) – (1) – DCS
- MJM – (2) – plant E&I support
- Precision – (5) – dynamite blasting
- Precision – (1) – night shift
- Matrix – (16) – unit 2 outage prep
- Neu Ideas – (1) – outage management
- Wm. Beasley – (1) – outage management night shift
- Bales – (2) – site security for outages
- Safety Training & Consultants – (1) – night shift safety manager
- TSI (6) – baghouse hopper project

(68) Total Contractors working on site today

General Comments:

There was a meeting with TSI, Russ, Joe, and I this morning re: the baghouse hoppers project. I will distribute minutes separately.

There was a meeting with Beth, Chris Neu, and I this morning to review the GCS plan for repairs of SDA vessels on units 2 and 3. The County is in agreement with the plans GCS had submitted, and gave GCS the OK to proceed with P.O.'s for materials and contractors. We discussed the estimated pricing Chris submitted, which I thought was on the high side. The majority of it will be T&M work, so it will be what it will be, and naturally, must be managed well to keep costs in line.

Mark noted that he would be preparing a revised CRR List showing the status of projects that had been approved, but not yet finished.

Pinellas WTE Daily Report

Edition: 226 - 11.05.14

Date of Report: Wednesday, 11/05/14

Tons Received: 3,582 on Tuesday, 11/04/14 + 0 from landfill

Tons Processed: 2,010 on Tuesday, 11/04/14

Pit Level: 7,136 tons @ midnight on 11/04/14

Weather: sunny & beautiful - 0% chance of rain - high 82 - low 63

Boiler 1 Steam Flow set point (lbs/hr): 225,000

Boiler 2 Steam Flow set point (lbs/hr): offline for the fall outage

Boiler 3 Steam Flow set point (lbs/hr): 225,000 (was dropped due to discharger problems, see below)

TG 1 Power Produced (MW-Hrs): 541 (daily gross 11/04/14)

TG 2 Power Produced (MW-Hrs): 526 (daily gross 11/04/14)

Net Power Exported (MW-Hrs): 859 (net for 11/04/14)

Safety:

No accidents reported.

I noted that lights in the baghouse area were still not on, it was dark around units 1 and 3, and there were 10 TSI/DCR guys working there. Later in the day GCS had the lights on.

I observed a large amount of hydraulic oil on the floor on the 20' elevation near the unit 2 Martin hydraulic skid. The area around the skid was taped off, but the spill continued ~ 20' down the hall towards unit 3. I reported this to Elwyn, Chris S, and Brian O. They said they would see that it was cleaned up and caution tape put up.

I also observed 2 Precision employees rodding out the unit SDA chute from ground level. They were in a cloud of flyash, had on negative pressure respirators, but no coveralls. Their clothes were covered in ash. I reported this to Elwyn, Chris S, and Brian O. They said they would see that these guys got coveralls to wear.

Environmental Compliance:

No exceedances reported.

Operations:

Unit 1 – is online at a set point of 225,000 pounds of steam per hour. Economizer outlet temp is 490 F. Baghouse pressure differential is 6.6". Opacity is .9%.

Unit 2 – came offline on Monday night, 11/03/14, at 2350 hours. This is day 2 of the fall outage, scheduled to complete on 11/19/14.

Cleaning & prep work were still the outage focus for today.

Precision was on site blasting the SDA vessel. There was a lot of ash coming out.

Unit 3 – was online at a set point of 225,000 pounds of steam per hour. Load had to be dropped (it was at 148k around 1500) because there was a problem with the motor for the TLT hydraulic pump. The spare motors were not available; they were out being re-furbished. The ash dischargers were down for quite a period today. As of 1500 GCS said they were taking a motor off unit 2 and swapping it to unit 3. They expect to have the unit 3 dischargers back in service tonight.

Economizer outlet temp is 483 F. Baghouse pressure differential is 7.9". Opacity is 1.4%.

GCS blew soot this morning. It brought back end temps down considerably.

TG 1 - is online at reduced load due to the unit 2-fall outage.

TG 2 – is online at a reduced load (15 MW around 1500) due to the ash discharger problems on unit 3.

Waste Forecast - There is no waste returning from landfill today due to the unit 2-scheduled outage.

Balance of Plant –

Maintenance is working on the crane 2 holding brake again today. Kone Crane is here today assisting.

Mark noted that Belt has finished repairs to the crash damage on the north exterior wall of RSPB. A Gaffin truck caused this damage. Gaffin was forthcoming with info on the crash, and wants to take responsibility for the repairs. GCS will back charge Gaffin for these repairs.

Cleaning - There is a large pile of flyash in the containment area under the filter press. The white stains on and under the unit 1 SDA vessel are still there. There is a lot of ash coming out of the unit 2 SDA vessel, being transported out via a bobcat. The ground floor area around the SDA #2 is not clean.

Maintenance

Chris S noted the following Maintenance activities today:

- TSI & DCR are continuing on the baghouse hopper project.
- Performing daily CEMS PM's.
- Working on the crane 2 holding brake with Kone Crane.
- Performing loader repair.

The following unit 2-outage work is being performed:

- Precision should complete blast cleaning the SDA vessel this evening. This will complete blasting.
- Cleaned the FD fan internals.
- TAW removed the FD fan motor. The concrete base looks rough and will require some work. TAW will be removing the base plate soon.
- GCS inspected the cooling tower today.
- Greased the UFA dampers.
- Second pass scaffold is complete, Safway will start the 3rd pass scaffold this evening, and should complete by 1900 tonight.
- Corrosion Control will start sand blasting at 1900 tonight.
- The shark fins have had ash/clinker cleaned off. Measurements will be taken tomorrow.
- The drum will be inspected tomorrow with FM Global.
- Matrix is setting up in feed hopper to replace plate.

- Matrix is setting up in the economizer to align bundles & replace any missing tube shields.
- Matrix will start in the 2nd and 3rd passes tomorrow.
- Gary Exum noted there are 3 bad rollers under the feed table that will be replaced.
- The inspection of the Martin hydraulic system is complete. Leak repairs begin tomorrow.
- Performing calibrations of instruments used in HHV calcs.
- OP's is inspecting baghouse modules. No work is planned.
- OP's cleaned the dischargers out today using the ice method.

The following contractors were logged in at the CR today;

- PPM – (19) on days –cleaning & Maintenance support
- PPM – (6) on night shift cleaning
- Coverall – (2) – cleaning
- Safway – (11)- scaffold
- Semco – (3) - APC dampers, conveyors, double dump valves
- DCR – (4) –working through TSI on stud welding for baghouse hopper heaters
- Magnus (Jim Hasselbauer) – (1) – DCS
- MJM – (2) – plant E&I support
- NIC – (2) – UT
- USA – (1) – street sweeper
- Precision – (5) – dynamite blasting
- Precision – (5) – night shift
- Matrix – (20) – unit 2 outage prep
- Maxim – (3) – grate work
- Neu Ideas – (1) – outage management
- Wm. Beasely – (1) – outage management night shift
- Bales – (2) – site security for outages
- Safety Training & Consultants – (1) – safety manager
- TSI (6) – baghouse hopper project

(95) Total Contractors working on site today

General Comments:

There will be a unit 2 outage meeting starting today and for as long as the outage lasts. The meeting will be held at 1500 in the conference room of the Classic Admin Bldg.

Beth sent GCS County approval of costs to make repairs of SDA vessels on units 2 and 3, per the plan Chris N laid out.

Marc asked if the County would approve replacement of the south side of the wind wall, where holes have appeared. Mark found old siding on site, so costs will be only ~ \$2k to install. GCS will move forward on this repair with Belt performing the work.

Marc noted that Mark is the one to co-ordinate the cataloging of County owned equipment that will stay on site after the new contract operator assumes O&M responsibilities. Val will start that effort next Tuesday in lieu of the monthly CEIR inspection.

Pinellas WTE Daily Report

Edition: 227 - 11.06.14

Date of Report: Thursday, 11/06/14

Tons Received: 2,304 on Wednesday, 11/05/14 + 0 from landfill

Tons Processed: 1,959 on Wednesday, 11/05/14

Pit Level: 7,424 tons @ midnight on 11/05/14

Weather: mostly sunny & beautiful - 0% chance of rain - high 80 - low 68

Boiler 1 Steam Flow set point (lbs/hr): 225,000

Boiler 2 Steam Flow set point (lbs/hr): offline for the fall outage

Boiler 3 Steam Flow set point (lbs/hr): 225,000

TG 1 Power Produced (MW-Hrs): 550 (daily gross 11/05/14)

TG 2 Power Produced (MW-Hrs): 503 (daily gross 11/05/14)

Net Power Exported (MW-Hrs): 845 (net for 11/05/14)

Safety:

No accidents reported.

Brian O noted that the area under the filter press was slick, due to traffic hauling ash from the unit 2 SDA.

Environmental Compliance:

No exceedances reported.

Becky noted that there have been random errors on opacity readings in the CEMS. Nexus was on site. They are still investigating, but feel that the problem is more from purging than in the instrumentation. Downtime has been experienced on all units, but unit 3 has had the most downtime.

Becky reported that GHG sampling was performed yesterday & that the PM 2.5 stack test will start on November 19.

Operations:

Unit 1 – is online at a set point of 225,000 pounds of steam per hour. Yesterday unit 2 averaged 225k. Economizer outlet temp is 518 F. Baghouse pressure differential is 6.9". Opacity is .6%.

Unit 2 – came offline on Monday night, 11/03/14, at 2350 hours. This is day 3 of the fall outage, scheduled to complete on 11/19/14.

Unit 3 – was online at a set point of 225,000 pounds of steam per hour. Yesterday unit 3 averaged 205k; load was dropped for awhile due to ash discharger problems. Economizer outlet temp is 529 F. Baghouse pressure differential is 7.9".

Elwyn noted that GCS may isolate module 3-12 in the baghouse. There have been spikes in opacity and they feel there may be bag problems in 3-12.

TG 1 - is online at reduced load due to the unit 2-fall outage. Max thrust bearing temp – 157 F.

TG 2 – is online. Max thrust bearing temp – 166 F.

Waste Forecast - There is no waste returning from landfill today due to the unit 2-scheduled outage.

Balance of Plant – Magnus (Jim Hasselbauer) has been on site the past couple of days. He will be here all week. Jim is upgrading Citect (which has to be done on each computer individually) & working on various DCS issues.

Mark noted that Belt is replacing siding on the lower section of the south side of the windwall.

Elwyn noted that the plant wattmeter (net) is not working; E&I to investigate.

Cleaning – The area under unit 2 SDA, where dynamite blasting and clearing of the hopper was performed yesterday, has been cleaned up, but there is still a pile of ash and moonrock directly under the hopper.

As noted above the area under the filter press needs to be cleaned up. GCS said that would happen today. Also, there are small piles of ash under the gallery belt.

Maintenance

Chris S noted the following Maintenance activities today:

- TSI & DCR are continuing on the baghouse hopper project.
- Performing daily CEMS PM's.
- Working on the crane 2 holding brake again today, with Kone Crane.

The following unit 2-outage work is being performed:

- The SDA vessel has been cleaned out.
- OP's is cleaning the baghouse inlet duct today.
- OP's is cleaning out the dischargers with hoses today.
- TAW is working on the FD fan & motor base plate. The anchor bolts were in poor condition from corrosion, and will have to be replaced. Also, the top ~ 2" of grout and concrete are in bad shape and will have to be removed and re-poured.
- E&I noticed the flex conduit on the 4160-volt power supply to the FD fan motor had pulled loose. They re-attach and seal the flex.
- Safway completed the 3rd pass scaffold. They are installing scaffold in the economizer today. Scaffold will be oing up inside the SDA vessel soon.
- OP's pressure washed the SCAH internals.
- The drum is being inspected today with FM Global & Chem Aqua.
- Repairing leaks in the Martin hydraulic system.
- Performing calibrations of instruments used in HHV calcs.
- OP's is inspecting baghouse modules. No work is planned.
- Inspecting the burners. Repairs are required on the south burner.
- Matrix is working in the feed hopper and inside the 2nd pass of the boiler.
- Corrosion Control is sandblasting inside the 3rd and 4th passes of the boiler.

The following contractors were logged in at the CR today;

- PPM – (16) on days –cleaning & Maintenance support
- PPM – (8) on night shift cleaning
- Coverall – (2) – cleaning
- Safway – (8)- scaffold
- Semco – (2) - APC dampers, conveyors, double dump valves
- DCR – (3) -working through TSI on stud welding for baghouse hopper heaters
- Magnus (Jim Hasselbauer) – (1) – Citect, DCS
- MJM – (2) – plant E&I support
- NIC – (2) – UT
- Matrix – (26) – unit 2 outage prep, feed hopper, economizer alignment, 2nd pass
- Maxim – (3) – prep for grate work
- Neu Ideas – (1) – outage management
- Wm. Beasely – (1) – outage management night shift
- Bales – (2) – site security for outages
- Safety Training & Consultants – (1) – safety manager
- Belt – (4) – replaced siding on south side wind-wall
- Corrosion Control – (7) – sand blasting
- Chem Aqua – (3) – drum inspection, water treatment
- TSI - (5) – baghouse hopper project

(97) Total Contractors working on site today

General Comments:

There will be a unit 2 outage meeting today and for as long as the outage lasts. The meeting will be held at 1500 in the conference room of the Classic Admin Bldg.

Marc noted that there is a meeting this afternoon on site with Covanta and the County to discuss Transition details.

I asked about the warranty claim against Aerofin on the 3 new SCAH cols that were leaking in unit 1. Chris S said that several Emails were exchanged; that Aerofin feels the damage is due to water hammer. None of us in the morning meeting have ever heard water hammer in the SCAH's or the steam & condensate lines that service them. Aerofin has

asked for temps before and after the steam traps. Chris S will supply this data for Aerofin.

Ethos, the contractor for the upcoming TG 1 and TG 2 outages, and Greg Mester (Turbineology) are on site today reviewing the TG outage scopes with Chris Neu.

Pinellas WTE Daily Report

Edition: 228 - 11.10.14

Date of Report: Monday, 11/10/14

Tons Received: 0 on Sunday, 11/09/14 + 0 from landfill

1,072 on Saturday, 11/08/14 + 0 from landfill

2,975 on Friday, 11/07/14, + 0 from landfill

Tons Processed: 2,043 on Sunday, 11/09/14

Pit Level: 6,711 tons @ midnight on 11/09/14

Weather: mostly sunny & beautiful - 0% chance of rain - high 75 - low 61

Boiler 1 Steam Flow set point (lbs/hr): 225,000

Boiler 2 Steam Flow set point (lbs/hr): offline for the fall outage

Boiler 3 Steam Flow set point (lbs/hr): 225,000

TG 1 Power Produced (MW-Hrs): 575 (daily gross 11/09/14)

TG 2 Power Produced (MW-Hrs): 549 (daily gross 11/09/14)

Net Power Exported (MW-Hrs): 929 (net for 11/09/14) – Note: this is an estimate; the net wattmeter is out of service

Safety:

No accidents reported.

Rob noted that the unit 2 economizer screw conveyors are being replaced; exercise caution below.

There was a discussion of cranes that will be on site soon for outage work. Rob recommended that the stack of siding on the north side of unit 3 be lifted down to grade for proper storage.

Environmental Compliance:

No exceedances reported.

Becky noted that Spectrum was on site Friday to investigate the random errors on opacity readings in the CEMS. Spectrum felt there was 2

issues; 1. Insufficient purge air on the 2 ends of the monitors (sending and transmitting/receiving) &
2. Faulty pressure switches.

Becky reminded all that the PM 2.5 stack test will start on November 19.

Operations:

Unit 1 – is online at a set point of 225,000 pounds of steam per hour. Yesterday unit 1 averaged 224k. Economizer outlet temp is 510 F. Baghouse pressure differential is 6.9". Opacity is .3%.

Unit 2 – came offline on Monday night, 11/03/14, at 2350 hours. This is day 7 of the fall outage, scheduled to complete on 11/19/14.

Unit 3 – is online at a set point of 225,000 pounds of steam per hour. Yesterday unit 3 averaged 224k. Economizer outlet temp is 494 F. Baghouse pressure differential is 7.6". Opacity is 1.7%.

Elwyn noted that GCS isolated baghouse modules 3-5 and 3-12 yesterday. They inspected the bags and found several that needed to be replaced.

E&I is investigating problems with riddling flaps.

TG 1 - is online at reduced load due to the unit 2-fall outage.

TG 2 – is online.

Waste Forecast - There is no waste returning from landfill today due to the unit 2-scheduled outage. Elwyn noted that GCS may be forced to divert tomorrow or Wednesday.

Balance of Plant –

Elwyn noted that the plant wattmeter (net) is out of service and that Duke Power will be on site to trouble shoot.

Cleaning –

There is a large pile of flyash in the containment under the filter press.

Also, there are small piles of ash under the unit 2 SDA and several of the unit 2 baghouse modules where final cleaning was done. Other than those areas the plant is relatively clean today.

Maintenance

Chris S noted the following Maintenance activities today:

- TSI & DCR are continuing on the baghouse hopper project.
- Performing daily CEMS PM's.
- Working on crane 2 again today.

The following unit 2-outage work is being performed:

- The SDA vessel has been cleaned out and UT measurements taken over the weekend by NIC. The UT measurements show some low areas within 2' of the hopper to vertical wall interface, but overall were not too bad.
- TAW continues work on the FD fan & motor base plate.
- TAW is changing out the ID fan motor. PM's are being performed on the ID fan.
- Repairing leaks in the Martin hydraulic system.
- Performing calibrations of instruments.
- Matrix is re-plating the feed hopper.
- Matrix is replacing several tubes inside the 2nd pass of the boiler. UT results revealed several tubes to have thin walls (< .120") on both 2nd pass sidewalls, near the interface of the furnace & 2nd pass.
- Matrix is making wear plate repairs inside the ash dischargers.
- Matrix is replacing burnt out shields on evaporator 1 tubes. These shields were replaced during the Spring outage, indicating high flames/high heat going over into the 2nd pass.
- Matrix is replacing superheater stringer tubes and tube shields.
- (41) shark fins were found to be < 4" & will be replaced.
- Semco is installing new economizer screw conveyors.
- Installing new infrared pyrometers for combustion control.

The following contractors were logged in at the CR today;

- PPM – (27) on days –cleaning & Maintenance support

- PPM – (9) on night shift cleaning
- Coverall – (2) – cleaning
- Safway – (3)- scaffold
- Semco – (7) – installing new economizer screws & maintenance on APC dampers, conveyors, double dump valves
- MJM – (2) – plant E&I support
- Matrix – (35) – unit 2 outage prep, feed hopper, economizer alignment, 2nd pass, superheaters
- Maxim – (17) – grate work, day shift
- Maxim – (15) – grate work, night shift
- RSR Industrial Coatings – (5) – FD fan pedestal
- Neu Ideas – (1) – outage management
- Wm. Beasely – (1) – outage management night shift
- Bales – (2) – site security for outages
- Safety Training & Consultants – (1) – night shift safety manager
- Belt – (4) – replaced siding on south side wind-wall
- TSI - (5) – baghouse hopper project

(136) Total Contractors working on site today

General Comments:

There will be a unit 2 outage meeting today and for as long as the outage lasts. The meeting will be held at 1500 in the conference room of the Classic Admin Bldg.

Eight Covanta staff members were on site today working on the Transition.

Pinellas WTE Daily Report

Edition: 229 - 11.11.14

Date of Report: Tuesday, 11/11/14

It is Veteran's Day; thank a vet for all they did for us.

Tons Received: 4,066 on Monday, 11/10/14 + 0 from landfill

Tons Processed: 2,031 on Monday, 11/10/14

Pit Level: 8,416 tons @ midnight on 11/10/14 – Note: GCS has a discrepancy of 1,600 tons between visual and calculated pit level.

Weather: sunny & beautiful - 0% chance of rain - high 74 - low 62

Boiler 1 Steam Flow set point (lbs/hr): 225,000

Boiler 2 Steam Flow set point (lbs/hr): offline for the fall outage

Boiler 3 Steam Flow set point (lbs/hr): 225,000

TG 1 Power Produced (MW-Hrs): 586 (daily gross 11/10/14)

TG 2 Power Produced (MW-Hrs): 546 (daily gross 11/10/14)

Net Power Exported (MW-Hrs): 937 (net for 11/10/14) – Note: this is an estimate; the net wattmeter is still out of service

Safety:

No accidents reported.

I noted that pallets of grate bars had been staged next to the switchyard. I spoke to Karl Giambo who had them pulled back without raising the mast of the forklift used.

Brian O noted that scaffold for the lip of the feed hopper re-plating would be hung off the parapet wall today.

Environmental Compliance:

No exceedances reported.

Beth noted that FRCC has sent the County paperwork to sign and forward to NRCC that will de-register the facility. If this goes through, Pinellas will be the 1st WTE facility to be let off the hook.

At Becky's request, I asked George Ball-llovera to have Covanta's Regional CEMS expert come by to review the problems on the opacity monitors. George said he would check Greg Z's schedule & have Greg here, if possible.

Testar will be here on November 19 to set up for the PM 2.5 stack test. Actual testing is scheduled for the 20th and 21st.

Operations:

Elwyn reported that a non-Fe load would be shipped out tomorrow.

Unit 1 – is online at a set point of 225,000 pounds of steam per hour. Yesterday unit 1 averaged 224k. Economizer outlet temp is 511 F. Baghouse pressure differential is 6.6". Opacity is .6%.

Unit 2 – came offline on Monday night, 11/03/14, at 2350 hours. This is day 8 of the fall outage, scheduled to complete on 11/19/14.

The unit 2-outage work is proceeding well, ahead of schedule. The 1st hydro is planned for tomorrow. If all goes well, the unit could be ready for service earlier than scheduled. However, the 3rd pass rear wall will undoubtedly have leaks, and the number of leaks and the number hydros that must be performed will dictate whether an early completion is possible.

Unit 3 – is online at a set point of 225,000 pounds of steam per hour. Yesterday unit 3 averaged 221k. Economizer outlet temp is 503 F. Baghouse pressure differential was 7.5" early in the morning; however, it had risen to 13.7" by noon; we need to watch this. Opacity is 1.8%.

Elwyn noted that some hot fuel went through the furnace this morning.

Elwyn noted that bags will probably have to be changed out in several modules during the December outage.

TG 1 - is online at reduced load due to the unit 2-fall outage.

TG 2 – is online.

Waste Forecast - There is no waste returning from landfill today due to the unit 2-scheduled outage.

GCS called for a Level 3 diversion today. Elwyn felt the diversion would be probably be needed tomorrow, also.

Balance of Plant –

Elwyn noted that the plant wattmeter (net) is still out of service and that Duke Power did not show up yesterday to trouble shoot; hopefully they'll make it today. GCS can pull data off the Duke web site.

Crane 2 is out of service again today. There are issues with the holding brake. There have been crane problems almost every day for several weeks now, with crane 2 being the baddest actor.

Marc noted that RSPB has been running at 100% for 7 days in a row now.

Cleaning –

There is a small pile of flyash in the containment under the filter press. Also, there are small piles of wet ash under the unit 2 dischargers. Other than those areas, the plant is relatively clean today.

Maintenance

Chris S noted the following Maintenance activities today:

- TSI is continuing the baghouse hopper project.
- Performing daily CEMS PM's.
- Working on crane 2 again today.
- Performing sootblower PM's.
- Atlas Copco is scheduled to be on site tomorrow, with parts, to put compressor A back into service.

The following unit 2-outage work is being performed:

- The SDA vessel has been cleaned out and UT measurements taken by NIC. By tomorrow Chris Neu says we should have UT data in an acceptable format. Work is starting on patching holes and installing straps between the vertical walls and the hopper.
- TAW continues work on the FD fan & motor base plate.

- TAW changed out the ID fan motor, bearings have been replaced, and alignment completed.
- Continuing repair of leaks in the Martin hydraulic system.
- Matrix continues re-plating the feed hopper.
- Matrix continues tube work inside the 2nd pass of the boiler and in the superheater.
- Matrix is making wear plate repairs inside the ash dischargers.
- Matrix is replacing burnt out shields on evaporator 1 tubes. These shields were replaced during the Spring outage, indicating high flames/high heat going over into the 2nd pass.
- Semco is installing new economizer screw conveyors & working on the SDA slide gates.
- Plattco is re-furbishing the 3 convection hopper dump valves.
- Maxim is installing new grate bars (upper 4 steps) and old/jigged bars (lower 11 steps) & mostly new compensation plates/division blocks. This work is expected to be complete and the grates ready for functional testing tomorrow morning.
- Brian O and OP's staff are grabbing spot UT readings in the superheater.

The following contractors were logged in at the CR today;

- PPM – (19) on days –cleaning & Maintenance support
- PPM – (10) on night shift cleaning & outage support
- Coverall – (2) – cleaning
- Safway – (13)- scaffold
- Semco – (11) – installing new economizer screws - maintenance on APC dampers, conveyors, double dump valves, slide gates
- MJM – (2) – plant E&I support
- Matrix – (35) – unit 2 outage - feed hopper, economizer alignment, 2nd pass, superheaters
- Maxim – (19) – grate work, day shift
- Maxim – (15) – grate work, night shift
- RSR Industrial Coatings – (4) – FD fan pedestal
- Plattco – (3) – convection hopper dump valves
- TAW – (3) – #2 FD fan base plate, changing #2 ID fan motor
- Neu Ideas – (1) – outage management
- Wm. Beasely – (1) – outage management night shift

- Bales – (2) – site security for outages
- Safety Training & Consultants – (1) – night shift safety manager
- Belt – (4) – replaced siding on south side wind-wall
- Precision Doors – (1) – estimate for damage repair to Bay 6 Tipping Bldg door
- DCR – (1) – welding studs for baghouse heaters
- TSI - (5) – baghouse hopper project

(152) Total Contractors working on site today

General Comments:

There will be a unit 2 outage meeting today and for as long as the outage lasts. The meeting will be held at 1500 in the conference room of the Classic Admin Bldg.

Four Covanta staff members were on site today working on the Transition.

There was a baghouse hopper project update meeting held this morning. Joe Cascio, Russ, and Jeremie (TSI) attended. Joe will issue minutes separately. Joe did say that TSI had completed electrical resistance testing on all heaters on the 5 hoppers that had tested badly during initial current testing. Most of the heaters on these 5 hoppers are bad.

A conference call is scheduled for tomorrow morning with the GCS transition team and the County to clarify GCS' role in planning the December outage work.

A conference call is scheduled for tomorrow afternoon with Covanta's Purchasing group and the GCS Purchaser to discuss P.O.'s for parts & labor for the December outages.

Pinellas WTE Daily Report

Edition: 230 - 11.12.14

Date of Report: Wednesday, 11/12/14

Tons Received: 1,281 on Monday, 11/11/14 + 0 from landfill

~ 1,800 tons were diverted to landfill on 11/11/14

Tons Processed: 2,019 on Monday, 11/11/14

Pit Level: 7,253 tons @ midnight on 11/11/14

Weather: sunny & beautiful - 0% chance of rain - high 76 - low 60

Boiler 1 Steam Flow set point (lbs/hr): 180,000

Boiler 2 Steam Flow set point (lbs/hr): offline for the fall outage

Boiler 3 Steam Flow set point (lbs/hr): 180,000

TG 1 Power Produced (MW-Hrs): 582 (daily gross 11/11/14)

TG 2 Power Produced (MW-Hrs): 540 (daily gross 11/11/14)

Net Power Exported (MW-Hrs): 927 (net for 11/11/14) – Note: this is an estimate; the net wattmeter is still out of service

Safety:

No accidents reported.

Environmental Compliance:

No exceedances reported.

Opacity “errors” appeared again, but only for about an hour, and only on unit 1.

George Ball-llovera announced that Greg Z, Covanta’s Regional CEMS expert, would be here November 24 to review the CEMS, and the opacity monitor issues.

Testar will be here on November 19 to set up for the PM 2.5 stack test. Actual testing is scheduled for the 20th and 21st.

Operations:

Loads were dropped to 180k this morning due to problems with conveyor C4 in RSPB.

Elwyn reported that the non-Fe load shipped out today.

Unit 1 – is online at a set point of 225,000 pounds of steam per hour. Yesterday unit 1 averaged 223k. Economizer outlet temp is 501 F. Baghouse pressure differential is 4.7". Opacity is .4%.

The 4.7" baghouse DP could be an error. It has been running steadily ~ 7.0", and there is no real reason for it to drop. If it is an error, it could cause damage to the bags by decreasing cleaning cycles. E&I to check it out.

Unit 2 – came offline on Monday night, 11/03/14, at 2350 hours. This is day 9 of the fall outage, scheduled to complete on 11/19/14.

The unit 2-outage work is proceeding well, ahead of schedule. The 1st hydro is planned for tonight. If all goes well, the unit could be ready for service earlier than scheduled. However, the 3rd pass rear wall will undoubtedly have leaks, and the number of leaks and the number hydros that must be performed will dictate whether an early completion is possible.

Unit 3 – is online at a set point of 180,000 pounds of steam per hour. Yesterday unit 3 averaged 220k. Economizer outlet temp is 545 F. Baghouse pressure differential was 7." Opacity is 1.8%.

I made an error in yesterday's Report, listing baghouse DP at 13.1%. It was actually in the 7" to 8" range. Whoops!

TG 1 - is online at reduced load due to the unit 2-fall outage.

TG 2 – is online.

Waste Forecast - There is no waste returning from landfill today due to the unit 2-scheduled outage.

Balance of Plant –

The plant wattmeter (net) is still out of service and Duke Power did not show up yesterday to trouble shoot. Duke was on site today, but

apparently was having problems. When they pulled the meter out they lost power & the program.

Chuck noted that a plumber would be on site to make various repairs in several restrooms. Thank God for small favors.

Conveyor C4 in RSPB has issues. The belt is folding over and the edges flapping. It is scheduled for replacement during the December common outage. If it does not make it until then, a quick replacement with super screws can be made. The belt could then be vulcanized during the common outage.

Cleaning –

There is a small pile of flyash in the containment under the filter press. Other than that, the plant is relatively clean today.

Maintenance

Chris S noted the following Maintenance activities today:

- TSI is continuing the baghouse hopper project.
- Performing daily CEMS PM's.
- Atlas Copco is on site today, with parts, to put compressor A back into service.
- Repaired train B of the carbon system; the feeder was plugged.
- Replacing a poppet valve on a unit 3 rotary sootblower (warranty issue).

The following unit 2-outage work is being performed:

- GCS is filling the boiler this evening and will hydro later tonight. They started filling earlier and found leaks on the roof of the 2nd pass, had to stop filling, and Matrix is currently making repairs.
- We are awaiting UT data from Chris Neu on the SDA vessel walls. Work is starting on patching holes and installing straps between the vertical walls and the hopper.
- TAW completed work on the FD fan motor pedestal and rails.
- Continuing repair of leaks in the Martin hydraulic system.
- Matrix continues re-plating the feed hopper.
- Matrix continues tube work inside the 2nd pass of the boiler and in the superheater.

- Matrix is making wear plate repairs inside the ash dischargers.
- Matrix is replacing burnt out shields on evaporator 1 tubes.
- Semco is installing new economizer screw conveyors.
- Plattco is re-furbishing the 3 convection hopper dump valves.
- Maxim has completed installation of new grate bars (upper 4 steps) and old/jigged bars (lower 11 steps) & mostly new compensation plates/division blocks. Functional testing is now planned for tonight.
- Flotec arrived to check out the attemperator controls valves. They forgot to bring gaskets and will return tomorrow, hopefully with gaskets.
- The attemperator nozzles were removed for inspection. They looked good, and have been replaced.

I do not have a count of contractors on site today; there is a bunch of them

General Comments:

There will be a unit 2 outage meeting today and for as long as the outage lasts. The meeting will be held at 1500 in the conference room of the Classic Admin Bldg.

Eight Covanta staff members were on site today working on the Transition.

The County has given GCS (Russ) their answer on extra work for TSI on the baghouse hopper project. The only hopper wall plate repair will be the minimum needed to scab new plate over thin areas to allow stud welding. The 2 walls of hopper 1-5 that have no heaters working will be stripped of insulation & lagging, new heaters installed, and insulation & lagging replaced. Module 1-5 has had problems recently.

A conference call was scheduled for today with Covanta's Purchasing group and the GCS Purchaser to discuss P.O.'s for parts & labor for the December outages.

Marc noted that a conference call today between GCS' Transition team and the County resolved issues with, and now allows, GCS to continue planning and assisting Covanta with the December outages.

Pinellas WTE Daily Report

Edition: 231 - 11.13.14

Date of Report: Thursday 11/13/14

Prepared by: Paul Hauck

Tons Received: 2,914 on Wednesday 11/12/14 + 0 from landfill

Tons Processed: 1,893 on Wednesday, 11/12/14

Pit Level: 8,078 tons @ midnight on 11/12/14

Weather: Partly cloudy, 0 percent chance of rain, high 79 - low 57

Boiler 1 Steam Flow set point (lbs/hr): 225,000

Boiler 2 Steam Flow set point (lbs/hr): Off line for fall outage

Boiler 3 Steam Flow set point (lbs/hr): 225,000

TG 1 Power Produced (MW---Hrs): 566(daily gross 11/12/14)

TG 2 Power Produced (MW---Hrs): 536 (daily gross 11/12/14)

Net Power Exported (MW---Hrs): 907(net estimated for 11/12/14)

Note that Elwyn estimated the net power due to inoperable Duke Energy electric meter based upon assumed parasitic use of 195 MWH.

Covanta Activities:

Phil Crepps and Bryan Pedersen (Boiler Reliability Specialists) were on site to inspect elements of Boiler No. 2. Joe Treshler was also on-site.

Safety:

Marc McMenamin dismissed a contractor worker from Maxim this morning when he was observed inside of the SDA No. 2 without his hard hat and smoking a cigarette. Robert Tilley also noted that a loose section of plate over a cutout in the grating around the SDA No. 2 has been removed and the area roped off until a permanent repair is made.

Environmental Compliance:

Paul observed a small cloud of lime dust around the top of the lime silo this morning while the unit was being filled. The fill process was immediately terminated by GCS and the root cause of the problem was later determined to be a loose Miltonics level probe attached to the roof of the silo, which was

repaired later in the day.

Becky reminded the team that the PM 2.5 testing will occur on November 20 and 21 as earlier noted.

Operations:

Unit 1 – online at a set point of 225,000 pounds of steam per hour. Economizer outlet temp is 552F, Baghouse differential pressure is 6.4 inches, and opacity at 0.3 ppm.

Unit 2 – offline due to fall outage.

Unit 3 – online at a set point of 225,000 pounds of steam per hour. Economizer outlet temp is 520 F. Baghouse differential pressure is 7.5 inches, and opacity at 1.4 ppm.

TG 1 – online at partial load (23.5 MW recorded at 0815)

TG 2 - on line at full load (22.5 MW recorded at 0815)

Waste Forecast – Level II diversion anticipated today from 0800-1600 hours.

Unit No. 2 Outage

1. The No.2 Boiler was filled yesterday and numerous leaks were found. Repairs by Matrix are on-going and the unit will be filled again and hydro-tested later today if all goes as planned. Scaffolding is being installed inside the first pass for refractory work.
2. Thimbles are being installed in the fabric filter No. 2 compartments which were not replaced in the past.
3. Chris Neu has completed numerous UT readings in the SDA yesterday, and will be obtaining additional readings today. A number of small holes and thin metal has been observed in a localized area approximately 6-inches above and below the shell-hopper weld line, in the Southwest and Northwest quadrants. The holes are being patched with ¼" thick plate and ¼ inch thick support straps are being installed on approximately 2' centers around the perimeter of the weld line. The straps extend 17 inches up the shell wall, and 36" down along the

hopper wall. Welding of the straps is delicate due to the thin metal in some areas. I was able to observe the thickness of the hopper in a few of the cutout areas where the scaffolding supports penetrate the hopper. The metal appeared to be ~ 3/32 inch thick (0.093") in several locations. This is approximately 30% of the original metal thickness (5/16").

4. Economizer No. 2 screw conveyor continues to be installed. Bryan noted that the installation crew was asked to stand down until congestion in the area due to boiler No.2 staging work subsided.
5. Marc noted that the grates were operated on Boiler No. 2 yesterday and they operated smoothly and quietly. A few hydraulic leaks remain to be repaired today.
6. Joe Cascio noted that TSI has been instructed to perform minimal plate repairs to the FF hoppers, and continue to install and test the remaining heaters.

Balance of Plant

1. The temporary air compressor remains on-site to serve as a backup for the North compressor, which went out of service on Friday (10/17/14) at 1700 hours. Atlas Copco is on-site continuing to make repairs on the corroded inlet ducting and silencer, which resulted in a glycol leak due to damage to the heat exchanger and flap valve.
2. The facility electric watt meter was repaired by Duke Power yesterday.
3. Paul noted that the bottom ash and downstream metal recovery system was operating today. However, the splitter plate for the Eddy Current System was observed to contain a heavy buildup of mud and foreign objects. Elwyn noted that the pressure washer used in the RSPB broke last night.

Cleaning

1. The plant inside the wind walls was clean today.

Maintenance

The following GCS Maintenance activities are scheduled to be performed today:

- There is a small leak in the drain line from the refuse crane pulpit in need of repair.
- Several small holes (0.5 -1.0 inch diameter) were found in the round chute above the SDA No. 2 slide gate valves.
- Continuing repairs on refuse crane No. 2 and No. 3

- Daily CEMS preventive maintenance
- Archiving of DCS data

General Comments:

1. The following contractors were logged in at the control room for Friday:
 - a. Beit Construction (2) – door repairs
 - b. Matrix (28) – leak repairs, installation of shield, B-102 feed chute
 - c. Semco (7) – Unit 2 economizers (3) and Baghouse repairs (4)
 - d. Safeway 15 – Boiler 2 insulation repairs (3) and scaffold in Boiler No. 2 (12)
 - e. Maxim (23) – B-102 outage support
 - f. MJM (2) – E/I
 - g. Alliance Fire (1) – Monthly fire inspection
 - h. TSI (5) installation and wiring of heaters on FF Unit No. 2
 - i. Gaffin (3) – Vacuum service
 - j. PPM (10) – laborers in RSPB (3) and general cleanup (7)

End of report

Pinellas WTE Daily Report

Edition: 232 - 11.14.14

Date of Report: Friday, 11/14/14

Tons Received: 2,483.64 on Thursday, 11/13/14

Tons Processed: 1,931 on Thursday, 11/13/14

Pit Level: 9,476 tons @ midnight on 11/13/14

Weather: Partly cloudy, 10% chance of rain, high of 66° and a low of 48°

Boiler 1 Steam Flow set point (lbs/hr): 225,000 (avg. 223,000)

Boiler 2 Steam Flow set point (lbs/hr): Off Line for Fall Outage

Boiler 3 Steam Flow set point (lbs/hr): 225,000 (avg. of 220,000)

TG1 Power Produced (MWHrs): 578 (daily gross 11/13/14)

TG 2 Power Produced (MWHrs): 537 (daily gross 11/13/14)

Net Power Exported (MWHrs): 925 (net for 11/13/14)

Station Service (parasitic load): 190 MWH for 11/13/14

Safety:

Elwyn asked Maxim to install blankets/shields between adjacent work areas to minimize the impacts from grinding and welding. Robert reported there were no other incidents to report.

Covanta Activities: There were approximately seven Covanta staff on site today. This included Al Cossy and Ron Gall who are the South Region Electrical Supervisor and Electric Field Services Manager respectively. Al and Ron met with Russ Waldbesser and Joe Cascio to review: LOTO procedures, plant electrical one-lines, maintenance history on high and medium voltage gear, and upcoming outage plans. Subsequently, they toured the facilities and visited locations of all major electrical systems.

Environmental Compliance:

No exceedances reported.

Opacity on Units 1, 2 and 3 were 0.6, 0.2 and 1.9% respectively.

Spectrum was on site on Thursday; opacity monitoring excursions have apparently been eliminated

Operations:

Unit 1 –online at a set point of 225,000 pounds of steam per hour. Economizer outlet temp is 515° F.

Unit 2 – offline due to fall outage.

Unit 3 – online at a set point of 225,000 pounds of steam per hour. Economizer outlet temp is 534°F. Sootblowers will be operated today.

TG 1 – online at 20.5MW recorded at 1108 hrs. Thrust bearing temperature was 154° F

TG 2 - online at 20.6 MW recorded at 1108 hrs. Highest thrust bearing temperature was observed to be 166° F.

Due to good condenser vacuum and ambient conditions a cooling tower cell was removed from service to reduce plant parasitic load and increase electric energy transmission to the grid. Subsequent investigations into condenser vacuum revealed no appreciable impact to vacuum levels.

Waste Forecast – Level II diversion today from 0700 to 1600hrs.

Balance of Plant

1. Baghouse 1 had a ΔP of 6.9"
2. Baghouse 2 ΔP not recorded due to Unit Outage
3. Baghouse 3 had a ΔP of 7.7"

Unit 2 Outage

- Last Hydro (Thursday night) revealed 8 leaks located in steam walls, penthouse, and lower dead air space

- Scaffolding has been set up in the first pass to facilitate application of refractory
- Shield installation in the second and third pass will continue into the night
- Scaffold in the economizer will be removed today
- SDA scaffold is also being dismantled and the hopper patched to seal all openings
- Alignment bars in the fourth pass should be completed on Saturday
- Installation of thimbles in Number 2 Baghouse have been completed
- If and FDF have been set in place and aligned
- Chris Neu has completed UT investigations and is assembling the data in a spreadsheet which he will subsequently publish and convey to interested parties
- Installation of new Economizer screw conveyors should be completed late today
- It's anticipated that the Unit will be returned to Operations on Monday, November 17, 2014

Maintenance

The following GCS Maintenance activities are being performed today:

- TSI and DCR ceased work on the Baghouse hoppers late Thursday. Work to complete installation of heaters (including minor metal work necessary to affix the heater mounting studs) and temperature sensors will resume Monday, November 17, 2014
- The A slacker grit screen foundation is badly rotted and will be replaced
- V 8 finger-rack (located just prior to eddy current system) to be replaced
- Corroded grating on SDA (1st elevation above grade) and near C12 will be replaced
- Number 2 Refuse Crane has an intermittent control issue thought to be associated with the festoon cable. Kone has been contacted and will travel to the site to investigate same
- After placing the #2 FDF motor on its pedestal, the location of the motor heaters was found to be on the far side of the electric service junction box. This is not a major issue and can be

resolved by extension of the electric circuit using seal-tight conduit

On Site Contractors and Support Personnel

The following contractors are working on site today and logged in at the CR:

- PPM – (12) on days – cleaning and maintenance support
- SEMCO – (7) Unit 2 economizer and baghouse
- DCR – (3) hopper repairs
- Safeway (13) scaffold, insulation and lagging
- Safeway inspector - (1) on night shift – one on day shift
- Maxim – (16) Unit 2 outage support
- MJM – (2) E&I
- Coverall – (2) 3rd floor cleaning
- Atlas Copco – (2) air compressor inspection/maintenance
- USA Service – (1) sweeper
- Zampell – (10) unit refractory
- Tampabay Fire Protection – (1) Quarterly fire sprinkler system inspection

(70) Total Contractors on site today

General Comments:

An outage meeting was held in the Classic Admin. Building at 1300 hrs.

Pinellas WTE Daily Report

Edition: 233 - 11.15.14

Date of Report: Sunday 11/16/14

Prepared by: Paul Hauck

Note: Abbreviated report based upon outage meeting at 1500 and follow-up inspection. The outage meeting was attended by Chris Neu, Marc McMenamin, Matrix (2), and outage project manager (1) and safety manager (1).

Tons Received: x,xxx (later) on Saturday 11/15/14 + 0 from landfill

Tons Processed: x,xxx (later) on Saturday, 11/15/14

Pit Level: x,xxx (later) tons @ midnight on 11/15/14

Weather: Partly cloudy, 0 percent chance of rain, high 72 - low 50

Boiler 1 Steam Flow set point (lbs/hr): 225,000

Boiler 2 Steam Flow set point (lbs/hr): Off line for fall outage

Boiler 3 Steam Flow set point (lbs/hr): 225,000

TG 1 Power Produced (MW---Hrs): xxx (later) (daily gross 11/15/14)

TG 2 Power Produced (MW---Hrs): xxx (later) (daily gross 11/15/14)

Net Power Exported (MW---Hrs): xxx (later) (net for 11/15/14)

Covanta Activities: Nothing to report.

Safety:

During a plant inspection following the 1500 hour outage meeting, I observed the following potential safety issues:

- There is a pre-existing steam leak in small bore piping between B-102 and B-103 under grating at elevation 20'.
- There is a pre-existing steam leak in small bore piping on south side of B-103 above elevation 64'-8".
- There are two sections of cast grating over the u-trench at the bottom of inclined ash conveyor on the east side which could present tripping hazards.
- There were several sections of insulation (~ 20" in overall length) which

have fallen off of a heat-traced stainless steel tube (1/2" diameter) on the SE corner of Fabric Filter compartment 1-6 (associated with 1-PIT-061)

Environmental Compliance: Nothing to report.

Operations:

Unit 1 – online at a set point of 225,000 pounds of steam per hour. Economizer outlet temp is 476F, Baghouse differential pressure is 6.5 inches, CO at 14.8, and opacity at 0.7 ppm (readings taken at 1700).

Unit 2 – offline due to fall outage.

Unit 3 – online at a set point of 225,000 pounds of steam per hour. Economizer outlet temp is 530 F. Baghouse differential pressure is 7.8 inches, CO at 56, and opacity at 2.1 ppm (readings taken at 1700).

TG 1 – online at partial load (23.5 MW recorded at 1700)

TG 2 - on line at full load (22.5 MW recorded at 1700)

Waste Forecast – Nothing to report.

Unit No. 2 Outage

1. The No.2 Boiler was successfully hydro-tested during the afternoon. The unit was de-pressurized to allow continuation of refractory work and removal of scaffolding.
2. Weld repairs continued on ash expellers.
3. Welding repairs continued on chutes between the single dump valves under evaporator hopper to the rear wall of the stoker (3 places).
4. Plate repairs to feed chute were completed earlier in the day.
5. Repairs in economizer section are complete; there was no evidence of movement of the tubes. New alignment bars and straps were installed.
6. Work continued on efforts to remove one section of SCAH which was found to be leaking (this is one of the older SCAH sections which was repaired during prior outage).
7. Repairs inside of SDA are complete, work continues to install plate sections over holes in lower hopper where scaffolding penetrated the unit. Metal

thickness in this area of the hopper appears to range from 3/32" to 1/8"; which presents a difficult situation for welding up the patches. High temperature silicone sealant is being applied to the outside perimeter of the patches to prevent tramp air infiltration on some of the plates as a precaution.

8. Weld repairs to the small hairline leaks in the water cooled feed chutes continues.

Balance of Plant

1. The bottom ash and downstream metal recovery system was operating today.

Cleaning

1. The plant inside the wind walls was clean today.

Maintenance: Nothing to report.

Outage Contractors:

1. The following contractors were logged in at the control room for Friday:
 - a. Zampell (9) – refractory repairs
 - b. Matrix (27) – B-102 feed chute repairs, ash discharger repairs, 2nd and 3rd pass shields.
 - c. Semco (3) – Unit 2 economizer repairs
 - d. Safeway 18 – Boiler 2 insulation repairs (5) and dismantling of scaffold in SDA No. 2 (13)
 - e. Maxim (17) – B-102 outage support, SDA plate repairs, feed chutes leak repairs
 - f. PPM (9) –general cleanup

End of report

Pinellas WTE Daily Report

Edition: 234 - 11.17.14

Date of Report: Monday, 11/17/14

Tons Received: Not available at time of this report

Tons Processed: 1,908 on Sunday, 11/16/14

Pit Level: 7,026 tons @ midnight on 11/16/14

Weather: Partly cloudy, 70% chance of rain, high of 81° and a low of 48°

Boiler 1 Steam Flow set point (lbs/hr): 225,000 (avg. 224,000)

Boiler 2 Steam Flow set point (lbs/hr): Off Line for Fall Outage

Boiler 3 Steam Flow set point (lbs/hr): 225,000 (avg. of 221,000)

TG1 Power Produced (MWHrs): 580 (daily gross 11/16/14)

TG 2 Power Produced (MWHrs): 542 (daily gross 11/16/14)

Net Power Exported (MWHrs): 918 (net for 11/16/14)

Station Service (parasitic load): 204 MWH for 11/16/14

Safety:

No safety incidents to report over the weekend.

Covanta Activities: A review by Covanta staff regarding the need for a Black Plant outage in 2015 is in progress. Al Cossy with Covanta indicated that a 2015 Black Plant may not be necessary. Russ Waldbesser responded with information on what relevant electrical systems were due for inspection and testing in 2015. The matter is under review with a consensus decision likely before week's end.

Environmental Compliance:

No exceedances reported.

Testar is scheduled to be here on Wednesday in preparation for PM 2.5 testing which will occur on Thursday, November 20, 2014.

Opacity on Units 1, 2 and 3 were 0.4, 0.3 and 1.7% respectively.

Operations:

Unit 1 –online at a set point of 225,000 pounds of steam per hour. Economizer outlet temp is 494° F.

Unit 2 – Turned over to Operations around 1700 hrs. on Sunday. The burners continue to be problematic – the north burner did not ignite; a flame on the south burner was achieved but only after several attempts. The Unit was on trash around 1100 hrs. and should be “on line” around 1300 hrs. today.

Unit 3 – online at a set point of 225,000 pounds of steam per hour. Economizer outlet temp is 520°F. Sootblowers will be operated later today.

TG 1 – online at 24MW recorded at 1045 hrs. Thrust bearing temperature was 158° F

TG 2 - online at 22 MW recorded at 1108 hrs. Highest thrust bearing temperature was observed to be 166° F.

Good condenser vacuum of 27.6” Hg and 26.6” Hg were observed for TG-1 and TG-2 respectively.

Waste Forecast – No diversions are anticipated today.

Balance of Plant

1. Baghouse 1 had a ΔP of 6.5”
2. Baghouse 2 ΔP not observed as of this writing.
3. Baghouse 3 had a ΔP of 7.8”

Maintenance

The following GCS Maintenance activities are being performed today:

- Atlas Copco (AC) continues to investigate the reported loss of glycol coolant for the A air compressor. Earlier observation of oil frothing in the sight glass resulted in the compressor being shut down to investigate potential detrimental effects. The AC rep indicated these type occurrences are not unusual and are typically non-consequential.
- TSI and DCR were not working on the Baghouse hoppers today. Jeremie Eastin, TSI on site Project Manager will host an update meeting tomorrow at 1000 hrs. in the Classic Admin Building.
- Rental Bobcat has been washed and is ready to be picked up.
- A Track-hoe was rented to clean the trench east of the VC. The collected materials are being transported to the Ash Building for dewatering and subsequent missing with dry ash.
- Operators were having problems getting the No. 2 FDF Breaker to close. This breaker is located in the infamous BUS 101 lineup. I will confer with Russ Waldbesser to develop a plan to improve the reliability of this breaker.
- DCS data will be downloaded.
- TG-1 and TG-2 exciter brushes will be inspected.
- 02 Probe for unit will be installed.
- Walk-down of drag conveyor

On Site Contractors and Support Personnel

The following contractors are working on site today and logged in at the CR:

- SEMCO – (3) Unit 2 economizer and baghouse
- DCR – (3) hopper repairs
- Safeway (7) scaffold tear downs and prep for loading for transportation off site
- MJM – (2) E&I
- Atlas Copco – (1) “A” air compressor intercooler inspection/maintenance
- USA Service – (1) sweeper
- Zampell – (7) tear outs on Unit 2
- ASI – (4) Insulators for Units 1, 2, and 3
- Belt Construction –(2) Inspections

(30) Total Contractors on site today

Pinellas WTE Daily Report

Edition: 235 - 11.18.14

Date of Report: Tuesday, 11/18/14

Tons Received: Not available at time of this report

Tons Processed: 2,275 on Monday, 11/17/14

Pit Level: 8,695 tons @ midnight on 11/17/14

Weather: Overcast, 60% chance of rain, high of 57° and a low of 37°

Boiler 1 Steam Flow set point (lbs/hr): 225,000 (avg. 220,000)

Boiler 2 Steam Flow set point (lbs/hr): 225,000 (avg. 218,000)

Boiler 3 Steam Flow set point (lbs/hr): 225,000 (avg. of 221,000)

TG1 Power Produced (MWHrs): 793 (daily gross 11/17/14)

TG 2 Power Produced (MWHrs): 531 (daily gross 11/17/14)

Net Power Exported (MWHrs): 1108 (net for 11/17/14)

Safety:

No safety incidents to report.

Covanta Activities: There were approximately seven Covanta staff members present today. Among them was Robert Hollingshead, Manager Crane Service. Robert engaged in conversation with Russ Waldbesser, Chris Schuckert and Joe Cascio regarding Refuse Crane(s) history as well as recent crane restorative measures recommended by Kone Crane Services.

Environmental Compliance:

No exceedances reported.

Testar is scheduled to be here on Wednesday in preparation for PM 2.5 testing. Unit 1 will be tested on Thursday, November 20, 2014; followed by testing for Unit 2 on Friday, November 21, 2014.

Rebecca indicated that DEP may have a staff member attend during the stack tests. She also indicated DEP's presence to witness stack tests is not routine.

Opacity on Units 1, 2 and 3 were 0.65, 1.53 and 1.87% respectively.

Operations:

Unit 1 – online at a set point of 225,000 pounds of steam per hour. Economizer outlet temp is 520° F.

Unit 2 – online at a set point of 225,000 pounds of steam per hour. Economizer outlet temp is 415° F.

Unit 3 – online at a set point of 225,000 pounds of steam per hour. Economizer outlet temp is 557°F. Sootblowers will be operated later today.

TG 1 – online at 46MW recorded at 0930 hrs. Highest thrust bearing temperature was 182° F

TG 2 - online at 22 MW recorded at 0930 hrs. Highest thrust bearing temperature was observed to be 167° F.

Good condenser vacuum of 27.7” Hg and 28.1” Hg were observed for TG-1 and TG-2 respectively.

Waste Forecast – No diversions are anticipated today.

Balance of Plant

1. Baghouse 1 had a ΔP of 6.4”
2. Baghouse 2 had a ΔP of 7.4”
3. Baghouse 3 had a ΔP of 8.7”

Maintenance

The following GCS Maintenance activities are being performed today:

- Broken middle spring on V10 (behind motor) will be replaced
- TSI and DCR were on site mounting heaters and doing minimal metal work to seal hopper wall and neck penetrations.
- A rental forklift will be rented for 4 days during the first week of December. The forklift is needed to facilitate segregation of GCS inventoried spare parts.

- The Track-Hoe has been effective in removing the solids (ash) from the contact sump. This work should be concluded by week's end.
- DCS data was downloaded today.
- Unit 2 Burners will be inspected and maintained as necessary.
- Work on integrating the O2 Probe into the monitoring system continues.
- A new 90° elbow will be installed on the treated water make-up pump to accommodate a better integration into the affected piping system.
- A flange gasket on a #3 SB will be replaced; additionally, small steam leaks in the sootblower's supply line will be repaired.
- Repairs to #2 Pug Mill
- Weld/repair the #2 Economizer Screw
- Daily PM for the CEM system
- Repair/rehabilitate lighting in the 3rd floor office area as well as the areas around Unit 3.
-

On Site Contractors and Support Personnel

The following contractors are working on site today and logged in at the CR:

- SEMCO – (2) Baghouse
- DCR – (3) hopper repairs
- Safeway (4) scaffold tear downs on elevation 20' and prep for loading for transportation off site
- MJM – (2) E&I
- ASI – (4) insulation and lagging for Units 1, 2, and 3
- PPM (5) night cleanup
- Chem Aqua (1) water treatment and lab

(21) Total Contractors on site today

Pinellas WTE Daily Report

Edition: 236 - 11.19.14

Date of Report: Wednesday, 11/19/14

Tons Received: 3,591 on Tuesday, November 18, 2014 with no diversions

Tons Processed: 2,799 on Tuesday, 11/18/14

Pit Level: 8,730 tons @ midnight on 11/18/14

Weather: Mostly cloudy, no rain forecasted; high of 59° and a low of 43°

Boiler 1 Steam Flow set point (lbs/hr): 225,000 (avg. 220,000)

Boiler 2 Steam Flow set point (lbs/hr): 225,000 (avg. 212,000)

Boiler 3 Steam Flow set point (lbs/hr): 225,000 (avg. of 220,000)

TG1 Power Produced (MWHrs): 1,148 (daily gross 11/18/14)

TG 2 Power Produced (MWHrs): 542 (daily gross 11/18/14)

Net Power Exported (MWHrs): 1461 (net for 11/18/14)

Safety:

No safety incidents to report. Robert Tilley reported having walked down the entire facility with no notable safety issues. Additionally, after conferring with Covanta management, Robert indicated the current safe work practices would continue to be observed during the upcoming fall outage.

A new signage program has been implemented by Safeway where tags (stating no alterations allowed) are attached to all erected scaffolding.

Covanta Activities: There were several new Covanta visitors at the plant today including a small contingent from procurement.

Ringpower documentation for the Plant's two front end loaders (#'s 1912 & 1933) has been requested. The information will be used to determine cost effectiveness of retaining the loaders or if the equipment should be replaced with new units.

Also present were Mark Kramer, Senior Turbine Specialist, and Joseph Flannagan Jr., PE, Senior Reliability Engineer.

Joe Treshler, Jack Holmes and Paul Hauck discussed erosion to the pit walls. Paul and Jack will assess the conditions and determine if immediate actions are required; and if do, will offer remediation proposals.

Environmental Compliance:

No exceedances reported.

TESTAR is here today prepping for PM 2.5 testing. Unit 1 will be tested on Thursday, November 20, 2014; followed by testing for Unit 2 on Friday, November 21, 2014. Tammy Stankunas plans to be on site to monitor the tests on Thursday and Friday.

Opacity on Units 1, 2 and 3 were 0.71, 1.6 and 2.3% respectively.

Operations:

Unit 1 – online at a set point of 225,000 pounds of steam per hour. Economizer outlet temp is 570° F. Sootblowers will be operated later today.

Unit 2 – online at a set point of 225,000 pounds of steam per hour. Economizer outlet temp is 451° F.

Unit 3 – online at a set point of 225,000 pounds of steam per hour. Economizer outlet temp is 523°F.

TG 1 – online at 48MW recorded at 1000 hrs. Highest thrust bearing temperature was 184° F

TG 2 - online at 22 MW recorded at 1000 hrs. Highest thrust bearing temperature was observed to be 169° F.

Good condenser vacuum of 28.0” Hg and 28.0” Hg were observed for TG-1 and TG-2 respectively.

Waste Forecast – No diversions are anticipated today.

Balance of Plant

1. Baghouse 1 had a ΔP of 7.5"
2. Baghouse 2 had a ΔP of 6.8"
3. Baghouse 3 had a ΔP of 7.9"

Maintenance

The following GCS Maintenance activities are being performed today:

- Cleanout of the contact sump has been completed
- Replace the Service Water make-up Valve to the Dilution Tank
- TSI and DCR were on site mounting heaters and doing minimal metal work to seal hopper wall and neck penetrations.
- Repair small steam leaks in the sootblower's supply line
- Repair/rehabilitate lighting in the 3rd floor office area as well as the areas around Unit 3.
- Adjust packing on B Slurry Pump
- Repairs and PMs on mobile equipment (loaders)
- Daily PMs on CEMs
- Make-up leads for the No. 2 SDA live bottom motor
- Replace 3" tertiary water valve to the dilution tank

On Site Contractors and Support Personnel

The following contractors are working on site today and logged in at the CR:

- SEMCO – (3) Baghouse
- DCR – (3) hopper repairs
- Safeway (1) scaffold inspector
- USA Service (1) sweeper
- TSI - (3) Baghouse hopper heater installations
- MJM – (2) E&I
- ASI – (4) insulation and lagging for Units 1, 2, and 3
- PPM (6 +11) clean up on night and day shift respectively
- TESTAR - (3) Units 1&2 Air Tests

(37) Total Contractors on site today (including prior night's work)

Pinellas WTE Daily Report

Edition: 237 - 11.20.14

Date of Report: Thursday, 11/20/14

Tons Received: 2,205 on Tuesday, November 19, 2014 with no diversions

Tons Processed: 2,812 on Wednesday, 11/19/14

Pit Level: 7,730 tons @ midnight on 11/19/14

Weather: Overcast but no rain forecasted; high of 68° and a low of 49°

Boiler 1 Steam Flow set point (lbs/hr): 225,000 (avg. 222,000)

Boiler 2 Steam Flow set point (lbs/hr): 225,000 (avg. 216,000)

Boiler 3 Steam Flow set point (lbs/hr): 225,000 (avg. 219,000)

TG1 Power Produced (MWHrs): 1,178 (daily gross 11/19/14)

TG 2 Power Produced (MWHrs): 539 (daily gross 11/19/14)

Net Power Exported (MWHrs): 1487 (net for 11/19/14)

Safety:

No safety incidents to report.

Covanta Activities: A brief overview of the December outage was presented by Covanta staff. A draft of the outage plans has been developed and will be distributed to interested parties prior to the outage.

Environmental Compliance:

No exceedances reported.

TESTAR is here today performing air test for Unit 1. As of mid-afternoon all was going well with the tests. Unit 2 will be tested tomorrow.

Opacity on Units 1, 2 and 3 were 0.9, 0.9 and 1.9% respectively.

Operations:

Unit 1 – online at a set point of 225,000 pounds of steam per hour. Economizer outlet temp is 512° F.

Unit 2 – online at a set point of 225,000 pounds of steam per hour. Economizer outlet temp is 468° F.

Unit 3 – online at a set point of 225,000 pounds of steam per hour. Economizer outlet temp is 546°F. Sootblowers will be operated later today.

TG 1 – online at 49MW recorded at 0945 hrs. Highest thrust bearing temperature was 186° F

TG 2 - online at 22 MW recorded at 0945 hrs. Highest thrust bearing temperature was observed to be 169° F.

Good condenser vacuum of 27.4” Hg and 27.7” Hg were observed for TG-1 and TG-2 respectively.

Waste Forecast – No diversions are anticipated today.

Balance of Plant

1. Baghouse 1 had a ΔP of 6.2”
2. Baghouse 2 had a ΔP of 6.3”
3. Baghouse 3 had a ΔP of 7.9”

Maintenance

The following GCS Maintenance activities are being performed today:

- Weekly inspection of the manlift and forklift
- Monthly back flush of the cooling water lines
- No. 3 Slurry Recirc. Pump inspection
- Pugmill feeder shock relay inspection
- TSI and DCR were on site mounting heaters and doing minimal metal work to seal hopper wall and neck penetrations.
- Post outage cleanup
- Repair leak on No. 3 south discharger

On Site Contractors and Support Personnel

The following contractors are working on site today and logged in at the CR:

- SEMCO – (3) Baghouse
- DCR – (2) hopper repairs
- Safeway - (5+1) scaffold revoval and an inspector
- TSI - (3) Baghouse hopper heater installations
- MJM – (2) E&I
- ASI – (4) insulation and lagging for Units 1, 2, and 3
- PPM - (7 +14) clean up on night and day shift respectively
- TESTAR - (3) Units 1&2 Air Tests

(44) Total Contractors on site today (including prior night's work)

Pinellas WTE Daily Report

Edition: 238 - 11.21.14

Date of Report: Friday, 11/21/14

Tons Received: 2,762 on Thursday, November 20, 2014 with no diversions

Tons Processed: 2,831 on Thursday, 11/20/14

Pit Level: 7,519 tons @ midnight on 11/20/14

Weather: Overcast with a 10% chance of rain; high of 72° and a low of 59°

Boiler 1 Steam Flow set point (lbs/hr): 225,000 (avg. 225,000)

Boiler 2 Steam Flow set point (lbs/hr): 225,000 (avg. 217,000)

Boiler 3 Steam Flow set point (lbs/hr): 225,000 (avg. 219,000)

TG1 Power Produced (MWHrs): 1,189 (daily gross 11/19/14)

TG 2 Power Produced (MWHrs): 539 (daily gross 11/19/14)

Net Power Exported (MWHrs): 1,499 (net for 11/19/14)

Safety:

No safety incidents to report.

Environmental Compliance:

No exceedances reported.

TESTAR is here today performing air test for Unit 2. As of mid-afternoon all was going well with the tests.

Opacity on Units 1, 2 and 3 were 0.6, 0.5 and 2.3% respectively.

Operations:

Unit 1 – online at a set point of 225,000 pounds of steam per hour. Economizer outlet temp is 547° F. Operations will blow soot later today.

Unit 2 – online at a set point of 225,000 pounds of steam per hour. Economizer outlet temp is 485° F.

Unit 3 – online at a set point of 225,000 pounds of steam per hour.
Economizer outlet temp is 521°F.

TG 1 – online at 47MW recorded at 1015 hrs. Highest thrust bearing temperature was 184° F

TG 2 - online at 22 MW recorded at 1015 hrs. Highest thrust bearing temperature was observed to be 173° F.

Waste Forecast – No diversions are anticipated today.

Balance of Plant

1. Baghouse 1 had a ΔP of 6.5"
2. Baghouse 2 had a ΔP of 6.4"
3. Baghouse 3 had a ΔP of 7.9"

Maintenance

The following GCS Maintenance activities are expected to be performed today:

- Adjust belts on shaker
- Repair/replace chemical pump on #3 chemical day
- Repair poppet valves on Unit 2's sootblower system
- Outage preparation and area clean-ups
- Daily CEM PM's
- No. 1 snicker pump is having controls issue; the electronic I/O card(s) will be replaced
- Temporary power and lighting are being set-up to support the December outage
- Several shorted electric circuits serving the lighting luminaires for the Unit 3 areas have been repaired. Power to approximately 75% of the associated outdoor lighting fixtures has been restored
- Ash Front-end Loaders will be washed this weekend

On Site Contractors and Support Personnel

The following contractors are working on site today and logged in at the CR:

- SEMCO – (3) Baghouse
- DCR – (2) hopper repairs
- Safeway - (5+1) scaffold removal and an inspector
- MJM – (2) E&I
- ASI – (4) insulation and lagging for Units 1 @ 0'elevation
- PPM - (7 +15) clean up on night and day shift respectively
- TESTAR - (3) Unit Air Tests
- USA (1) – Sweeper

(44) Total Contractors on site today (including prior night's work)

Pinellas WTE Daily Report

Edition: 239 - 11.24.14

Date of Report: Monday, 11/24/14

Tons Received: 0 on Sunday, 11/23/14 + 0 from landfill
1,075 on Saturday, 11/22/14

Tons Processed: 2,119 on Sunday, 11/23/14

Pit Level: 3,603 tons @ midnight on 11/23/14

Weather: sunny, warm - 10% chance of rain - high 83 - low 74

Boiler 1 Steam Flow set point (lbs/hr): 225,000

Boiler 2 Steam Flow set point (lbs/hr): 200,000

Boiler 3 Steam Flow set point (lbs/hr): offline due to tube leak

TG 1 Power Produced (MW-Hrs): 1,144 (daily gross 11/23/14)

TG 2 Power Produced (MW-Hrs): 160 (daily gross 11/23/14)

Net Power Exported (MW-Hrs): 1,093 (net for 11/23/14)

Safety:

No accidents reported.

I noted that the skirting/siding was missing on G11, the eddy current separator. G11 was in service, thus creating a rotating equipment safety hazard. I notified the Shift Sup'v. and the CRO.

Environmental Compliance:

Unit 3 had a 4-hour and a 24-hour CO exceedance Sunday morning, 11/23/14, after the tube rupture that brought the unit offline. Elwyn will notify FDEP. This will be classed as a shut down due to a malfunction.

Bays 3 and 4 in the pit were turned over this weekend.

I asked if there were any preliminary reports on PM 2.5 testing from last week. There is not.

Operations:

Unit 1 – is online at a set point of 225,000 pounds of steam per hour. Yesterday unit 1 averaged 223k. Economizer outlet temp is 561 F. Opacity is .7%.

Unit 2 – is online at a set point of 200,000 pounds of steam per hour. Load on unit 2 was dropped to 200k due to problems with conveyor C9 in RSPB. Yesterday unit 1 averaged 207k. Economizer outlet temp is 539 F. Opacity is .9%.

I noted a loud thumping sound coming from the drive end (west end) of the 2-north baghouse screw conveyor. It sounded like a bearing issue, or a drive alignment issue. I notified the Shift Sup'v. and the CRO.

Unit 3 – coded offline around 0740 Sunday morning, 11/23/14. A tube leak in the roof, in the vicinity of the screen tubes that penetrate the roof at the furnace/2nd pass interface appears to be the problem. The leak was substantial, but did not drain the drum immediately. OP's was able to keep drum level for a while, but then had to bring the unit down in a controlled fashion.

Precision blast cleaned the unit yesterday. Safway is here building scaffold up in the furnace and is expected to have it complete by noon. Matrix will make repairs.

In addition to the tube leak, Chris S noted that 1 broken grate bar and several damaged compensation plates have been found. They will be replaced.

OP's will be clearing hoppers and inspecting unit 3 today.

TG 1 - is online. The max thrust bearing temp was at 162 F this morning.

TG 2 – is offline since Sunday morning after unit 3 came down.

Waste Forecast - The unit 3-unscheduled outage will probably keep waste from returning from landfill.

Balance of Plant –

Conveyor C9 in RSPB has return roller problems. This has caused load to be dropped on unit 2.

Crane 2 is down today.

One of the 2 large screens in the CR has fried. This is the one that shows data for all 3 units (steam load, various temps and pressures, and emissions). The data is available on one of the CRO's small screens.

Sam noted that the fire alarm in the ladies locker room has been alarming for about 2 weeks.

Sam noted that the County's water plant will be shutting down for maintenance the 1st week I December.

Cleaning –

There is a pile of flyash in the containment under the filter press. The areas under all 3 dischargers are dirty, lots of water and slop on the ground. Bobcats and laborers with shovels are busy cleaning it up. The units 1 and 2 dischargers are overflowing quite a lot, adding to the problem and making clean up more difficult.

Maintenance

Chris S noted the following Maintenance activities today:

- TSI & DCR are continuing the baghouse hopper project.
- Performing daily CEMS PM's.
- Supporting boiler 3 tube and grate repairs.
- Blowing soot on unit 1 and hopefully unit 2.
- Performing electrical repairs on a bobcat.
- Replacing return rollers on C9 belt conveyor in RSPB.
- E&I is checking riddling flaps on unit 3 while it is down.
- Archiving DCS data.
- Restoring the #1 SNCR pump.
- Kone Crane is on site for repairs to crane 2.
- Spotting the Covanta Field Services (CFS) job site trailer which is scheduled for delivery today.

The following contractors are on site and signed in at the CR:

Kone – 3 – crane repairs
DCR – 2 – plate metal repairs on the baghouse hopper project
TSI – 5 - baghouse hopper project
ASI – 4 – insulators baghouse hopper project
Semco -3 – ash removal system
MJM – 2 – supplementing E&I staff
Safway – 1 – scaffold (I believe there are more, but I did not see them signed in to the CR logs
USA – 1 – street sweeper
PPM – 8 – cleaning and mechanical maintenance support
(29) total contractors working on site today

General Comments:

Baghouse hopper project update - Joe Cascio noted that TSI would work 10 hours today and Tuesday and 5 hours on Wed. DCR should finish all steel work by Wednesday. Completion is now scheduled for 12/18/14. There is a meeting with TSI tomorrow at 1000 in the Classic Admin Bldg. All interested parties should attend, including a Covanta rep, if possible, since this project will extend past December 7. A more in depth report of project status will be issued after tomorrow's meeting.

Chuck noted that a conference call was scheduled for this morning with Covanta's Purchasing group and the GCS Purchaser to discuss P.O.'s for parts & labor for the December outages.

Beth noted that 2 additional roll around platforms will be needed for the spare parts Inventory starting next week. Chuck will look into rental vs. purchasing new ones. Chuck noted that he has 1 additional forklift coming for the Inventory.

Chris S. noted that Richard Mork (FM Global) has been scheduled in for 12/15/14 to inspect the unit 3-steam drum. Chris S also noted that Covanta's water treatment sub, Chemtreat, would be onsite in December to inspect all 3-steam drums, and both D.A.'s.

Chris S also noted that all 3 new O2 analyzers are operational, but are not tied into the combustion control systems yet. Covanta will do that once their combustion control expert is on site to supervise.

Pinellas WTE Daily Report

Edition: 240 - 11.25.14

Date of Report: Tuesday, 11/25/14

Tons Received: 4,056 on Monday, 11/24/14 + 0 from landfill

Tons Processed: 1,842 on Monday, 11/24/14

Pit Level: 5,827 tons @ midnight on 11/24/14

Weather: cloudy, light rain in the AM, heavier rain forecast for the PM as a cold front approaches- 100% chance of rain - high 79 - low 61

Boiler 1 Steam Flow set point (lbs/hr): 225,000

Boiler 2 Steam Flow set point (lbs/hr): 225,000

Boiler 3 Steam Flow set point (lbs/hr): offline due to tube leak

TG 1 Power Produced (MW-Hrs): 1,169 (daily gross 11/24/14)

TG 2 Power Produced (MW-Hrs): 0 (daily gross 11/24/14)

Net Power Exported (MW-Hrs): 957 (net for 11/24/14)

Safety:

No accidents reported.

Elwyn reported a potentially serious situation. Sometime, at least 1 year ago, the checkered plate floors in the SDA penthouses were covered with fiberglass. It made a nice surface and was sloped to a trench draining the penthouse. Now the floor in the unit 1 SDA penthouse has sagged, and it appears as if the checkered plate is breaking/corroding away from the supports. The area has been blocked off with Danger tape. A thorough investigation is needed

Environmental Compliance:

No exceedances reported. Elwyn did send the unit 3 CO excursion notification to FDEP. It was addressed to Erin DeBacco, who has left FDEP. Notifications are now to be sent to Danielle Henry.

Operations:

Unit 1 – is online at a set point of 225,000 pounds of steam per hour. Yesterday unit 1 averaged 217k. Economizer outlet temp is 507 F. Baghouse DP is 6.0". Opacity is .7%.

Unit 2 – is online at a set point of 225,000 pounds of steam per hour. Yesterday unit 1 averaged 213k. Economizer outlet temp is 486 F. Baghouse DP is at 6.6". Opacity is .9%.

The loud thumping sound I heard yesterday coming from the drive end (west end) of the 2-north baghouse screw conveyor has subsided.

Unit 3 – coded offline around 0740 Sunday morning, 11/23/14. A tube leak in the roof, in the vicinity of the screen tubes that penetrate the roof at the furnace/2nd pass interface appears to be the problem. The leak was substantial, but did not drain the drum immediately. OP's was able to keep drum level for a while, but then had to bring the unit down in a controlled fashion.

Yesterday evening repairs were made to 3 tubes in the center of the roof at the furnace/2nd pass interface. The 1st hydro was performed and 2 leaks were detected on the 3rd pass rear wall (aka steam wall). Those 2 leaks were repaired and a 2nd hydro was attempted around 1900 last night; 1 leak in the 3rd pass rear wall was found. This leak was repaired and a 3rd hydro was performed early this morning, 1 more leak was found in the 3rd pass rear wall. It was repaired and hydro #4 this morning was successful. As of about 1400 the south burner had been it; problems have been encountered with the north burner's slide gate.

Three grate bars and 10 compensation plates were found to be damaged on the grate surface and were replaced.

Elwyn noted that unit 3 opacity is staying at a constant 2.0%, even with the unit offline. The elevated opacity we have been seeing the past several weeks (> 2.0%) may have been an error in calibration; E&I to investigate.

TG 1 - is online. The max thrust bearing temp was at 189 F this morning @ a load of 48.4 MW.

TG 2 – has been offline since Sunday morning after unit 3 came down.

Waste Forecast - Elwyn noted that, if unit 3 comes back online soon, waste may be needed from the landfill to get through the weekend. He is in touch with the landfill operator and they have a stash of trash ready and waiting.

Balance of Plant –

Conveyor C9 in RSPB still has return roller problems. Chris S expects this problem to be remedied today.

Crane 2 is down again today. Chris S says Kone is waiting on a Magne Torque brake. Delivery is now scheduled for tomorrow.

Cleaning –

There is a large pile of flyash in the containment under the filter press. The areas under all 3 dischargers are cleaner today, but there are still small piles of ash under #3. The units 1 and 2 dischargers are overflowing some today, not nearly as much as yesterday. There are piles of ash under the gallery belt; laborers were working to clean it up.

Maintenance

Chris S noted the following Maintenance activities today:

- TSI & DCR are continuing the baghouse hopper project.
- Performing daily CEMS PM's.
- Supporting boiler 3 tube repairs.
- Performing electrical forklift weekly PM's.
- Replacing return rollers on C9 belt conveyor in RSPB.
- E&I is checking riddling flaps on all units.
- Restoring the SNCR pump.
- Replacing a bolt on V 10 vibrating conveyor.
- Spotting the Covanta Field Services (CFS) job site trailer, which showed up around 1400.

The following contractors are on site and signed in at the CR:

Coverall – 2 – cleaning

DCR – 2 – plate metal repairs on the baghouse hopper project

TSI – 4 - baghouse hopper project

Matrix – 2 – tube repair

ASI – 4 – insulators baghouse hopper project

Semco -3 – ash removal system
MJM – 2 – supplementing E&I staff
Chem Aqua – 2 – water treatment
Gaffin – 3 – cleaning
PPM – 12 on days + 8 on nights – cleaning & mech maintenance support

(44) total contractors working on site today

General Comments:

Baghouse hopper project update - Joe Cascio, Russ, Jeremie (TSIO, and myself attended a baghouse hopper project meeting this AM. Joe will issue minutes separately.

Chuck noted that a he had a productive conference call yesterday with Covanta's Purchasing group. Chuck reports that Covanta will be bringing in the following new rolling stock on December 4;

- 2 new CAT loaders for RSPB (initially these will be rentals until new ones arrive circa March timeframe)
- 2 new, and larger than current, CAT loaders for the tipping floor (initially these will be rentals until new ones arrive circa March timeframe).
- 2 new skid steers
- 2 new forklifts for use in the plant (the old one in the warehouse will stay)
- a new 26' scissor lift
- a new aerial lift

This equipment will be parked on the County's property across from WTE. There was an in depth discussion in the morning O&M meeting as to maintenance of this equipment. This does not have to be sorted out immediately, but the plant staff has depended on rental companies for much of the rolling stock maintenance in the past. With Covanta owning the equipment, maintenance will have to be provided in house or through some outside group.

Sam noted he would lead a walk down of the new underground cable installers on December 10th. They will be looking at locations for U/G cables as part of the new security system (swipe badges for employees and entrance gates).

Joe Treshler and 3 CFS employees were on site today for Covanta working on the Transition.

Pinellas WTE Daily Report

Edition: 241 - 11.26.14

Date of Report: Wednesday, 11/26/14

Tons Received: 3,678 on Tuesday, November 25, 2014

Tons Processed: 2,067 on Tuesday, 11/25/14

Pit Level: 7,399 tons @ midnight on 11/25/14

Weather: Partly cloudy with 60% chance of rain; high of 63° and a low of 52°; wind gusts forecasted to be up to 30mph. Note: Yesterday's recorded rainfall for Pinellas County was 3.4"

Boiler 1 Steam Flow set point (lbs/hr): 225,000 (avg. 219,000)

Boiler 2 Steam Flow set point (lbs/hr): 225,000 (avg. 221,000)

Boiler 3 Steam Flow set point (lbs/hr): 225,000 (returned to service at 0026 hrs. Wednesday)

TG1 Power Produced (MWHrs): 1,171 (daily gross 11/25/14)

TG 2 Power Produced (MWHrs): TG tied to the electric grid at 0115 hrs. Wednesday

Net Power Exported (MWHrs): 990 (net for 11/25/14)

Safety:

No safety incidents to report.

Environmental Compliance:

No exceedances reported.

Opacity on Units 1, 2 and 3 were <1, <1 and 1.9% respectively.

Operations:

Unit 1 – online at a set point of 225,000 pounds of steam per hour. Economizer outlet temp is 560° F. Operations will blow soot later today.

Unit 2 – online at a set point of 225,000 pounds of steam per hour. Economizer outlet temp is 514° F.

Unit 3 – online at a set point of 225,000 pounds of steam per hour.
Economizer outlet temp is 504°F.

TG 1 – online at 45MW recorded at 1000 hrs. Highest thrust bearing temperature was 181° F

TG 2 - online at 16 MW recorded at 1000 hrs.

Waste Forecast – No diversions are anticipated today.

Balance of Plant

1. Baghouse 1 had a ΔP of 6.7"
2. Baghouse 2 had a ΔP of 7.0"
3. Baghouse 3 had a ΔP of 6.4"

Maintenance

The following GCS Maintenance activities are expected to be performed today:

- Unit 3's south burner would not ignite during startup; this is a recurring issue as it is with other unit's burners
- Electric service to a 53' Covanta maintenance trailer
- A new boiler condition monitor will be installed in the Control Room
- A spare sonic level detector was discovered in the warehouse; E&I staff will install the detector on the Unit 3 north discharger as a test to determine if this technology may be suitable for controlling the water levels in the expellers
- Outage preparation
- Daily CEM PM's
- Crane inspection have been completed
- #2 Pug Mill has apparently ingested another foreign object sufficient to bow the impeller shaft; maintenance will remove the obstacle and will attempt to straighten the shaft; fabrication and installation of a screen is being contemplated to avert future ingestion of hardware which could result in jamming the Pugmill's rotor

- Temporary power and lighting are being set-up to support the December outage
- Two rollers were replaced on Conveyor C9 yesterday; a third roller will be replaced today
- Grit screen metal is in need of replacement
- "B" Slaker need to be rebuilt; Gary reports that most of the parts necessary to complete this task are in the warehouse; he will order the few remaining minor parts needed to complete the rebuild

On Site Contractors and Support Personnel

Contractors working on site today and logged in at the CR:

- SEMCO – (3) Baghouse
- DCR – (2) hopper repairs
- Safeway - (1) scaffold inspector
- MJM – (2) E&I
- ASI – (4) insulation and lagging
- PPM - (11) clean up on day shift
- USA (1) – Sweeper
- Precision Doors - (2)
- Trane – (1) HVAC system maintenance
- Coverall (2) – 3rd floor cleaning
- Unitherm (3) – Insulation on Unit 3 hopper

(32) Total Contractors on site today (including prior night's work)

General Comments:

- The penthouse on No. 3 SDA had been cordoned off until a safety inspection of the floor can be completed and repairs completed; the floors on SDA's 1 and 2 will also be inspected
- There are no Covanta staff on site today
- Unit 3 Tube Repairs:
 - 11/23/14 Off-line
 - Cross over at elevation 92'
 - Tube # 43 was pad welded
 - Steam wall at elevation 71.6'
 - Tube #56 was pad welded
 - Steam wall at elevation 55.1'

- Pad weld repair on tube #18 from south
- 2nd Pass roof
 - Pad weld repairs to tubes #41 and #42
- Satisfactory hydro was performed at 1300 hrs. on 11/25/14

On a lighter note, it's been rumored that the traditional pardon for the Thanksgiving turkey (Tom) will not be forthcoming this year. It was also reported that upon Tom's hearing of the news, he has flown the coop. Substantiation of the alleged felonious fugitive's attempt to hide from authorities can be seen in the attached photo taken at the Pinellas Waste to Energy Facility. Happy Thanksgiving to everyone!

Pinellas WTE Daily Report

Edition: 241 - 12.01.14

Date of Report: Monday, 12/01/14

Tons Received: 0 on Sunday, 11/30/14 + 0 from landfill

1,363 on Saturday, 11/29/14 + 0 from landfill

3,196 on Friday, 11/28/14 + 0 from landfill

Tons Processed: 2,596 on Sunday, 11/30/14

Pit Level: 2,160 tons @ midnight on 11/30/14

Weather: mostly sunny, partly cloudy- 10% chance of rain - high 79 - low 63

Boiler 1 Steam Flow set point (lbs/hr): 225,000

Boiler 2 Steam Flow set point (lbs/hr): 225,000

Boiler 3 Steam Flow set point (lbs/hr): 225,000

TG 1 Power Produced (MW-Hrs): 956 (daily gross 11/30/14)

TG 2 Power Produced (MW-Hrs): 436 (daily gross 11/30/14)

Net Power Exported (MW-Hrs): 1,171 (net for 11/30/14)

Safety:

No accidents reported.

Environmental Compliance:

No exceedances reported.

Error alarms for opacity on unit 1 returned over the weekend, along with the associated downtime of the monitor. Becky did not have a full report of the problems at the morning O&M meeting.

Bays 6, 7, and 8 in the pit were turned over this past weekend.

Becky noted that she had checked on results from the PM 2.5 testing, but so far no news.

Operations:

Boiler steam loads were dropped on Sunday because of the low pit level. They were coming back up this morning to 225k.

GCS did not blow soot over the long holiday weekend, as their sootblower expert, Joey, was taking some well-earned time off. Back end temps have risen, and the plan was to blow soot on all 3 units today, if possible.

Elwyn noted that a non-Fe load was shipping out today.

Unit 1 – is online at a set point of 225,000 pounds of steam per hour. Yesterday unit 1 averaged 186k. Economizer outlet temp is 526 F after the start of sootblowing operations. Baghouse DP is 6.3". Opacity is 0%.

Unit 2 – is online at a set point of 225,000 pounds of steam per hour. Yesterday unit 2 averaged 182k. Economizer outlet temp is 595 F. Baghouse DP is at 6.6". Opacity is .8%.

Unit 3 – is online at a set point of 225,000 pounds of steam per hour. Yesterday unit 3 averaged 184k. Economizer outlet temp is 582 F. Baghouse DP is at 6.7". Opacity is 2.8%.

TG 1 - is online. The max thrust bearing temp was at 186 F this morning @ a load of 49.6 MW.

TG 2 – is online. The max thrust bearing temp was at 169 F this morning @ a load of 21.8 MW.

Waste Forecast - With all 3 combustion units in service & no diversions or waste returning from landfill, my calculations show that there will be around 3,500 tons in the pit by this weekend when the December outages start. Small diversions may be necessary, to keep the pit near empty when the outages begin.

Balance of Plant –

Crane 2 is still down again today. Kone is still waiting on the Magne Torque brake delivery. I have heard some extreme delivery times, but want to confirm.

Crane 3 holding is still not working well. The crane drivers are having problems and are wiggling/double jostling the joystick to make it hold better, but it is running at less than 100% holding capacity.

Cleaning –

There is a large pile of flyash in the containment area under the filter press. The areas under all 3 dischargers have small piles of ash scattered about. There are small piles of ash under the gallery belt.

Maintenance

Chris S noted the following Maintenance activities today:

- TSI, DCR, and ASI are continuing the baghouse hopper project.
- Performing daily CEMS PM's.
- Performing PM's on TG 1, hot well pumps, retractable sootblowers, man-lift, loaders, UPS #1 and #2, and the spare transformer.
- 3 maintenance mechanics are assisting in the spare parts inventory effort.
- Calibrating D train of the carbon injection system.
- Blowing soot on all 3 units, if possible.
- Conveyor CNV 15 in RSPB is tripping out; E&I to investigate.

The following contractors are on site and signed in at the CR:

Coverall – 2 – cleaning

DCR – 1 – plate metal repairs on the baghouse hopper project

TSI – 5 - baghouse hopper project

ASI – 4 – insulators baghouse hopper project

USA – 1 – street sweeper

PPM – 13 on days + assuming 8 on nights – cleaning & mech maintenance support

MJM – 2 – supplementing E&I staff

(36) Total contractors working on site today

General Comments:

Chuck noted that 2 of Covanta's procurement reps are on site today working with Chuck on reagent contracts. Joe Treshler and Jack Holmes are also on site for Covanta.

A daily Transition Meeting will be held every day this week at 1500 hours in the Classic Admin Bldg conference room. Purpose of the meetings will be to discuss the many on site details to be worked out prior to this weekend.

Becky noted that she would be soon making revisions to the October Monthly Report.

Pinellas WTE Daily Report

Edition: 243 - 12.02.14

Date of Report: Tuesday, 12/02/14

Tons Received: 4,679 on Monday, 12/01/14 + 0 from landfill

Tons Processed: 2,622 on Monday, 12/01/14

Pit Level: 4,483 tons @ midnight on 12/01/14

Weather: mostly cloudy- 10% chance of rain - high 79 - low 63

Boiler 1 Steam Flow set point (lbs/hr): 225,000

Boiler 2 Steam Flow set point (lbs/hr): 225,000

Boiler 3 Steam Flow set point (lbs/hr): 225,000

TG 1 Power Produced (MW-Hrs): 1,119 (daily gross 12/01/14)

TG 2 Power Produced (MW-Hrs): 466 (daily gross 12/01/14)

Net Power Exported (MW-Hrs): 1,358 (net for 12/01/14)

Safety:

No accidents reported.

Robert reported that he is boxing up safety records for GCS to keep; there is a 30-year record retention requirement. He is preparing a spreadsheet of training for Covanta that all GCS employees have received in the past 2 years.

Environmental Compliance:

No exceedances reported.

Yesterday more "Error" alarms for opacity on unit 1 were registered. I mentioned to George Ball-llovera that it would be good for Covanta's CEMS expert to take a look at this chronic problem. George says the CEMS expert (Greg Z) is in Miami commissioning a new CEMS, but will be here soon.

I asked several questions on Tammy's behalf in the O&M meeting this morning.

- First, the communication between the DCS and the CEMS for the urea flow on unit 1 has not been restored. Tammy had noticed it

was out during stack testing. Becky said that GCS has the urea flow set at min flow and the CRO must initiate a manual adjustment if NOx rises too high.

- Secondly, the erroneous notification that there is natural gas flow on units 1 and 3 is still registering on the CEMS. It is not a flow measurement that is used, so this is only a nuisance that hopefully can be cleared when the Covanta techs come in.

Operations:

GCS did blow soot on all 3 units yesterday; back end temps fell accordingly.

Average boiler steam loads for yesterday were low since the units were dialed back to 180k on Sunday due to low pit level, and were still coming up to 225k yesterday morning.

Elwyn noted the following November 2014 & November 2013 monthly performance stats:

	<u>Tons Processed</u>	<u>Tons Diverted</u>	<u>MW-hours</u>
November 2014	63,660	2,567	32,930
November 2013	58,401	7,243	25,266

Elwyn also noted a 1% increase in waste available in November 2014 vs. November 2013.

Unit 1 – is online at a set point of 225,000 pounds of steam per hour. Yesterday unit 1 averaged 211k. Economizer outlet temp is 541 F. Baghouse DP is 6.3". Opacity is .7%.

Unit 2 – is online at a set point of 225,000 pounds of steam per hour. Yesterday unit 2 averaged 200k. Economizer outlet temp is 513 F. Baghouse DP is at 6.3". Opacity is .6%.

Unit 3 – is online at a set point of 225,000 pounds of steam per hour. Yesterday unit 3 averaged 195k. Economizer outlet temp is 534 F. Baghouse DP is at 6.5". Opacity is 2.4%.

TG 1 - is online. The max thrust bearing temp was at 186 F this morning @ a load of 49.6 MW.

TG 2 – is online. The max thrust bearing temp was at 169 F this morning @ a load of 21.8 MW.

Waste Forecast - With all 3 combustion units in service & no diversions or waste returning from landfill, my calculations show that there will be around 3,500 tons in the pit by this weekend when the December outages start. Elwyn's calcs say 3,000 tons, so the pit should be low and in good shape for the start of outages.

Balance of Plant –

Crane 2 is still down again today. The Magne Torque brake was delivered yesterday. Kone may install it tomorrow when deliveries are lighter.

Crane 3 has a broken holding cable and is out of service today. The crane drivers are using crane 2, which is not working well. They were having problems keeping the unit 3 feed hopper full when I was up in the pulpit.

Cleaning –

There is a small pile of flyash in the containment area under the filter press. The areas under units 1 and 3 dischargers have wet slop under them. Other than that, the plant is relatively clean today.

Maintenance

Chris S noted the following Maintenance activities today:

- TSI and Unitherm are continuing the baghouse hopper project.
- Performing daily CEMS PM's.
- Performing PM's on 2 Wastewater pumps, 4 carbon screw feeders, tertiary water pumps 1 and 2, service water pumps A and B, the backwash flow pump, 2 acid pumps, 2 caustic pumps, the glycol pump @ the air compressors, and the Volvo loader.
- 2 maintenance mechanics are assisting in the spare parts inventory effort.
- Calibrating all 4 trains of the carbon injection system.
- Replacing a poppet valve o a unit 3 sootblower.

- Some Maintenance staff attending Covanta benefits meeting.

The following contractors are on site and signed in at the CR:

Coverall – 2 – cleaning

TSI – 2 - baghouse hopper project

Unitherm – 3 – insulators baghouse hopper project

Alliance Fire– 2 – fire extinguisher inspections

Gaffin – 7 – cleaning

ASI – 4 – insulation & lagging

PPM – 14 on days + 7 on nights – cleaning & mech maintenance support

MJM – 2 – supplementing E&I staff

(43) Total contractors working on site today

Transition

There are 10 Covanta staff on site today working on various phases of the Transition.

A daily Transition Meeting will be held every day this week at 1500 hours in the Classic Admin Bldg conference room. Purpose of the meetings will be to discuss the many on site details to be worked out prior to this weekend. If any GCS staff member has questions they want answered re: Transition, please direct them to Mark Novak, and Mark will bring them to the daily meeting.

At yesterday's meeting the following was discussed:

- Covanta HR staff will be holding several meeting per day on Tuesday, Wednesday, and Thursday to explain Covanta's employee benefits package. ALL GCS employees will attend one of these sessions.
- Covanta owes GCS for part of the employee health insurance premium & for early payments made to Kone & GK for outage goods/services. Covanta will pay by check; Joe T to submit checks to Mark N.
- Covanta's new rolling stock will be delivered on Thursday except for the 2 RSPB loaders. Covanta will take over the GCS lease on the RSPB loaders currently in use on 12/7/14. Ring Power has

- inspected these loaders and calculated costs for repairs, which will be to GCS' account.
- Caterpillar will provide training for the new CAT loaders and other equipment.
 - Covanta needs GCS' EAM software, with the updated revision purchased by GCS. Covanta needs this to download data to their system. Joe T. to discuss with Beth details for purchasing the GCS license.
 - Becky has been given her new Covanta Email address early to submit to regulators for official communications she must make.
 - Covanta will speak with V-Tek, the GCS network administrator. Covanta would like to hire V-Tek to help in transitioning the GCS staff to Covanta's Email system.
 - The outage schedule as stated in the County's memo (from Beth to GCS) is still the current schedule.
 - There have been several discussions re: GCS employees actions on Friday and Saturday as the boilers and TG's are taken out of service. GCS employees will not enter the boilers, nor will they rod ash out of hoppers or chutes, nor will they supervise any of these actions. Covanta is looking into hiring laborers (possibly PPM) to do this work under Covanta supervision. Nothing is definite yet on the work scope of the laborers.
 - Spare Parts Inventory – there were 3 CDM Smith employees, 4 County employees, 4 GCS employees, and 1 Covanta employee working on Inventory yesterday; reportedly they made great progress. Several spoke to me and remarked what great shape the warehouse was in and how well Desiree had managed the parts; nice work Desiree. Today a smaller group was finishing up work on stoker & discharger parts, and boiler tube stock in conex boxes and on pallets throughout the yard and laydown areas. This work was progressing much slower when I talked to the group just before noon.

General Comments:

Becky repeated that she would be soon making revisions to the October Monthly Report.

A weekly baghouse hopper project progress update meeting was held this morning. Russ, Jeremie from TSI, and I attended. The following was discussed:

- DCR has completed all mechanical/welding work
- TSI has installed and wired all heaters on the 18 hoppers that were part of this project scope
- The Unitherm insulators are currently working on the 3 unit 1 hoppers, will move to unit 2 next, and then unit 3 which has all 12 hoppers stripped.
- Jeremie is hopeful all insulation work will be complete by the end of next week & final commissioning will commence.

New heaters & pads were ordered from Thermon There are 10 Covanta staff on site today working on various phases of the Transition.

A daily Transition Meeting will be held every day this week at 1500 hours in the Classic Admin Bldg conference room. Purpose of the meetings will be to discuss the many on site details to be worked out prior to this weekend.

- for hopper 1-5. Delivery kept slipping on these, so we asked TSI to look into cancelling the order. TSI has cancelled the order and there will be no cancellation/re-stocking charges.

Pinellas WTE Daily Report

Edition: 244 - 12.03.14

Date of Report: Wednesday, 12/03/14

Tons Received: 4,140 on Tuesday, 12/02/14 + 0 from landfill

Tons Processed: 2,832 on Tuesday, 12/02/14

Pit Level: 5,466 tons @ midnight on 12/02/14

Weather: mostly sunny- 10% chance of rain - high 80 - low 65

Boiler 1 Steam Flow set point (lbs/hr): 225,000

Boiler 2 Steam Flow set point (lbs/hr): 225,000

Boiler 3 Steam Flow set point (lbs/hr): 225,000

TG 1 Power Produced (MW-Hrs): 1,186 (daily gross 12/02/14)

TG 2 Power Produced (MW-Hrs): 514 (daily gross 12/02/14)

Net Power Exported (MW-Hrs): 1,469 (net for 12/02/14)

Safety:

No accidents reported.

Robert reported that he continues boxing up safety records for GCS to retain, and preparing a spreadsheet of training for Covanta that all GCS employees have received in the past 2 years. He does not have any training records from the Veolia period.

Marc noted that a County vehicle(s) was seen speeding through the breezeway under the gallery belt. Apparently this has happened more than once. Sam will address this with County staff.

Environmental Compliance:

No exceedances reported.

“Error” alarms for opacity on unit 1 continue to come in. Covanta’s CEMS expert, or some CEMS savvy person, needs to take a look at this chronic problem soon.

The erroneous notification that there is natural gas flow on units 1 and 3 has been cleared off the CEMS. Nice work someone, Becky was not sure who gets the credit.

Becky stated that PM 2.5 test results were still at least a week out. That must be a slow process??

Elwyn noted that Bay 5 in the pit was rotated yesterday.

Operations:

GCS will blow soot on all 3 units today. Back end temps should come down somewhat from what is listed below.

Unit 1 – is online at a set point of 225,000 pounds of steam per hour. Yesterday unit 1 averaged 224k. Economizer outlet temp is 517 F. Baghouse DP is 6.7". Opacity is .1%.

Unit 2 – is online at a set point of 225,000 pounds of steam per hour. Yesterday unit 2 averaged 221k. Economizer outlet temp is 530 F. Baghouse DP is at 6.1". Opacity is .6%.

Unit 3 – is online at a set point of 225,000 pounds of steam per hour. Yesterday unit 3 averaged 216k. Economizer outlet temp is 566 F. Baghouse DP is at 7.0". Opacity is 2.9%.

I have walked by the drag chain conveyor under the unit 3 SDA 5 or 6 times this week, and it has not been in service at any time. With the outage approaching in 2 days, it would be good to begin removing ash from the #3 SDA hopper, as best possible.

Elwyn noted that baghouse modules 3-2 and 3-5 would be re-bagged during the outage. Thimbles will be inspected and replaced as needed.

TG 1 - is online. The max thrust bearing temp was at 187 F this morning @ a load of 48.9 MW.

TG 2 – is online. The max thrust bearing temp was at 168 F this morning @ a load of 19.3 MW.

Waste Forecast - It still appears the pit should be low and in good shape for the start of outages this weekend. No diversions or waste returned from landfill should be required.

Balance of Plant –

Crane 2 is still down again today. The Magne Torque brake was delivered yesterday, and Kone Crane and GCS are installing it today. Having crane 2 in service will be a welcome improvement.

The holding cable on crane 3 was cut and repaired yesterday. Crane 3 is in service today.

Cleaning –

There is a small pile of flyash in the containment area under the filter press. Other than that, the plant is relatively clean today. The charging floor around the feed hoppers and the crane cab are exceptionally clean. Kudos to someone for that work.

Maintenance

Chris S noted the following Maintenance activities today:

- TSI and Unitherm are continuing the baghouse hopper project.
- Assisting Kone with changing out the Magne Torque brake on crane 2.
- Performing daily CEMS PM's.
- Performing oil changes and PM's on 11 pumps, PM on the vapor extractor, all 3 baghouse screws (E&I PM), quarterly PM's on both TG lube oil pumps, the 4 carbon flow sensors PM's (E&I), both TG hot well PM's, and both TG exciter PM's (E&I) .
- 1 maintenance mechanic is assisting in the spare parts inventory effort.
- Blowing soot.
- Some Maintenance staff are attending Covanta benefits meetings.

The following contractors are on site and signed in at the CR:

Semco – 3 – ash system maintenance

TSI – 2 - baghouse hopper project

Unitherm – 6 – insulators baghouse hopper project

DCR – 2 –

J&L Mechanical - 4 -
Alliance Fire- 2 - fire extinguisher inspections
Gaffin - 7 - cleaning
Kone Crane - 2 - crane 2 repairs
USA - 1 - street sweeper
ASI - 4 - insulation & lagging
PPM - 12 on days + 8 on nights - cleaning & mech maintenance support
MJM - 2 - supplementing E&I staff

(55) Total contractors working on site today

Transition Issues

There are numerous Covanta staff on site today working on various phases of the Transition.

A daily Transition Meeting will be held every day this week at 1500 hours in the Classic Admin Bldg conference room. Purpose of the meetings will be to discuss the many on site details to be worked out prior to this weekend. If any GCS staff member has questions they want answered re: Transition, please direct them to Mark Novak, and Mark will bring them to the daily meeting.

At yesterday's meeting the following was discussed:

- Covanta HR staff will continue holding several meetings per day through Thursday to explain Covanta's employee benefits package. ALL GCS employees will attend one of these sessions.
- Covanta's new rolling stock will be delivered on Thursday except for the 2 RSPB loaders. Covanta will take over the GCS lease on the RSPB loaders currently in use on 12/7/14. Ring Power has inspected these loaders and calculated costs for repairs, which will be to GCS' account. During the morning O&M meeting Marc noted that Ring Power's assessment appeared to him as a wish list, and that reconciling this will go past this week.
- Covanta needs GCS' EAM software, with the updated revision purchased by GCS. Covanta needs this to download data to their PM system. This has been discussed several times; still no resolution.
- There have been several discussions re: GCS employees' actions on Friday and Saturday as the boilers and TG's are taken out of

- service. GCS says their employees will not enter the boilers, nor will they rod ash out of hoppers or chutes, nor will they supervise any of these actions. Covanta is looking into hiring laborers (possibly PPM) to do this work under Covanta supervision. This issue has not been resolved yet.
- Spare Parts Inventory – should complete today. There were only several parts not to be found, and they were all located somewhere in the laydown areas. Maintenance was going to help again today to close these last few items out.
 - Covanta staff will now start attending the morning O&M meetings to get current on the numerous issues discussed every morning.
 - Kelsi asked GCS for County documents that had been stored at Black Mountain, at the County's expense. Mark is checking into this, and didn't feel it would be a problem.
 - Employee cell phones were discussed. Covanta will issue Covanta owned phones.
 - Chuck noted in the morning O&M Meeting that he is working diligently with Covanta purchasing staff to cross reference vendors in databases, and enter vendors GCS has used that Covanta might want to use. Chuck mentioned that the co-operation between all was refreshing, but that he was so far behind he would never be allowed to die.
 - Today at the Transition Meeting open items on the CRR List will be discussed.
 - Today at the Transition Meeting changes to the CEIR List will be discussed. Covanta was issued the CEIR List with an August revision. There has been items added and items completed since that time.

General Comments:

Sam asked GCS to notify their staff not to park with the nose of their vehicles pushing into the new fence. Curb stops will be coming, but until then Sam asked to use a little common sense when parking.

Pinellas WTE Daily Report

Edition: 245 - 12.04.14

Date of Report: Thursday, 12/04/14

Tons Received: 2,440 on Wednesday, 12/03/14 + 0 from landfill

Tons Processed: 2,797 on Wednesday, 12/03/14

Pit Level: 4,832 tons @ midnight on 12/03/14

Weather: sunny- 0% chance of rain - high 81 - low 64

Boiler 1 Steam Flow set point (lbs/hr): 225,000

Boiler 2 Steam Flow set point (lbs/hr): 225,000

Boiler 3 Steam Flow set point (lbs/hr): 225,000

TG 1 Power Produced (MW-Hrs): 1,191 (daily gross 12/03/14)

TG 2 Power Produced (MW-Hrs): 520 (daily gross 12/03/14)

Net Power Exported (MW-Hrs): 1,483 (net for 12/03/14)

Safety:

No accidents reported.

Elwyn noted that Precision is online blasting unit 3 and to take caution. Marc stated that Precision was under contract to Covanta for this work.

Sam said he spoke with the driver of the County vehicle seen speeding through the breezeway under the gallery belt.

Environmental Compliance:

No exceedances reported.

“Error” alarms for opacity on unit 1 did not come in yesterday. Becky had no reason why, the problem(s) are still out there. She did note that new blowers for the opacity monitors were delivered yesterday.

Becky noted that EPA – MWC training is set up for CRO Andy Griffin.

Operations:

Unit 1 – is online at a set point of 225,000 pounds of steam per hour. Yesterday unit 1 averaged 224k. Economizer outlet temp is 521 F. Baghouse DP is 6.2". Opacity is 0%.

Unit 2 – is online at a set point of 225,000 pounds of steam per hour. Yesterday unit 2 averaged 217k. Economizer outlet temp is 505 F. Baghouse DP is at 5.8". Opacity is .5%.

Unit 3 – is online at a set point of 225,000 pounds of steam per hour. Yesterday unit 3 averaged 212k. Economizer outlet temp is 528 F. Baghouse DP is at 7.6". Opacity is 4.6% (possibly high due to explosive cleaning).

In the morning meeting I mentioned that the drag chain conveyor under the unit 3 SDA has not been in operation this week, when I walked by. Elwyn said it is being run in manual, but that he would make certain of this so the hopper is as clear as possible going into the outage.

Yesterday Elwyn noted that baghouse modules 3-2 and 3-5 would be re-bagged during the outage. Thimbles will be inspected and replaced as needed.

TG 1 - is online. The max thrust bearing temp was at 188 F this morning @ a load of 49.9 MW.

Sam asked if spare thrust bearings were on site. GCS said no they are not, but they are at a shop being re-furbished, under a Covanta P.O.

TG 2 – is online. The max thrust bearing temp was at 169 F this morning @ a load of 19.8 MW.

Waste Forecast - Deliveries have been higher than normal this week; could be Thanksgiving waste coming in?? Still it appears the pit should be low and in good shape for the start of outages this weekend.

Balance of Plant –

Crane 2 is back in service today after a lengthy run of downtime. The Magne Torque brake was installed yesterday. The crane rivers send their thanks.

Elwyn noted that a bolt was replaced in V5 conveyor in RSPB last night. This has been a chronic problem. Modifying V5 and V10 to GK's Brute Force mounting during the common outage should help.

Cleaning –

There is a large pile of flyash in the containment area under the filter press. Lime slurry was spilled out of the unit 1 SDA penthouse down to grade level. Other than that, the plant is relatively clean today.

The charging floor around the feed hoppers and the crane cab still is exceptionally clean today.

Maintenance

Chris S noted the following Maintenance activities today:

- TSI and Unitherm are continuing the baghouse hopper project.
- Performing daily CEMS PM's.
- Taking lube oil and control oil samples from TG 1 and TG 2.
- Performing economizer screw conveyor PM's on all 3 units.
- Performing sootblower PM's.
- E&I is investigating problems associated with urea flow not being bale to run in the auto mode.
- Some Maintenance staff will be attending Covanta benefits meetings.
- Preparing for outages.
- E&I staff will be receiving NFPA 70E electrical training.

The following contractors are on site and signed in at the CR:

Semco – 3 – ash system maintenance

TSI – 2 - baghouse hopper project

Unitherm – 6 – insulators baghouse hopper project

Precision – 5 – dynamite-blasting unit 3

ICI – 3 – outage prep

J&L Mechanical - 4 –

Kimmins – 3 –

GRL Electrical – 1 -

ASI – 4 – insulation & lagging

PPM – 15 on days + 5 on nights_ cleaning & mech maintenance support

Coverall -2 - cleaning
MJM – 2 – supplementing E&I staff

(55) Total contractors working on site today

Transition Issues

There are numerous Covanta staff on site today working on various phases of the Transition.

A daily Transition Meeting will be held every day this week at 1500 hours in the Classic Admin Bldg conference room.

The following issues have been discussed at various meetings:

- Covanta HR staff will complete employee benefits meetings today.
- Covanta's new rolling stock will be delivered on tomorrow except for the 2 RSPB loaders. Covanta may take over the GCS lease on the RSPB loaders currently in use on 12/7/14. Ring Power has inspected these loaders and calculated costs for repairs, which will be to GCS' account. Marc repeated that Ring Power's assessment appeared to him as a wish list, and that reconciling this will go past Saturday. Also, there is uncertainty if the County will take the 2 tipping floor loaders from GCS. Elwyn says the plant will definitely need 1 loader during the outages to move ash from the dischargers and hopper clearing activities.
- Covanta needs GCS' EAM software, with the updated revision purchased by GCS. Covanta needs this to download data to their PM system. This has been discussed several times; still no resolution.
- It appears as if all issues have been settled related to taking the boilers and TG's out of service on Friday and Saturday. GCS employees will not enter the boilers, nor will they rod ash out of hoppers or chutes, nor will they supervise any of these actions. Covanta will hire laborers through PPM to do this work under Covanta supervision. Covanta has hired Precision to perform explosive blast cleaning; they are here today doing online blasting of unit 3.
- Spare Parts Inventory completed yesterday. Value of parts still needs to be reconciled/negotiated between the County and GCS.

- Yesterday at the Transition Meeting open items on the CRR List were discussed. Many, if not all, are covered under the TRP. I will cross-reference the 2 and confirm that.
- Yesterday at the Transition Meeting changes to the CEIR List was discussed. Covanta was issued the CEIR List with an August revision. There have been 44 new items added (grouped into 2 categories – grating & site work/roadways) and 25 old items completed since that time. We are still discussing how to handle these changes.

General Comments:

Pinellas WTE Daily Report

Edition: 246 - 12.05.14

Date of Report: Friday, 12/05/14

Tons Received: 3,021.87 on Thursday, December 04, 2014

Tons Processed: 2,851 on Thursday, 12/04/14

Pit Level: 5,037 tons @ midnight on 12/04/14

Weather: Partly cloudy with 0% chance of rain; high of 77° and a low of 63

Boiler 1 Steam Flow set point (lbs/hr): 225,000 (avg. 224,000)

Boiler 2 Steam Flow set point (lbs/hr): 225,000 (avg. 220,000)

Boiler 3 Steam Flow set point (lbs/hr): 225,000 (avg. 221,000)

TG1 Power Produced (MWHrs): 1,185 (daily gross 12/04/14)

TG 2 Power Produced (MWHrs): 539 (daily gross 12/04/14)

Net Power Exported (MWHrs): 1,495 (net for 12/04/14)

Safety:

No safety incidents to report.

Environmental Compliance:

No exceedances reported.

Opacity levels on Units 1, 2 and 3 were well within their allowable operating range.

MWC training is scheduled for Monday, December 8, 2014.

Results for the PM2.5 tests are not anticipated before the end of next week.

There were no opacity error alarms on Thursday, December 4, 2014.

Operations:

Unit 1 – online at a set point of 225,000 pounds of steam per hour. Unit will be taken off line at 0000 hrs. tonight

Unit 2 – online at a set point of 225,000 pounds of steam per hour. Unit is scheduled to come off around noon on Saturday

Unit 3 – was removed from service (offline) at 1111hrs. today. Precision Blasting is expected to return to the plant around 1700hrs. to resume blast cleaning of the boiler

TG 1 – online at 45MW recorded at 1000 hrs. Highest thrust bearing temperature was 181° F. Over speed test for the turbine generator is planned for late Saturday morning just prior to taking Boiler 2 offline

TG 2 – successfully tripped (separated from the transmission grid) at 1021 hrs. via reverse power relay operation. The unit was placed back on line to accommodate the primary over speed trip test which was successfully completed at 3,960 rpm at 1033 hrs.; again, the generator was placed on line to accommodate the emergency over speed trip test which was successfully completed at 4,029 rpm at 1040 hrs.

Waste Forecast – Moderate diversions will take place today in anticipation of the upcoming plant wide outage. A full waste diversion will be in effect for Saturday.

Balance of Plant

1. Baghouse 1 had a ΔP of 7.3"
2. Baghouse 2 had a ΔP of 6.6"
3. Baghouse 3 had a ΔP of 7.3"

Maintenance

The following GCS Maintenance activities are expected to be performed today:

- Due to upcoming heavy maintenance on the refuse cranes, a

- derrick type crane system will be erected over the #3 refuse pit to convey material to effect relining of the feed chute.
- A concrete foundation has been poured to accommodate a new stairway located on the north side of the cooling tower (CT). The existing vertical ladder on the north side of the CT will be relocated to the south side and the south stairway will be demolished.
 - Top SW and SE sections of the tipping building's sheathing are being removed to accommodate installation of festoon cables for the refuse cranes.
 - Outage preparation
 - Daily CEM PM's
 - Repair oil filter holder for #3 FDF motor
 - Replace missing filter holder for a refuse crane motor
 - E&I will be installing temporary electric power to office and contractor trailers
 - The drag chain under the #3 SDA is operational in the manual mode

On Site Contractors and Support Personnel

Contractors working on site today and logged in at the CR:

- SEMCO – (3) ash system maintenance
- Bert Construction - (1) cooling tower stairway foundation
- MJM – (2) E&I
- PPM - (15) clean up on day shift; 3 on night shift
- USA (1) – Sweeper
- Precision - (5) blast cleaning furnace 3
- Unitherm (6) – Insulation on Baghouse 3 hoppers
- J&L Mechanical – (4) north end processing
- Kone Crane – (2) refuse crane inspections and repairs

(38) Total Contractors are on site today (including prior night's work)

General Comments:

The new Facility Manager, Paul Grego, will be on site Monday, December 8, 2014.

Daily outage update meetings will be held at 0600 and 1800 hrs. in the Classic Admin. Building – Covanta's Joe Treshler will accommodate a

brief 8:30 update meeting for those interested in attending.

GCS has worked very well with Covanta in accommodating operational needs to support the forthcoming outages.

Two additional Covanta supervisors will arrive next week to help coordinate all outage activities.

Beth will attempt to acquire an electronic copy of the site plan to better layout the locations for office and maintenance trailers.

Covanta has contracted Kim Eiss, a well-respected generator specialist, to witness the electrical testing and installation of the new retaining rings on the #1 Generator's rotor. The work will be performed at TAW's shop in Miami, Florida.

Al Cossey and Ron Gall have worked with Russ Waldbesser in developing complete electrical systems outage plans for the upcoming outages. A courtesy copy of the plans has been given to CDM Smith for their edification.

Joe Treshler has contacted FM Global's Richard Mork to alert Richard of the upcoming outage schedule and to solicit any input he may have regarding planned work scope for the electrical battery of tests for the #1 Generator's stator and field

The 1500hrs. Transition Meeting among GCS, Covanta and County staff, was cancelled today due to the absence of significant issues.

Pinellas WTE Daily Report

Edition: 247 - 12.08.14

Date of Report: Monday, 12/08/14

Tons Received: 1,176 to the landfill and 2,333 to the plant on Friday, December 05, 2014; full diversion from the plant and 1,091 tons to the landfill on Saturday, December 6, 2014

Tons Processed: Not reported

Pit Level: Not reported

Weather: Partly cloudy with 10% chance of rain; high of 72° and a low of 54°

Boiler 1 Steam Flow set point (lbs/hr): Coded off line at 1130 on Saturday, December 6, 2014

Boiler 2 Steam Flow set point (lbs/hr): Coded off line at 2320 on Friday, December 5, 2014

Boiler 3 Steam Flow set point (lbs/hr): Coded off line at 1117 on Friday, December 5, 2014

TG1 Power Produced (MWHrs): Coded off line at 1020 on Saturday, December 6, 2014

TG 2 Power Produced (MWHrs): Coded off line at 1020 on Friday, December 5, 2014

Net Power Exported (MWHrs): Not reported

Safety:

A DPS sandblaster got some blast material in his eye; he subsequently washed his eyes with no residual effects.

Although all the units are off, hearing protection is still required throughout the plant.

J&L was cautioned by Robert Tilley about reported improper lifts. Robert asked that everyone pay special attention when moving about areas where J&L may be working.

There are MANY contractors on site in nearly every conceivable location. Everyone is urged to exercise caution in moving about the plant.

Environmental Compliance:

Results for the PM2.5 tests are not anticipated before the end of next week.

There were no opacity error alarms just prior to or during shutting all the units down. Rebecca is waiting for a fellow Covanta CEM consultant to arrive so they can discuss the potential benefits of adding blowers to effect better opacity monitoring performance.

Waste Forecast – All delivers are going directly to the landfill's staging area.

Maintenance

The following maintenance activities are being managed by Covanta Pinellas:

- The “dance floor” in unit 3 has been completed
- The front standard cover on #1 Turbine has been removed; a front standard (including over speed bolt) and thrust bearing inspection will ensue
- The #1 Generator rotor removal is ahead of schedule with the rotor expecting to be pulled on Tuesday; upon flying the rotor to ground level it will be loaded onto a low-boy and transported to TAW for retaining ring replacements and electrical inspections and testing
- There is a moderate level of waste in the pit; however, the refuse has been removed form along the west wall to facilitate inspection and to effect planned repairs
- A derrick type crane system will be erected over the #3 refuse pit to convey materials necessary to reline the feed chute.
- Fill and spacer/holders on the north side of the cooling tower is being removed
- The exterior sheathing on top east and west corners of the north and south facing Refuse Crane Building has been removed to accommodate installation of festoon cables for the refuse cranes.
- Switchyard clearance was given to EEE and system grounds applied; cleaning of insulators has commenced with electrical testing to follow

- Gaffin will be cleaning the Number 1 Condenser
- Kone Crane Service is prepping for installation of two trolley and three runway festoons
- Insulation and lagging on Baghouse 1 has been completed; six hoppers on Baghouse 2 still need to have lagging installed. The insulation on Baghouse 3 appears to be complete but all 12 hoppers are awaiting installation of the lagging metal
- The new (replacement for the original #1 charger) #1 Battery Charger is being installed in the 13kV Building
- A new dual cell battery for the #1 Station Battery Bank is in the battery room. It will replace the defective cell which had been bypassed during the past several months while a new battery could be procured

On Site Contractors and Support Personnel

Contractors working on site today and logged in at the CR:

- Maxium (3) – Unit 3
- ISI (5) – fourth floor OFA duct
- Diversified Plant Services (15) – Unit 3 SH, and 1st & 2nd pass
- Safeway (20) – scaffolding inside and outside of Unit 3
- TAW (1) – pick up FDF motor
- SEMCO (3) - Baghouse
- Bert Construction (1) - cooling tower stairway foundation
- MJM (2) - E&I
- USA (1) – sweeper
- Precision (5) - blast cleaning furnace 3
- Unitherm (5) – Number 3 Penthouse
- RSI (4) – Economizer inlet expansion joint
- ETHOS (8) – Generator disassembly and Front Standard inspection
- GRL (6) - electrical support
- Gaffin Industries (10 day + 5 night) – super sucker and other cleaning
- J&L Mechanical (4) - north end processing
- Kone Crane (6 +3) - refuse crane festoon cable replacements
- DPS (13) sandblasting
- EEE (22) - High voltage systems' cleaning, inspections and testing
- MOR PPM (11) – Plant wide cleaning

(153) Total Contractors are on site today (including prior night's work)

General Comments:

The new Facility Manager, Paul Grego, was at today's 8:30 AM meeting and introduced to all in attendance. Covanta will continue to host a Daily Update meeting at 0830 hrs. in the Classic Admin. Building.

Daily outage update meetings will be held at 0600 and 1800 hrs. in the Classic Admin. Building.

Currently, receipt of email for Covanta Operations and Maintenance personnel is not functional. Transition of email accounts from GCS to Covanta should be completed within a couple of days. Plant personnel's cell numbers have been retained and should be functioning normally.

Covanta's Joe Treshler mentioned that respectful removal of GCS logo's items would commence today. This includes changing the heading on the Contractor's sign in sheets in the Control Room.

Two new 980 Caterpillar front end loaders were delivered today and have been parked at the top of the entrance ramp to the Tipping Building.

Kim Eiss, generator specialist, will be at Miami's TAW shop to witness generator field electrical testing and installation of the new retaining rings.

Bill Crellin, P.E., with Crellin Engineering LLC, will be at the Plant Tuesday through Friday.

Pinellas WTE Daily Report

Edition: 248 - 12.09.14

Date of Report: Tuesday, 12/09/14

Tons Received: 0 on Monday, 12/08/14

4,326 diverted to landfill on 12/08/14

Tons Processed: 0 on Monday, 12/08/14

Pit Level: No data

Weather: sunny- 0% chance of rain - high 61 - low 53

Boiler 1 Steam Flow set point (lbs/hr): Offline for Common Outage

Boiler 2 Steam Flow set point (lbs/hr): Offline for Common Outage

Boiler 3 Steam Flow set point (lbs/hr): Offline for Fall Outage

TG 1 Power Produced (MW-Hrs): Offline due to common outage

TG 2 Power Produced (MW-Hrs): Offline due to unit 3 fall outage

Net Power Exported (MW-Hrs): 0 on 12/08/14

Safety:

No accidents reported. Doug from Safety Training & Consultants is managing safety on night shift.

Robert noted that extension cords were being problematic, and that all needed to stress keeping them run neatly and out of walkways.

There was a discussion in the morning meeting re: parking. There are lots of contractors driving inside the plant and very few parking spaces available. Beth said she did not want parking in the grass in front of the new Admin Bldg, as tours for school children will continue.

John Bouten (sp?) will be onsite today for heavy equipment operator training.

Robert noted that over 130 individuals have received Pinellas specific safety training yesterday and this morning. Ted Hoefler said that sometime in the future the plant would implement use of IS Net and that

all contractors must participate in IS Net. They will then do their training on line before arriving at Pinellas.

Robert noted that eventually the plant would become tobacco free, which will include smoking, chewing, and use of eCigarettes. Ted said that would probably take about 3 months to implement, so for now, tobacco is still allowed in specified smoking zones.

Environmental Compliance:

No exceedances reported.

Becky noted that EPA – MWC training is under way for CRO Andy Griffin.

Becky noted that PM 2.5 results were in today. I have not seen the #'s, but Becky said they were good.

Becky asked if Jim Hasselbauer could check into problems with the NOx feedback controls & optimize control of the urea pumps.

Becky inquired about tying the new O2 analyzers at the economizer outlet into combustion controls. Russ and Gus are working on it.

Operations:

Unit 1 – Coded offline @ 1130 Saturday, 12/06/14 for the common outage.

Unit 2 – Coded offline @ 2320 Friday, 12/05/14 for the common outage.

Unit 3 – Coded offline @ 1117 Friday, 12/05/14.

TG 1 – was taken offline @ 1020 Saturday, 12/06/14 for replacement of the generator rotor retaining rings & the common outage.

TG 2 – was taken offline @ 1020 Friday, 12/05/14 for the unit 3 Fall Outage & the common outage.

Waste Forecast - Deliveries have been halted, all waste is being diverted to landfill.

Balance of Plant –

Elwyn noted that all stock of water treatment chemicals previously supplied by Chem Aqua would be used. As supplies dwindle, Chem Treat will replace them.

Covanta is using the GCS EAM software. Beth said she was not sure if the license had been transferred to Covanta.

Joe T stated that Covanta would not be using any GCS equipment by the end of the day. It does not look like Covanta will take over the GCS lease on the loaders used in RSPB. There are still disagreements between GCS and Ring Power over what repairs are required on the old loaders.

Cleaning –

There is a small pile of flyash in the containment area under the filter press, and slop under the dischargers, which are being cleaned out. Ash and moon rock are under the unit 3 SDA. Other than that, the plant is relatively clean today, given all the work that is ongoing.

The crane operator is doing a thorough cleaning of the crane cab.

Maintenance

Chris Schuckert noted the following Maintenance and Outage activities today:

- Unitherm continues installing lagging as part of the baghouse hopper project.
- Semco is installing new unit 3-economizer screw conveyors.
- BMG is in RSPB, they have found several issues with tail pulleys, skirting, etc.
- Kone Crane is installing new crane rails. They report being ~ ½ shift behind, but hope to make up ground lost.
- PPM laborers are cleaning out dischargers using ice.
- Gaffin is cleaning #1 main condenser tubes.
- Matrix is replacing numerous small-bore valves.
- Matrix is pulling a circ water pump & motor.
- Matrix is re-plating the unit 3 feed hopper.

- Ethos has removed the TG 1 thrust bearing. The active face showed scarring, but only a couple of mils deep. The inactive face looked good.
- Ethos is preparing to pull the TG 1 generator rotor out. They say it will be later tonight. Afterwards it will be shipped to TAW's Miami shop for retaining ring replacement.
- DPS is sand blasting; unit 3 furnace completed this morning.
- Safway is installing unit 3 SDA scaffold. The SDA hopper has buckled in 1 spot.
- Ethos removed 2 large-bore 90-degree elbows at the #1 condenser to facilitate cleaning of the condenser tubes. They did not remove the water boxes, which are scheduled to be replaced. Apparently there was some confusion since this was under a GCS P.O. The new water boxes are in Batavia NY; Chuck is working to get them here.
- Damage from arcing has been found on the TG 1 bus.
- Cleaning the SCAH's – I asked if the warranty claim was ever settled by GCS with Aerofin for the 3 new coils that have leaks. It has not been settled. Ted said Covanta may have some leverage over Aerofin to deal with this issue.

The following contractors are on site and signed in at the CR:

Semco – 3 – ash system maintenance
 Semco – 4 – CNV 4 in RSPB
 Semco – 3 – baghouse
 Safway – 13 – scaffold
 Double Eagle – 5
 GRL Electric – 6
 EEE – 8 – 13.8 kV switchyard
 RSI – 5 – expansion joints
 RSR Industrial Coatings – 3 – pump base
 Unitherm – 6 – insulators/lagging baghouse hopper project
 ICI – 7 – installing beams at elevation 46' 8"
 J&L Mechanical - 4 –
 Kimmins – 3 –
 GRL Electrical – 1 -
 ASI – 4 – insulation & lagging
 PPM – 7 on days + 4 on nights – cleaning

Coverall -2 – cleaning
Gaffin – 4 – cleaning condenser tubes
Safety Training & Consultants – 1 – night shift safety
Maxim – 6
Matrix – 32 – re-plating feedchute, various pressure parts, valve replacements
Ethos – 7 – TG 1 outage
Kone – 5 – replacing crane rails
DPS – 15 on days + 13 on nights - sandblasting
MJM – 2 – supplementing E&I staff

(173) Total contractors working on site today

General Comments:

There is a large # of Covanta staff on site today assisting in outage work, and testing activities, training and setting up OP's procedures..

Elwyn noted that FM Global and Chem Treat would be on site December 15 to inspect steam drums.

New Covanta Email system for ex-GCS employees is starting to work. Emails lost since GCS left, have been stored and are showing up on everyone's inbox.

Outage meetings are being held at 0600 and 1800 in the Classic Admin Bldg conference room.

Pinellas WTE Daily Report

Edition: 249 - 12.10.14

Date of Report: Wednesday, 12/10/14

Tons Received: 0 on Tuesday, 12/09/14

3,567 diverted to landfill on 12/09/14

Tons Processed: 0 on Tuesday, 12/09/14

Pit Level: No data

Weather: sunny- 0% chance of rain - high 65 - low 48

Boiler 1 Steam Flow set point (lbs/hr): Offline for Common Outage

Boiler 2 Steam Flow set point (lbs/hr): Offline for Common Outage

Boiler 3 Steam Flow set point (lbs/hr): Offline for Fall Outage

TG 1 Power Produced (MW-Hrs): Offline due to common outage

TG 2 Power Produced (MW-Hrs): Offline due to unit 3 fall outage

Net Power Exported (MW-Hrs): 0 on 12/09/14

Safety:

No accidents reported.

There was a situation last night that was quite out of the ordinary. Evap Tech is doing work at the cooling tower, but only on day shift. They decided they needed a security guard for night shift to watch the area. Covanta allowed that, but the guard showed up last night with a gun, yes, an armed guard. For what little it is worth, he was licensed to carry the gun. Covanta is taking care of the situation; there will be no more armed guards on site.

A 4 pack of welding machines has disappeared from the site. Beth reported that the BMX Racing building across 28th street was stripped of copper recently & that a loader was stolen off a job site down 28th street. All to be aware of shady criminal behavior.

There was a discussion in the 0600 outage meeting; there is too much red tape in the plant. Robert is investigating, and if it doesn't need to be there, it will be removed or minimized.

Environmental Compliance:

No exceedances reported.

Becky noted that EPA – MWC training continues for CRO Andy Griffin.

Becky noted that PM 2.5 results were:

- Unit 1 – 6
- Unit 2 - 3

Becky mentioned that 2 Shift Supervisors still need to take their site specific portion of the ASME licensing test for Operator of a Resource Recovery Facility. Also, they will need training.

Becky stated that Greg Zodorko (sp?), Covanta's Regional CEMS expert would be on site tomorrow. He will investigate the opacity "Error" signals that have been coming in recently. Becky also said the new blowers for the Lighthawk opacity monitors are in the warehouse.

Operations:

Unit 1 – Coded offline @ 1130 Saturday, 12/06/14 for the common outage.

Unit 2 – Coded offline @ 2320 Friday, 12/05/14 for the common outage.

Unit 3 – Coded offline @ 1117 Friday, 12/05/14.

TG 1 – was taken offline @ 1020 Saturday, 12/06/14 for replacement of the generator rotor retaining rings & the common outage.

There is confusion over what happened to the spare thrust bearings that were shipped out by GCS to GE to be re-built (babbit poured and milled to GE spec). Covanta has purchased from GE a spare set of thrust bearings (1 active face & 1 inactive face) for both TG 1 and TG 2.

TG 2 – was taken offline @ 1020 Friday, 12/05/14 for the unit 3 Fall Outage & the common outage.

Waste Forecast - Deliveries have been halted, all waste is being diverted to landfill.

Balance of Plant –

Elwyn noted that the plant should consider purchasing an air-cooled compressor. The 3 Atlas Copco compressors are all water cooled, so when the cooling tower is down, there is no supply of compressed air.

Richard Malloy stated that the following equipment has arrived:

- 2 - skid steerers
- 1 – telescoping man lift
- 1 - telescoping fork lift (aka Lull)
- 2 – CAT 980 K loaders – rentals
- 2 – CAT 980 M loaders will arrive in April – Covanta will purchase these
- 1 – Cat 966 loader – for use in RSPB
- 1 – Gator vehicle (not to be confused with the superior Noles vehicle)

Apparently the rental loaders came with pneumatic tires. John Boutin, Covanta's Mobile Equipment Manager, is trying to work out something with GCS to swap with their solid tires. If that doesn't work, Covanta will buy solid tires and then swap them out from the rental loaders to mount on the new loaders in April.

John Boutin also recommends installing a new 110-volt diesel fuel pump. Currently diesel fuel is transferred into loaders via gravity; very slow & causes leaks. The pump would be ~ \$3500, and would eliminate leaks. It also would monitor time/date fuel was taken, and which vehicle received it. Covanta to provide pricing.

Cleaning –

Very early this morning there was a lake at ground level. Water from draining boilers, pipes cut, condenser cleaning, cleaning dischargers with ice, etc. all contributed. Covanta quickly got the contact sump pump in service and pumped the water to the Waste Water Tank.

There is a medium pile of flyash in the containment area under the filter press, and slop under the dischargers, which are being cleaned out. Ash and moon rock are still under the unit 3 SDA. There are small piles of

ash under the gallery belt.

The crane operators continue to do a thorough job cleaning the crane cab. Vinyl floor tiles are peeling up, so something will have to be done about the floor.

Maintenance

Chris Schuckert noted the following Maintenance and Outage activities today:

- Semco is installing new unit 3-economizer screw conveyors.
- BMG is in RSPB, they have found several issues with tail pulleys, skirting, etc.
- Kone Crane is installing new crane rails on the west side of the pit and removing old ones on the east side (see attached photo). They report picking up time they have lost. They are also, de-terminating festoon cables with GRL Electric.
- PPM laborers are cleaning in various areas.
- Gaffin continues cleaning #1 main condenser tubes. They now have 2 blasting units working and report they will finish #1 main condenser today. After that, they will move to the #2 bypass condenser. Both bypass condensers are open.
- Gaffin continues cleaning out the cooling tower basin.
- Matrix is replacing numerous small-bore valves; 21 were reported replaced last night
- Matrix has pulled a circ water pump & motor.
- Matrix continues re-plating the unit 3 feed hopper (see attached photo). They have installed the plate on the north wall and are welding it out. Plate is going in the south side and on the slide surface. Matrix reported thin metal n the vertical east wall; Covanta to investigate.
- Matrix is replacing the glycol cooling line at the air compressor building.
- Ethos had the TG 1 generator rotor out and on ground level around 1800 last night. It shipped out around 2100. It is in TAW's Miami shop for retaining ring replacement.
- At 1500 today Joe Cascio reported that Al Cossey, got a call from TAW stating that a low megger test reading was registered on the TG 1 generator rotor. Kim Eiss will be in TAW's shop tomorrow

morning to over see additional testing. It is not know at this time, if this will have an impact on the TG 1 schedule.

- DPS completed sand blasting in the boiler, for now. After refractory is removed they will return to blast areas where refractory was taken out.
- DPS will start magnetic particle NDE on areas around nozzles on the #2 DA today. These areas looked suspect.
- Covanta will take spot UT readings on the #2 DA shell today. The south side of #2 DA looks rough from corrosion. I recommended that this DA vessel be sand blasted and painted with a corrosion resistant coating before insulation and lagging is replaced; Covanta will provide pricing for this work.
- Zampell is jack hammering out bad areas of refractory in the furnace.
- Safway is installing unit 3 SDA scaffold. The SDA hopper has buckled in 1 spot (see attached photo).
- Covanta is still waiting on new water boxes for main condenser #1, which are scheduled to be replaced. Apparently there was some confusion since this was under a GCS P.O. The new water boxes are in Batavia NY; Chuck is working to get them here.
- Damage from arcing has been found in 1 spot on the TG 1 bus.
- EEE is performing electrical testing on the TG 1 generator, bus, and inside the main switchyard.
- RSR Industrial Coatings are repairing the top of the unit 1 FD fan motor base. This is a concrete repair similar to what was done on unit 2 a couple of weeks ago.
- NIC and Covanta staff will start UT testing in various areas of B-103 today.
- Covanta's Field Services group is doing well on replacement of the unit 3 economizer stringers and supports. It is my opinion this work is progressing ahead of even the advanced schedule.

The following contractors are on site and signed in at the CR:

Semco – 3 – unit 3 economizer screw conveyor

Semco – 4 – CNV 4 in RSPB

Semco – 3 – airlines

Safway – 16 – scaffold

Double Eagle – 4
GRL Electric – 6 – electrical work at the cooling tower and RSPB
EEE – 7 – main switchyard & bus testing
RSI – 30 – unit 1 economizer expansion joints
RSR Industrial Coatings – 2 – unit 1 FD fan base
RRT – 2 – RSPB belts
Unitherm – 6 – insulating/lagging baghouse hopper project
ICI – 6 – RSPB
ICI -4 – Unit 3 OFA duct supports
J&L Mechanical - 6 –
PPM – 11 on days + 7 on nights_– cleaning
Coverall -2 – cleaning
Gaffin – 10 – cleaning condenser tubes
Maxim – 6
Matrix – 33 – re-plating feedchute, various pressure parts, valve replacements
Ethos – 7 day shift + 4 nights – TG 1 outage
Kone – 11 day shift + 5 nights – replacing crane rails & festoons
DPS – 6 – NDE
Flotec – 10 – valve repair
USA – 1 – street sweeper
Evap Tech – 12 – cooling tower repair
NIC – 5 – UT
Safety Training & Consultants – 1 – night shift safety
Neu Ideas – 1 – outage management
IE – 1 – night shift outage management
MJM – 2 – supplementing E&I staff

(234) Total contractors working on site today (Note: this does not include the Covanta Field Services group)

General Comments:

There is a large # of Covanta staff on site again today assisting in outage work, testing activities, training and setting up OP's procedures..

Outage meetings are being held at 0600 and 1800 in the Classic Admin Bldg conference room. Get there early for a chair.

Pinellas WTE Daily Report

Edition: 250 - 12.11.14

Date of Report: Thursday, 12/11/14

Tons Received: 0 on Wednesday, 12/10/14

2,567 diverted to landfill on 12/10/14

Tons Processed: 0 on Wednesday, 12/10/14

Pit Level: No data

Weather: sunny- 0% chance of rain - high 64 - low 46

Boiler 1 Steam Flow set point (lbs/hr): Offline for Common Outage

Boiler 2 Steam Flow set point (lbs/hr): Offline for Common Outage

Boiler 3 Steam Flow set point (lbs/hr): Offline for Fall Outage

TG 1 Power Produced (MW-Hrs): Offline due to common outage

TG 2 Power Produced (MW-Hrs): Offline due to unit 3 fall outage

Net Power Exported (MW-Hrs): 0 on 12/10/14

Safety:

No accidents reported; good work & good co-operation by all so far.

Beth noted that someone tried to use a de-activated pass card to enter the shower/locker room building a couple of days ago. Additionally there are issues obtaining a list of those who have access cards, what access they have, etc. Beth recommends a separate, small group meeting to sort everything out.

Environmental Compliance:

No exceedances reported.

Becky noted that there was a false opacity excursion registered yesterday on B 103. The opacity monitor shutter closed and it registered a 100% reading. Becky will send FDEP a courtesy letter to explain.

Becky stated that Greg Zodorko, Covanta's Regional CEMS expert is on site today. He will investigate the opacity "Error" signals that have been coming in recently, the new blowers for the Lighthawk opacity monitors, and all other CEMS issues.

Operations:

Unit 1 – Coded offline @ 1130 Saturday, 12/06/14 for the common outage.

Unit 2 – Coded offline @ 2320 Friday, 12/05/14 for the common outage.

Unit 3 – Coded offline @ 1117 Friday, 12/05/14.

TG 1 – was taken offline @ 1020 Saturday, 12/06/14 for replacement of the generator rotor retaining rings & the common outage.

There is confusion over what happened to the spare thrust bearings that were shipped out by GCS to GE to be re-built (babbitt poured and milled to GE spec). Covanta has purchased from GE a spare set of thrust bearings (1 active face & 1 inactive face) for both TG 1 and TG 2, but GE reportedly lost the P.O. Chuck is working hard to make sense of this.

TG 2 – was taken offline @ 1020 Friday, 12/05/14 for the unit 3 Fall Outage & the common outage.

Waste Forecast - Deliveries have been halted, all waste is being diverted to landfill.

Balance of Plant –

John Boutin presented info and specs on a diesel tank within a tank, pump, and tracking device; Covanta to provide pricing.

Joe T stated that Covanta would purchase new solid tires for the 2 rental loaders. Trying to work a deal with GCS to use their tires, while GCS & Ring Power were disagreeing over costs to renew the GCS rental loaders seemed too confusing. The tires they purchase will be mounted on the new loaders that arrive in April. The new loaders will come without tires.

Cleaning –

The area under the dischargers was a mess this morning due to sand blast media and ash. Bobcats are transferring ash to the containment area under the filter press. There is a lot of ash under SDA 3, where the live bottom has been removed.

There are messy areas, but given that the entire plant has been shut down and cleaning activities are ongoing basically everywhere, the cleaning staff is to be commended. There is a lot to keep up with, and they are definitely giving it their best effort. I expect them to catch up soon, and the plant to become immaculately clean.

Maintenance

Chris Schuckert noted the following Maintenance and Outage activities today:

- Semco is installing new unit 3-economizer screw conveyors.
- Kone Crane has installed new crane rails on the west side of the pit, and are now working on the east side. They report being back on schedule. They are also, de-terminating festoon cables with GRL Electric, and will start festoon installation soon.
- PPM laborers are cleaning in various areas.
- Gaffin continues cleaning #1 main condenser tubes; should finish today. They now have 2 blasting units working, and have the 2nd unit cleaning the #2 bypass condenser.
- Gaffin continues mucking out the cooling tower basin.
- Matrix is replacing numerous small-bore valves and steam traps.
- Matrix has replaced a re-built circ water pump (north pump) & motor. They will grout it in today, and replace the motor in a day or 2 after the grout sets up.
- After removing the circ water pump motor, damage was found to the 4160 V feed. It will have to be replaced.
- Matrix continues re-plating the unit 3 feed hopper. They have all the new plate in place, and are welding it out. Matrix reported thin metal in the vertical east wall; they will also replace this plate wall.
- Matrix is replacing the glycol cooling line at the air compressor building. All of the old piping is out and the new is going in.

- Ethos has the TG 1 generator rotor in TAW's Miami shop for retaining ring replacement.
- Ethos had major problems removing TG 1 main steam valve bolts yesterday. Today they brought Bolt Tech in for induction heating of the bolts/nuts to ease the removal process.
- A 1430 conference call will be held today with Joe Cascio, myself, Covanta staff, and Kim Eiss (in Miami) to discuss the low megger test reading registered on the TG 1 generator rotor, additional test results, the path forward, and schedule impacts.
- DPS continues magnetic particle NDE on areas around nozzles on the #2 DA today. These areas looked suspect.
- Covanta continues UT readings on the #2 DA shell today. The south side of #2 DA looks rough from corrosion. I recommended that this DA vessel be sand blasted and painted with a corrosion resistant coating before insulation and lagging is replaced; Covanta will provide pricing for this work.
- Zampell has finished jack hammering out bad areas of refractory in the #3 furnace.
- DPS is sand blasting areas in the #3 furnace where refractory was taken out.
- Safway is installing unit 3 SDA scaffold; they should finish late tomorrow. The SDA hopper has buckled in 1 spot.
- New water boxes for main condenser #1, are confirmed to be on the way. Once they arrive, measurements will be taken to assure they will fit, and if so, they will be installed by Matrix.
- Damage from arcing has been found in 1 spot on the TG 1 bus.
- EEE is performing electrical testing on the TG 1 generator, bus, and inside the main switchyard.
- NIC and Covanta staffs are UT testing in various areas of B-103 today. The 2nd pass readings should be complete today. They will move to the 3rd pass rear wall next.
- Covanta's Field Services group is doing well on replacement of the unit 3 economizer stringers and supports. Early this AM ~ ½ of the tubes were installed. It is still my opinion this work is progressing ahead of even the advanced schedule.
- Industrial Access came on site today for stack & flue inspections and repairs.

- The Covanta Maintenance staff is primarily working on a large list of PM's.
- An economizer leak was discovered in B 102; CFS will make the repair.

The following contractors are on site and signed in at the CR:

Semco – 4 – unit 3 economizer screw conveyor
 Semco – 4 – CNV 4 in RSPB
 Safway – 13 – scaffold
 Double Eagle – 5 – coating high voltage bus
 GRL Electric – 3 – electrical work at the cooling tower and RSPB
 EEE – 18 – main switchyard & high voltage bus testing
 RSI – 27 – unit 1 economizer expansion joints
 RRT – 2 – RSPB belts
 Unitherm – 6 – insulating/lagging baghouse hopper project
 ICI – 6 – RSPB
 ICI - 4 – Unit 3 OFA duct supports
 PPM – 15 on days + 8 on nights – cleaning
 Coverall -2 – cleaning
 Gaffin – 6 – cleaning condenser tubes
 Maxim – 28 – unit 3 grates, SDA
 Matrix – 32 – re-plating feedchute, various pressure parts, valve replacements
 Ethos – 9 day shift + 4 nights – TG 1 outage
 Kone – 6 day shift + 5 nights – replacing crane rails & festoons
 DPS – 12 – Sandblast & NDE
 Flotec – 11 – valve repair
 Evap Tech – 12 – cooling tower repair
 NIC – 5 – UT on night shift
 Safety Training & Consultants – 1 – night shift safety
 Neu Ideas – 1 – outage management
 IE – 1 – night shift outage management
 Otis -1 – elevator repair last night
 Zampell – 6 – refractory removal last night
 Industrial Access – 9 – stack and flue inspections, repairs
 Bolt Tech – 2 – induction heating of TG 1 main steam valve bolts/nuts
MJM – 2 – supplementing E&I staff

(270) Total contractors working on site today (Note: this does not include the Covanta Field Services group, or outside Covanta technicians & managers)

General Comments:

There is a large # of Covanta staff on site again today assisting in outage work, testing activities, training and setting up OP's procedures..

Outage meetings are being held at 0600 and 1800 in the Classic Admin Bldg conference room. Get there early for a chair.

Sam discussed maintenance of the new Admin Bldg and the new Shower/Locker room Bldg under the new contract with Covanta. Covanta has the responsibility for this maintenance, but there are warranty issues still open from construction of the buildings. Sam recommends a separate smaller group meeting to discuss.

Paul Grego stated that Covanta is obtaining pricing for repairs to existing burners, and replacement burners. He said new MACT standards will make it tough/impossible to comply with 4-hour CO averages with burners that take long periods of time to light, and that are not reliable.

Pinellas WTE Daily Report

Edition: 251 - 12.12.14

Date of Report: Friday, 12/12/14

Tons Received: 0 on Thursday, 12/12/14

2,951 diverted to landfill on 12/11/14

Tons Processed: 0 on Thursday, 12/11/14

Pit Level: No data

Weather: cloudy - 0% chance of rain - high 62 - low 48

Boiler 1 Steam Flow set point (lbs/hr): Offline for Common Outage

Boiler 2 Steam Flow set point (lbs/hr): Offline for Common Outage

Boiler 3 Steam Flow set point (lbs/hr): Offline for Fall Outage

TG 1 Power Produced (MW-Hrs): Offline due to common outage

TG 2 Power Produced (MW-Hrs): Offline due to unit 3 fall outage

Net Power Exported (MW-Hrs): 0 on 12/11/14

Safety:

No accidents reported; still good work & good co-operation by all.

As one would expect, minor issues pop up (scaffold alterations, caution tape that needs to be removed, improved lighting in some areas, etc.), but it seems as if these are being addressed quickly.

Environmental Compliance:

No exceedances reported.

Greg Zodorko, Covanta's Regional CEMS expert, is on site again today. Yesterday he reviewed the CEMS with Paul Grego.

There are interferences with mounting the new blowers for the opacity monitors and stack test ports. Covanta is looking for a solution.

Operations:

Unit 1 – Coded offline @ 1130 Saturday, 12/06/14 for the common outage.

Unit 2 – Coded offline @ 2320 Friday, 12/05/14 for the common outage.

Unit 3 – Coded offline @ 1117 Friday, 12/05/14.

TG 1 – was taken offline @ 1020 Saturday, 12/06/14 for replacement of the generator rotor retaining rings & the common outage.

There is still confusion over what happened to the spare thrust bearings P.O. that went to GE. Chuck re-sent the P.O. and expects acknowledgement from GE today that they received it. The thrust bearings that just came out of TG 1 are going to Liddy's in Jacksonville today to be re-furbished. Hopefully, Liddy's still has the GE specs.

TG 2 – was taken offline @ 1020 Friday, 12/05/14 for the unit 3 Fall Outage & the common outage.

Waste Forecast - Deliveries have been halted, all waste is being diverted to landfill.

Balance of Plant –

Cleaning –

Clean up has improved, still some ways to go.

Maintenance

Chris Schuckert noted the following Maintenance and Outage activities today:

- Semco continues installing the new unit 3-economizer screw conveyors.
- Kone Crane has installed the new crane rails on the east & west sides of the pit. They still have bolts and clips to rattle up, and have to align the rails. Today they plan on lifting the crane 3 main and bridge festoons into place.
- PPM laborers are cleaning in various areas.
- Gaffin has finished cleaning tubes on the #1 main condenser and the #2 bypass condenser. They are working on an LP feedwater heater and hope to start on the #1 bypass condenser today.
- Gaffin has completed mucking out the cooling tower basin.

- Evap Tech continues replacing rotten wood, screens and packing in cell 5 of the cooling tower. They are also working on replacing the supports, fan, gearbox, shaft, and fan of cell 1. Butterfly valves are scheduled to be replaced in the riser pipes on the east side of the tower. They have run into problems with the valves being stuck in the open position, and not having clearance to slide them out.
- Matrix has only 2 steam traps left to replace. They are nearly complete with the list of small-bore valves to be replaced.
- Matrix has replaced a re-built circ water pump (north pump) & grouted it in. They will replace the motor tomorrow.
- After removing the circ water pump motor, damage was found to the 4160 V feed. It will have to be replaced.
- Matrix continues re-plating the unit 3 feed hopper. They are fitting up new plates in the rear (east) wall that was found to be thin.
- Matrix is nearly complete with replacing the glycol cooling line at the air compressor building. That work should finish today.
- Ethos has the TG 1 generator rotor in TAW's Miami shop for retaining ring replacement. Megger testing revealed a ground in the #6 coil. Kim Eiss, Covanta's generator specialist, is in Miami at the TAW shop. In a conference call yesterday Kim stated that the damage is due to copper softening over time and deforming slightly to cause insulation to be compromised. It was decided to do only what is needed to put the machine back in service for now. Kim, TAW, and Covanta should have a report back today of what immediate repairs are needed, and the cost and schedule impacts. Preliminary word is that there could be a 2-week delay in the schedule. Kim said that a rewind would be needed at some point in the next 5 years. It seems that when the TG 1 steam path is replaced would be a good time for the rewind.
- DPS finished magnetic particle NDE on areas around nozzles on the #2 DA today. These areas looked suspect. This morning Covanta said that there are issues, but that they wanted to fully review the data and come up with a repair plan before discussing with the County. They have now decided to go inside the vessel and perform more NDE work.
- Covanta completed UT readings on the #2 DA. The south side of #2 DA looks rough from corrosion. I recommended that this DA

- vessel be sand blasted and painted with a corrosion resistant coating before insulation and lagging is replaced; Covanta will provide pricing for this work.
- Last night DPS finished sand blasting areas in the #3 furnace where refractory was taken out.
 - Safway completed the unit 3 SDA scaffold. The SDA hopper has buckled in 1 spot.
 - New water boxes for main condenser #1, are on site and Matrix has started installation today.
 - Minor damage from arcing has been found in 1 spot on the TG 1 bus. EEE is repairing and will pull all old plate bus members out and clean them, re-install, and replace the insulating sheathing over the plate us.
 - EEE is performing electrical testing on TG 2, TG 1 generator (minus the rotor), bus, and inside the main switchyard. Preliminary reports are that all looks good.
 - NIC and Covanta staffs are UT testing in various areas of B-103 today. The 2nd pass readings are complete. They have moved to the 3rd pass walls and superheater tubes.
 - Covanta's Field Services group (CFS) is doing well on replacement of the unit 3 economizer stringers and supports. They expect to have all tubes replaced and be water tight around noon Saturday. Supports above the roof will then be replaced.
 - CFS is pad welding wall tubes in the 2nd pass found to be < the ASME minimum criteria.
 - Industrial Access performed stack & flue inspections and repairs yesterday. Today they are starting on repairs to known damage in the upper portion of the unit 1 flue. Also, they found serious corrosion damage to the bottoms of all 3 flues (see attached photo). All 3 flues have cracked, pulled apart, and shifted over approximately 1/3 of the perimeter. Industrial Access will also start on those repairs today, with the focus on preserving structural integrity (Covanta has sent details to their structural engineer).
 - The Covanta plant Maintenance staff is primarily working on a large list of PM's.
 - An economizer tube leak was discovered in B 102; CFS will make the repair.

- Unitherm continues on lagging as part of the baghouse hopper project. Brian O and OP's need them to get done on unit 3 so scaffold can be removed, and the screws run out.
- A dance floor has been built in the furnace over the grates to allow work above and on the grates. Two end bars have been removed from each grate step, some comp plates removed, and tension rods loosened. Inspections and measurements will begin today.

The following contractors are on site and signed in at the CR:

Semco – 11 – unit 3 economizer screw conveyor, baghouse
 Safway – 10 – scaffold
 Double Eagle – 4 – coating high voltage bus
 GRL Electric – 6 – electrical work at the cooling tower and baghouse
 EEE – 16 – main switchyard & high voltage bus testing
 RSI – 27 – unit 1 economizer expansion joints
 RRT – 2 – RSPB repairs
 Unitherm – 6 – insulating/lagging baghouse hopper project
 ICI – 6 – RSPB
 ICI - 4 – Unit 3 OFA duct supports
 PPM – 15 on days + 13 on nights – cleaning
 Coverall -2 – cleaning
 Gaffin – 5 – cleaning condenser feedwater heater tubes
 Maxim – 29 – unit 3 grates, SDA
 Matrix – 32 – re-plating feedchute, various pressure parts, valve replacements
 Ethos – 7 – TG 1 outage
 Kone – 6 day shift + 5 nights – replacing crane rails & festoons
 J&L – 1 – crane 3
 DPS – 12 – Sandblast & NDE
 Flotec – 10 – valve repair
 USA – 1 – street sweeper
 Evap Tech – 12 – cooling tower repair
 NIC – 5 – UT on night shift
 Safety Training & Consultants – 1 – night shift safety
 Neu Ideas – 1 – outage management
 IE – 1 – night shift outage management
 Otis -1 – elevator repair last night
 Zampell – 6 – refractory removal last night

Industrial Access – 9 – stack and flue inspections, repairs
Bolt Tech – 2 – induction heating of TG 1 main steam valve bolts/nuts
MJM – 2 – supplementing E&I staff

(270) Total contractors working on site today; same # as yesterday, amazing. (Note: this does not include the Covanta Field Services group, or outside Covanta technicians & managers)

General Comments:

There is a large # of Covanta staff on site again today assisting in outage work, testing activities, training and setting up OP's procedures.

Outage meetings are being held at 0600 and 1800 in the Classic Admin Bldg conference room.

There is a meeting today @ 1430 with Beth, Joe T, Paul G, and myself to begin review of work encountered above the original outage scope.

Pinellas WTE Daily Report

Edition: 252 - 12.15.14

Date of Report: Monday, 12/15/14

Tons Received: 3,141 diverted to landfill on Friday, 12/12/14

1,084 diverted to landfill on Saturday, 12/13/14

Tons Processed: 0 on Sunday, 12/14/14

Pit Level: No data

Weather: sunny - 0% chance of rain - high 65 - low 46

Boiler 1 Steam Flow set point (lbs/hr): Offline for Common Outage

Boiler 2 Steam Flow set point (lbs/hr): Offline for Common Outage

Boiler 3 Steam Flow set point (lbs/hr): Offline for Fall Outage

TG 1 Power Produced (MW-Hrs): Offline due to common outage

TG 2 Power Produced (MW-Hrs): Offline due to unit 3 fall outage

Net Power Exported (MW-Hrs): 0 on 12/14/14

Safety:

Saturday night a PPM employee was walking near RSPB, tripped, hit his face on a truck bed, and needed stitches.

Rob and Paul noted that several areas of grating/stairs were being repaired on an emergency basis; stairs near the elevator and on the north end of the boiler structure.

Environmental Compliance:

False opacity readings were registered on unit 3 over the weekend. Fumes from flame cutting and welding were the culprits.

Elwyn noted that the new blowers for the opacity monitors had been mounted for all 3 units. Hopefully this will eliminate the "Errors" readings recently registered on the CEMS.

Operations:

Unit 1 – Coded offline @ 1130 Saturday, 12/06/14 for the common outage.

Unit 2 – Coded offline @ 2320 Friday, 12/05/14 for the common outage.

Unit 3 – Coded offline @ 1117 Friday, 12/05/14.

TG 1 – was taken offline @ 1020 Saturday, 12/06/14 for replacement of the generator rotor retaining rings & the common outage.

The thrust bearings that just came out of TG 1 are going to Liddy's in Jacksonville today to be re-furbished. Hopefully, Liddy's still has the GE specs. GE has the P.O. for new thrust bearings for TG 1 and TG 2; they are scheduled to be delivered on 12/30/14.

TG 2 – was taken offline @ 1020 Friday, 12/05/14 for the unit 3 Fall Outage & the common outage.

Waste Forecast - Deliveries have been halted, all waste is being diverted to landfill.

Balance of Plant –

Cleaning –

The plant is relatively clean today.

Maintenance

Chris Schuckert noted the following Maintenance and Outage activities today:

- CFS has B 103 water tonight. The boiler was being filled this afternoon, and a hydro is scheduled for shift change tonight. They hope to find no leaks in the furnace and 2nd pass so that refractory can be gunned, and then scaffold removed.
- Semco has completed installing the new unit 3-economizer screw conveyors.
- Kone Crane is lifting the crane 2 main and bridge festoons into place. They hope to have crane 2 in service by Wednesday, 12/17/14.
- PPM laborers are cleaning in various areas.
- Gaffin is cleaning tubes on the condensers.

- Evap Tech continues replacing rotten wood, screens and packing in cell 5 of the cooling tower. They are also working on replacing the supports, fan, gearbox, shaft, and fan of cell 1. Butterfly valves have been replaced in the 5 riser pipes on the east side of the tower (see attached photo).
- Matrix has replaced the north circ water pump with a re-built model & grouted it in. They still have not replaced the motor.
- After removing the circ water pump motor, damage was found to the 4160 V feed. It will have to be replaced.
- Matrix continues re-plating the unit 3 feed hopper. They are nearly complete.
- Matrix has completed replacing the glycol cooling line at the air compressor building.
- Ethos has the TG 1 generator rotor in TAW's Miami shop for retaining ring replacement. Megger testing revealed a ground in the #6 coil. It has been decided to do only what is needed to put the machine back in service for now. Kim Eiss, TAW, and Covanta have submitted a report this afternoon on what immediate repairs are needed, and the cost and schedule impacts.
- Magnetic particle and UT NDE on the #2 DA revealed several areas that required repair. There are several areas on the top and the south side of the vessel that have been cut out, and will be replaced (see attached photo) by Matrix. Additionally some weld build-up has been applied to the nozzle on the west side. I am awaiting a test report from Covanta with a repair plan.
- Paul G stated that there would not be enough time to coat SDA 2 and use the spray on type insulation that breathes. Conventional mineral wool insulation with aluminum lagging will be applied.
- Repairs are underway on the #3 SDA hopper; approximately 750 square feet of plate is being replaced. This vessel was on bad shape. It may now be the critical path of the unit 3-outage.
- New water boxes for main condenser #1, are on place. Matrix is waiting on new bolts and nuts to finish installation.
- Covanta is considering whether UT testing will be done in B 101 and/or B 102 while they are out of service.
- Covanta's Field Services group (CFS) has completed replacement of the unit 3 economizer stringers and supports including supports above the roof. Roof casing is now being replaced.

- CFS has completed pad welding wall tubes in the 2nd pass found to be < the ASME minimum criteria.
- Industrial Access continues repairs to all 3 flues; temporary supports are in place. They will be replacing 4 to 6 feet up from the bottom of all 3 flues. They are working on the unit 3 flue 1st.
- The Covanta plant Maintenance staff is primarily working on a large list of PM's.
- Unitherm continues on lagging as part of the baghouse hopper project. Brian O and OP's need them to get done on unit 3 so scaffold can be removed, and the screws run out.
- Inspections and work on the unit 3 grate surface is complete. There is still work to be done on the feed table, but this work will have to wait until furnace scaffold supports, which rest on the feed table, are removed.
- Replacing 6 valves on the unit 3 SCAH is nearly complete.
- TAW is replacing the unit 1 FD and ID fan motors with re-furbished motors.
- Nolan Power is performing battery load tests today.
- Maxim has started replacement of the VC 3 pan today.
- Covanta decided to remove the plate in the upper deck of VC 2 and put the fingers back in.
- The shop where the magnet was sent is having problems removing the old bearings.
- Ethos is replacing the rupture discs on Tg1 and TG 2 today.
- A large section of damaged concrete tipping floor, west of bays 2 and 3 was replaced today.
- The unit 3 baghouse inlet duct has been cleaned out, old refractory patches removed off the floor, and plate repairs are underway.
- Conco is on site performing eddy current testing on the condenser tubes.

The following contractors are on site and signed in at the CR:

Semco – 12 – VC 3, CNV 4, baghouse work

Safway – 6 – scaffold

Double Eagle – 3 – coating high voltage bus

EEE – 5 – main switchyard & high voltage bus testing

RSI – 26 – unit 1 economizer expansion joints
RSR Industrial Coatings – 2 -
RRT – 2 – RSPB repairs
Unitherm – 6 – insulating/lagging baghouse hopper project
ICI – 6 – RSPB
ICI - 4 – Unit 2 OFA duct supports
PPM – 12 on days + 14 on nights_– cleaning
Coverall -2 – cleaning
Gaffin – 12 – cleaning condenser & feedwater heater tubes
Maxim – 27 – VC 3, SDA #3
Matrix – 25 – re-plating feedchute, various pressure parts, valve replacements
Ethos – 7 – TG 1 outage
Kone Crane – 5 day shift + 5 nights – replacing crane rails & festoons
J&L – 2 – crane 3
DPS – 12 – Sandblast & NDE
Flotec – 10 – valve repair
USA – 1 – street sweeper
Evap Tech – 12 – cooling tower repair
Safety Training & Consultants – 1 – night shift safety
Neu Ideas – 1 – outage management
IE – 1 – night shift outage management
Zampell – 6 – refractory repair tonight
Industrial Access – 9 – stack and flue inspections, repairs
FM Global – 1 – drum inspections
Nolan Power – 1 – battery load tests
BMG Conveyor Service – 1 - RSPB
ORL – 6 -
MJM – 2 – supplementing E&I staff

(247) Total contractors working on site today. (Note: this does not include the Covanta Field Services group, or outside Covanta technicians & managers)

General Comments:

There is a large # of Covanta staff on site again today assisting in outage work, testing activities, training and setting up OP's procedures.

Outage meetings are being held at 0600 and 1800 in the Classic Admin Bldg conference room.

Joe T reminded all that the monthly Operations meeting will be held tomorrow @ 1000 in the County's Solid Waste Admin Bldg.

Pinellas WTE Daily Report

Edition: 253 - 12.16.14

Date of Report: Tuesday, 12/16/14

Tons Received: 4,128 diverted to landfill on Monday, 12/15/14

Tons Processed: 0 on Monday, 12/15/14

Pit Level: No data

Weather: sunny - 0% chance of rain - high 73 – low 56

Boiler 1 Steam Flow set point (lbs/hr): Offline for Common Outage

Boiler 2 Steam Flow set point (lbs/hr): Offline for Common Outage

Boiler 3 Steam Flow set point (lbs/hr): Offline for Fall Outage

TG 1 Power Produced (MW-Hrs): Offline due to common outage

TG 2 Power Produced (MW-Hrs): Offline due to unit 3 fall outage

Net Power Exported (MW-Hrs): 0 on 12/15/14

Safety:

No major issues reported.

Environmental Compliance:

No issues reported.

Operations:

Unit 1 – Coded offline @ 1130 Saturday, 12/06/14 for the common outage.

Unit 2 – Coded offline @ 2320 Friday, 12/05/14 for the common outage.

Unit 3 – Coded offline @ 1117 Friday, 12/05/14.

TG 1 – was taken offline @ 1020 Saturday, 12/06/14 for replacement of the generator rotor retaining rings & the common outage.

TG 2 – was taken offline @ 1020 Friday, 12/05/14 for the unit 3 Fall Outage & the common outage.

Covanta has made the decision to wait until after the major outages that are now ongoing before replacing the condensate pump canister. There are 2 condensate pumps, and 1 had tripped out of service several weeks ago because of loss of vacuum, caused by holes in the can. The holes were a result of years of corrosion. At that time, the feeling was to repair the 2nd can at the 1st opportunity. Due to the vast amount of work now being performed, and the fact that this pump canister can be repaired online, it will wait.

Waste Forecast - Deliveries have been halted, all waste is being diverted to landfill.

Balance of Plant –

Cleaning –

The plant is relatively clean today.

Maintenance

Chris Schuckert noted the following Maintenance and Outage activities today:

- After hydro #1 on B 103 there were 9 leaks found (steam wall/aka 3rd pass rear wall, 1 cross over tube between the 3rd and 4th passes, and the rest in the upper 2nd pass). By 0600 this morning CFS had repaired all leaks. Hydro #2 was successful.
- Zampell will be gunning ~ 150 square feet of refractory in the furnace this afternoon/evening. Safway will then remove scaffold.
- Kone Crane is lifting the crane 1 main and bridge festoons into place. They hope to have crane 3 in service by Wednesday night, 12/17/14.
- PPM laborers are cleaning in various areas.
- Evap Tech continues replacing rotten wood, screens and packing in cell 5 of the cooling tower. They are also working on replacing the supports, fan, gearbox, shaft, and fan of cell 1. Butterfly valves have been replaced in the 5 riser pipes on the east side of the tower minus 2 valves that had bent shafts, which occurred during shipping. New valves are being shipped.
- Matrix has replaced the A (north) circ water pump and motor.
- Damage to the 4160 V feed to the A (north) circ water pump motor still must be repaired.

- Matrix has completed re-plating the unit 3 feed hopper. They still must clean up the area, and lower the trolley crane they erected over the feed hopper.
- Ethos has the TG 1 generator rotor in TAW's Miami shop for retaining ring replacement. Megger testing revealed a ground in the #6 coil. It has been decided to do only what is needed to put the machine back in service for now. Kim Eiss, TAW, and Covanta have submitted a report on what immediate repairs are needed. Covanta has now pushed back the TG 1 completion date to the end of 1st week in January. This is still a guesstimate; more precise scheduling is forthcoming.
- Magnetic particle and UT testing on the #2 DA revealed several areas that required repair. A plate to replace the largest damaged area was delivered, but unfortunately was 1.5" short. Covanta is scrambling to find a new rolled plate. I am still awaiting a test report from Covanta with a repair plan.
- Paul G stated that there would not be enough time to coat SDA 2 and use the spray on type insulation that breathes. The vessel will be sandblasted and painted with a corrosion resistant coating. Conventional mineral wool insulation with aluminum lagging will be applied over the coating.
- Repairs are underway on the #3 SDA hopper; approximately 750 square feet of plate is being replaced. This vessel was on bad shape. It now is the critical path of the unit 3-outage & expected to be completed Thursday night.
- New water boxes for main condenser #1, are on place. Matrix is waiting on new bolts and nuts to finish installation; they are expected to be delivered today.
- Covanta is considering whether UT testing will be done in B 101 and/or B 102, and NDE work on DA #1 while they are out of service waiting on TG 1 to be ready for service.
- Covanta's Field Services group (CFS) has completed replacement of the unit 3 economizer stringers including supports above the roof. Roof casing is now being replaced.
- I questioned several of the horizontal economizer stringer welds, because they only had 1 pass on the cover pass (aka the reinforcement). My experiences were that 2 stringer passes are welded on the cover pass. Covanta's QA/QC supervisor, Chickee (sp?) discussed the issue, and he gave me their WPS (Weld

Procedure Specification), which does not specify the cover pass. It is to the welder's determination.

- Industrial Access continues repairs to all 3 flues; temporary supports are in place. They will be replacing 4 to 6 feet up from the bottom of all 3 flues. They are working on the unit 3 flue 1st.
- The Covanta plant Maintenance staff is primarily working on a large list of PM's.
- Unitherm continues on lagging as part of the baghouse hopper project. They have completed enough work to get out of the way of Brian O and OP's on unit 3 economizer screws.
- Inspections and work on the unit 3 grate surface are complete. There is still work to be done on the feed table, but this work will have to wait until furnace scaffold supports, which rest on the feed table, are removed.
- Replacing 6 valves on the unit 3 SCAH is complete.
- TAW has replaced the unit 1 FD and ID fan motors with re-furbished motors.
- Nolan Power completed battery load tests yesterday; results were good.
- Maxim continues replacement of the VC 3 pan; they expect to complete work late Thursday/early Friday.
- The shop where the magnet was sent is having problems removing the old bearings. It seems as if communication with the shop has been difficult.
- The unit 3 baghouse inlet duct has been cleaned out, old refractory patches removed off the floor, and plate repairs are underway.
- Conco has completed performing eddy current testing on the condenser tubes.

I do not have an exact tally of contractors are on site and signed in at the CR; too many meetings.

General Comments:

There is a large # of Covanta staff on site again today assisting in outage work, testing activities, training and setting up OP's procedures.

Outage meetings are being held at 0600 and 1800 in the Classic Admin Bldg conference room.

The monthly Operations meeting was held this morning.

There will be about 2 weeks of down time for B 101, B 102, and DA #1 waiting on repairs to the TG 1 generator rotor. I have asked Covanta several times if they plan on taking advantage of this down time to perform UT testing/NDE testing. They have stated that they are checking into availability of contractors. Hopefully some of this work can be done. It would give us great insight to what needs to be done during the Spring outages.

Pinellas WTE Daily Report

Edition: 254 - 12.17.14

Date of Report: Wednesday, 12/17/14

Tons Received: 3,358 diverted to landfill on Tuesday, 12/16/14

Tons Processed: 0 on Tuesday, 12/16/14

Pit Level: No data

Weather: sunny - 0% chance of rain - high 73 – low 61

Boiler 1 Steam Flow set point (lbs/hr): Offline for Common Outage

Boiler 2 Steam Flow set point (lbs/hr): Offline for Common Outage

Boiler 3 Steam Flow set point (lbs/hr): Offline for Fall Outage

TG 1 Power Produced (MW-Hrs): Offline due to common outage

TG 2 Power Produced (MW-Hrs): Offline due to unit 3 fall outage

Net Power Exported (MW-Hrs): 0 on 12/16/14

Safety:

A serious accident was narrowly missed this morning. A Matrix employee was welding at DA #2 when a large piece of pipe (reported as a sootblower lance) fell from several levels above. Reportedly other outage workers were pulling cords and welding lead that caused the pipe to roll off the platform. The pipe missed the welder by about a foot. If it had hit him, it would have resulted in a serious injury. Covanta staff immediately ordered a safety stand down; cords and weld lead were rolled back, and there is a major cleanup underway of outage scrap & debris.

Environmental Compliance:

No issues reported.

Operations:

Unit 1 – Coded offline @ 1130 Saturday, 12/06/14 for the common outage.

Unit 2 – Coded offline @ 2320 Friday, 12/05/14 for the common outage.

Unit 3 – Coded offline @ 1117 Friday, 12/05/14.

TG 1 – was taken offline @ 1020 Saturday, 12/06/14 for replacement of the generator rotor retaining rings & the common outage.

TG 2 – was taken offline @ 1020 Friday, 12/05/14 for the unit 3 Fall Outage & the common outage.

Waste Forecast - Deliveries have been halted, all waste is being diverted to landfill.

Balance of Plant –

Cleaning –

The plant is relatively clean today, except for a large pile of ash in the containment area under the filter press.

Maintenance

Chris Schuckert noted the following Maintenance and Outage activities today:

- Yesterday I reported that Hydro #2 was successful; it was, but only in proving that the furnace and second pass were leak tight. There still were 11 leaks found in the 3rd pass rear wall (aka steam wall). These 11 tubes were being replaced; 9 of them were 20 foot long. Hydro #3 will be performed this afternoon/evening.
- Zampell is gunning ~ 150 square feet of refractory in the furnace today. They should be done by afternoon, and Safway will then remove scaffold.
- Kone Crane has all main and bridge festoons lifted into place. They now hope to have crane 3 in service by Thursday night, 12/18/14. This is 1 day later than previously scheduled.
- PPM laborers are cleaning in various areas.
- Evap Tech continues replacing rotten wood, screens and packing in cell 5 of the cooling tower. They are also working on replacing the supports, fan, gearbox, shaft, and fan of cell 1.
- Damage to the 4160 V feed to the A (north) circ water pump motor still must be repaired.

- Matrix has completed re-plating the unit 3 feed hopper. They still must clean up the area, and lower the trolley crane they erected over the feed hopper.
- Ethos has the TG 1 generator rotor in TAW's Miami shop for repairs and retaining ring replacement. Megger testing revealed a ground in the #6 coil. It has been decided to do only what is needed to put the machine back in service for now. Repairs are being made at TAW and then they will install the new retaining rings. The rotor is expected to be done in Miami, and shipped to Mitsubishi's Savannah plant on 12/23, where the high-speed balance will be performed. Covanta has now pushed back the date TG 1 will be back in service to 1/9/16.
- Magnetic particle and UT testing on the #2 DA revealed several areas that required repair. All plates to replace the damaged areas have been cut, fit in place, and are in the process of being welded out by Matrix. Today a small area crumpled inward about 3" on the south side of DA 2; Covanta's QA/QC managers said that too much heat from welding hit the affected area. I am still awaiting a test report from Covanta with a repair plan.
- Paul G stated that there would not be enough time to coat SDA #2 and use the spray on type insulation that breathes. The vessel will be sandblasted and painted with a corrosion resistant coating. Conventional mineral wool insulation with aluminum lagging will be applied over the coating.
- Repairs continue on the #3 SDA hopper by Maxim; approximately 750 square feet of plate is being replaced. This vessel was on bad shape. It now is the critical path of the unit 3-outage. The crew working inside the vessel has been jacked up to 15. Work inside is now forecasted to complete Friday night/Saturday morning. After that, it will take 12 hours to pull scaffold. The ~ 30 holes in the vessel where scaffold supports ran through must be welded back into place. It is looking like Sunday night before the #3 SDA is ready for service.
- New water boxes for main condenser #1, are in place, bolts and nuts have arrived. Matrix will complete this work today.
- Conco is on site eddy current testing condenser and feedwater heater tubes (see attached photo).
- Covanta's Field Services group (CFS) has completed replacement of the unit 3 economizer stringers including supports above the

- roof. Roof casing has now been replaced and rectangular box support steel painted with corrosion resistant coating (see attached photo).
- Matrix continues repairs to all 3 flues; temporary supports are in place. They will be replacing 4 to 6 feet up from the bottom of all 3 flues. They are working on the unit 3 flue 1st.
 - The Covanta plant Maintenance staff continues working on a large list of PM's.
 - Unitherm continues on lagging as part of the baghouse hopper project. They are now not projected to finish until the end of the month. These guys have been extremely slow.
 - Work on the feed table (replacing cast curved blocks, shark fins, and 1 damaged feed table bar) should complete tomorrow.
 - Maxim continues replacement of the VC 3 pan; they expect to complete work late Thursday/early Friday.
 - The magnet has not been returned from the shop. It seems as if communication with the shop has been difficult.
 - The unit 3 baghouse inlet duct has been cleaned out, old refractory patches removed off the floor, and plate repairs continue.
 - Conco continues performing eddy current testing on the condenser and feedwater heater tubes (see attached photo).

The following contractors are on site and signed in at the CR today;

- Zampell – 4 – gunning refractory
- Coverall – 2 – cleaning
- PPM – 10 on days + 9 on nights – cleaning
- Maxim – 27 on days + 20 on nights - #3 SDA, feedtable
- FloTech – 10 - valve repair
- Evap Tech – 21 – cooling tower repairs
- Kone – 5 – crane repairs
- J&L Mechanical – 3 – crane repairs
- Safway – 11 – scaffold
- Semco – 14 – VC 3, baghouse screws
- ICI – 10 – OFA duct supports, RSPB
- Conco – 3 – eddy current testing
- Plattco – 3 – slide gate repairs
- Ethos – 7 – TG 1 repairs

- GRL – 7 – electrical repairs in RSPB
- Unitherm – 5 – lagging baghouse hoppers
- RSI – 22 – economizer expansion joints
- RRT -2 – RSPM management
- Matrix – 26 – DA#2, stack repairs
- Neu Ideas – 1 – outage management
- IE – 1 – night shift outage management
- Safety Training & Consultants – 1 – night shift safety

Total - (224) contractors signed in and working on site today (Note: this does not include Covanta technical staff & CFS)

General Comments:

There is a large # of Covanta staff on site again today assisting in outage work, testing activities, training and setting up OP's procedures.

Outage meetings are being held at 0600 and 1800 in the Classic Admin Bldg conference room.

There will be about 2 weeks of down time for B 101, B 102, and DA #1 waiting on repairs to the TG 1 generator rotor. I have asked Covanta several times if they plan on taking advantage of this down time to perform UT testing/NDE testing. They have stated that they are checking into availability of contractors. Hopefully some of this work can be done. It would give us great insight to what needs to be done during the Spring outages.

Joe T noted that he has arranged for 2 contractors, AGT & NEC, to visit the TAW shop in Miami. They will be allowed to take measurements on the TG 1 rotor, which will allow them to competitively bid the rewind of the rotor in the future.

Pinellas WTE Daily Report

Edition: 255 - 12.18.14

Date of Report: Thursday, 12/18/14

Tons Received: 2,505 diverted to landfill on Wednesday, 12/17/14

Tons Processed: 0 on Wednesday 12/17/14

Pit Level: No data

Weather: Partly cloudy - 0% chance of rain - high 68° - low 50°

Boiler 1 Steam Flow set point (lbs/hr): Offline for Common Outage

Boiler 2 Steam Flow set point (lbs/hr): Offline for Common Outage

Boiler 3 Steam Flow set point (lbs/hr): Offline for Fall Outage

TG 1 Power Produced (MW-Hrs): Offline due to common outage

TG 2 Power Produced (MW-Hrs): Offline due to unit 3 fall outage

Net Power Exported (MW-Hrs): 0 on 12/17/14

Safety:

Robert Tilley indicated the Covanta Safety videos have been downloaded and will be used in future Safety Orientation/Training meetings.

Additionally, the 2015 Safety stickers have been ordered.

Robert made a plant wide safety survey noting several issues which included: improperly secured gas bottles, unsecured items on upper elevations which could be subject to displacement from high winds, no face or respirator protection during welding, absence of a GFCI on a drop cord, harnesses not being tied off, and miscellaneous scrap left on the walkway gratings creating tripping hazards. In each case Robert conferred with the offending parties and the measures were promptly corrected.

Further investigation into the large (~2.5" x 9') pipe which fell from elevation 70' revealed that the pipe was not associated with any outage work but apparently was scrap and been abandoned. Again, there was no associated injury but the close call has heightened the need for everyone to be aware of their environment. Paul Grego indicated that any unsafe act or condition should immediately be addressed. After the outage work is completed, Paul will have several 55 gallon drums placed throughout

the plant to accommodate disposal of scrap materials and trash.

To glean a comprehensive perspective on the Plant's operating environments, Covanta plans to invite Safety Managers from other nearby Covanta facilities to do a walk through focusing on potentially unsafe conditions.

Environmental Compliance:

No major issues were reported; however, the Unit 3 opacity monitor was again displaying an error code. Elwyn will have Waldbesser and company investigate.

Operations:

Unit 1 – Coded offline @ 1130 Saturday, 12/06/14 for the common outage.

Unit 2 – Coded offline @ 2320 Friday, 12/05/14 for the common outage.

Unit 3 – Coded offline @ 1117 Friday, 12/05/14. The Unit is expected to be turned over to Operations late Sunday or Monday.

TG 1 – was taken offline @ 1020 Saturday, 12/06/14 for replacement of the generator rotor retaining rings & the common outage.

TG 2 – was taken offline @ 1020 Friday, 12/05/14 for the unit 3 Fall Outage & the common outage.

Waste Forecast – Deliveries have been halted, all waste is being diverted to landfill.

Balance of Plant –

Cleaning –

The plant is relatively clean today.

Maintenance

Please see the accompanying document produced by Chris Schuckert for plant wide maintenance activities planned for Thursday, December 18, 2014

On Site Contractors and Support Personnel

Contractors working on site today and logged in at the CR:

- Zampell (5) – gunning refractory (night)
- Coverall (2) - cleaning
- Maxium (27 day + 10 night) – #3 SDA and feed table
- FloTech (10) – Vv repair
- ICI (8) – OFA duct supports
- Evap Tech (20) – cooling tower repairs
- SEMCO (14) - Baghouse screws and VC 3
- Kone Crane (5 day + 5 night) – refuse crane festoon installations
- Unitherm (7) – lagging on bag house hoppers
- RSI (23) – Economizer expansion joints
- ETHOS (2) – Generator stator inspection and repairs
- GRL (6) - electrical support in RSPB
- Gaffin Industries (6) – plant wide cleaning
- Conco (3) – eddy current testing on #2 bypass condenser
- Corrosion Control (4) –
- BMG (?) – conveyors
- Tim Clark (3) - duct supports
- SECM (3) – under grate dampers
- RRT (1) – RSPM management
- Matrix (15) – DA#2 & stack repairs
- Neu Ideas (1) – outage management

(180) Total Contractors are on site today (including prior night's work)

General Comments:

There are several Covanta staff on site again today assisting in outage work, testing activities, training and setting up OP's procedures.

Paul Grego asked that plant supervisors assure that common gaskets are available to support plant outage work through the weekend. He also instructed that tarps be available to potentially protect materials in case of rain.

The cooling tower will be filled tonight; approximately 500,000 gal of processed water is available from the Water Treatment Plant.

Scott at the landfill was contacted and asked to be prepared to deliver 1,000 T/day of waste to the plant starting Monday. Partial MSW diversion will continue until all units have been returned to service. The ~30 T of tires delivered daily will be withheld until all units are available for full combustion.

Generator Specialist Kim Eiss arrived today at 0900. She and Al Cossey promptly began the visual inspection of the No. 1 Generator stator. Overall the stator was determined to be in good physical condition. There were several areas previously noted by ETHOS where the insulating blocking between some of the coil end turn windings were "loose". Loose wedges are due to ineffective binding and epoxy encapsulation of the end turn supports. Ethos finding were limited to the end turn windings on the exciter end; however, Ms. Eiss also found some dusting (or greasing) on the turbine end of the generator as well. All areas requiring remedial attention were marked for easy location and repair by ETHOS. Repairs to the generator stator should be completed by Monday, December 22, 2014. ETHOS also presented Kim with the results of the electrical tests performed after the removal of the generator's rotor. Kim will review the recent data and compare it with baseline data which was recorded after the stator rewind in 2008.

Outage meetings are being held at 0600 and 1800 in the Classic Admin Bldg. conference room.

Just as a reminder, there will be about 2 weeks of down time for B 101, B 102, and DA #1 waiting on repairs to the TG 1 generator rotor. I have asked Covanta several times if they plan on taking advantage of this down time to perform UT testing/NDE testing. They have stated that they are checking into availability of contractors. Hopefully some of this work can be done. It would give us great insight to what needs to be done during the spring outages.



Figure 1 The white residue is referred to as "dusting" and is indicative of a poor bond between connected parts

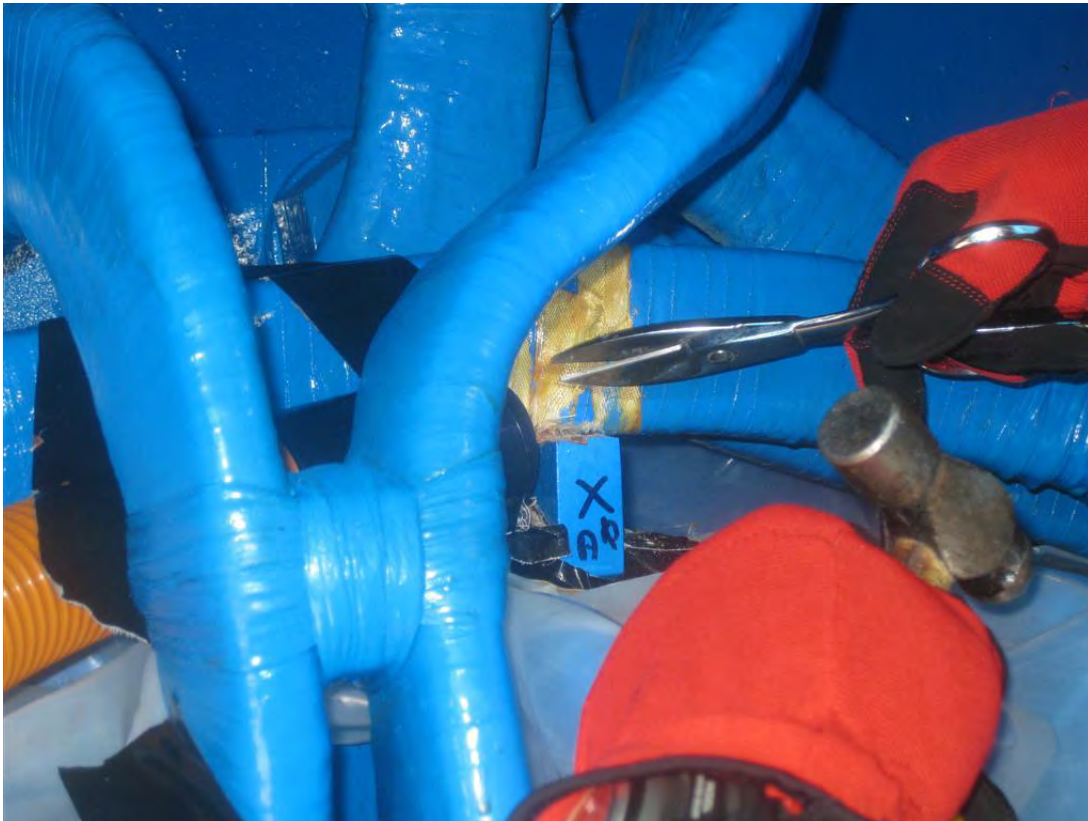


Figure 2 Loose binding being prepped for new binding materials and epoxy encapsulation



Figure 3 Replaced section (~15' x 30") of concrete floor in the Tipping Building



Figure 4 Note heavy concentrations of fiberglass fibers in the concrete. Fibers are intended to minimize cracks in the concrete.



Figure 5 New inlet water box on Number 1 main steam condenser

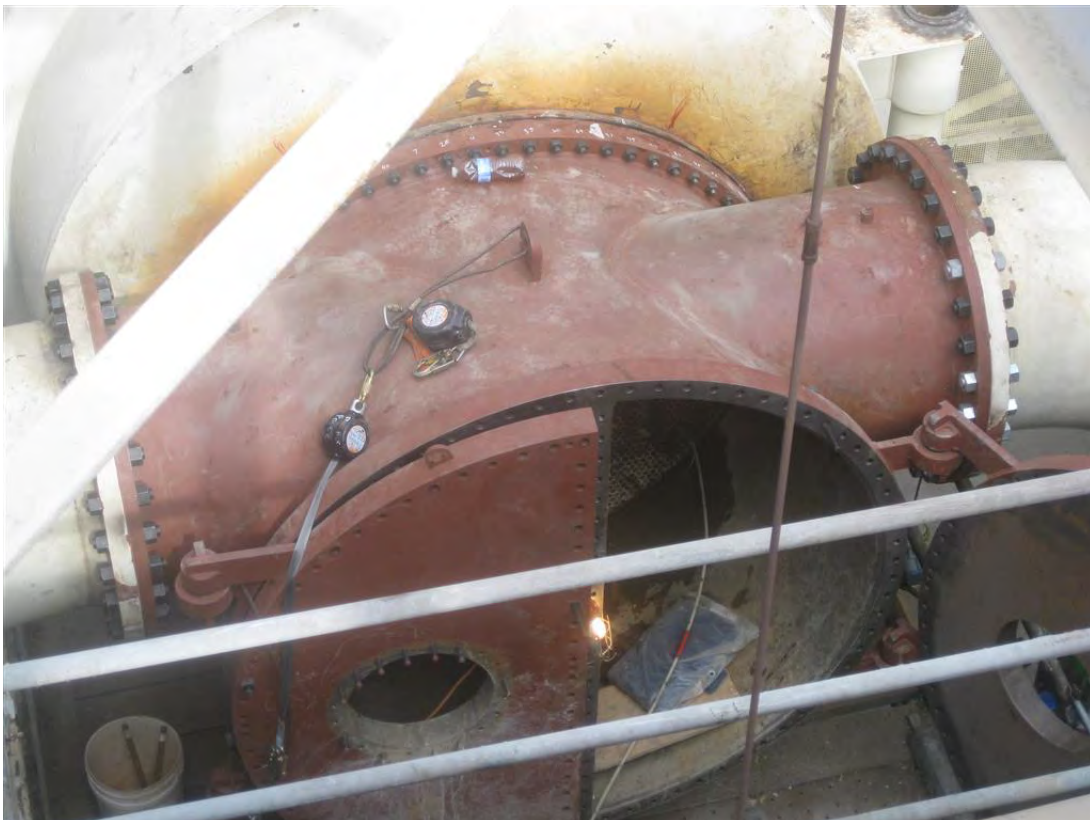


Figure 6 Number 1 Condenser water box

Pinellas WTE Daily Report

Edition: 256 - 12.19.14

Date of Report: Friday, 12/19/14

Tons Received: Beginning Monday, December, 22, 2014, the Plant will be accepting approximately 1,000 T/day and will be under a level 3 diversion until the other units are returned to service.

Tons Processed: Zero on Thursday, 12/18/14

Pit Level: No data

Weather: Partly cloudy with 0% chance of rain; high of 72° and a low of 55°

Boiler 1 Steam Flow set point (lbs/hr): Off line for common outage

Boiler 2 Steam Flow set point (lbs/hr): Off line for common outage

Boiler 3 Steam Flow set point (lbs/hr): Off line for fall outage

TG1 Power Produced (MWHrs): Off line due to common outage

TG 2 Power Produced (MWHrs): Off line due to Unit 3 fall outage

Net Power Exported (MWHrs): Zero on 12/18/14

Safety:

No issues to report.

There was a crane coordination issue with the equipment being used to lift the crane rails into the refuse building. The problem was rectified through intervention of Covanta staff.

Covanta will be enhancing their safety program by integrating a new awareness program named SPARK. The program is intended to provide awareness of relevant safety and maintenance events occurring throughout the plant. A bulletin board allowing for the posting of major work being performed and corresponding relevant safety issues may be installed in the Control Room, plant elevator, elevator landings and possibly other commonly frequented areas.

Environmental Compliance:

PM2.5 tests results (report) have been finalized.

The CO Task Force will resume their meetings beginning January 15, 2014. Subsequent to the resumption of Task Force oversight on CO matters, the group will invite the DEP to introduce Covanta as the new Plant Operator.

Waste Forecast – All delivers are going directly to the landfill.

Operations:

Unit 1 – Coded offline @ 1130 Saturday, 12/05/14 for the common outage.

Unit 2 – Coded offline @ 2320 Friday, 12/05/14 for the common outage.

TG-1 – was taken off line @ 1020 Saturday, 12/06/14 for replacement of the generator rotor's retaining rings.

TG-2 – was taken off line @ 1020 Friday, 12/05/14 for its fall major outage.

Maintenance

Please see the accompanying attachment developed by Chris Schuckert for plant wide maintenance activities planned for Friday, December 19, 2014.

On Site Contractors and Support Personnel

Contractors working on site today and logged in at the CR:

- Maxium (25) – No. 3 SDA and Feed Table
- FloTech (10) – Valve repairs
- ICI (11) – OFA duct supports
- Evap Tech (20) – Cooling Tower rehabilitation
- Safeway (17) – scaffolding inside and outside of Unit 3
- SEMCO (13) - Baghouse screws and VC3
- Kone Crane (7 on days & 5 on night shift) – Festoon and rail replacements
- Unitherm (7) – Lagging on Baghouse hoppers
- Ethos (2) – No.1 Generator stator end turn bracing

- Conco (2) – Eddy current testing on No. 2 Bypass Condenser
- Corrosion Control (2) – NO. 2 DA
- USA (1) – Sweeper
- BMG (1) Conveyors
- RRT (1) RSPM management
- Neu Ideas (1) – Outage management
- J&L Mechanical (5) - Festoons
- RSI (22) – Expansion joints
- Southern Construction (3) – B103 elevation 20’
- Denny Schult (1) – Ash Building
- MOR PPM (9 on days & 10 on night shift) – Plant wide cleaning

(175) Total Contractors are on site today (including prior night’s work)

General Comments:

ETHOS technicians will complete the “tightening” of the (16) loose end turn blocking today by installing additional saturated (with epoxy) insulation, wrapping each new area where blocking was enhanced, and overlaying epoxy to encapsulate the joints. This work should conclude today.

All of the aforementioned repairs affected areas are on the exciter end of the generator. There were no similar issues discovered on the generator’s turbine end.

ETHOS will paint the affected areas on Saturday and should finish up on Sunday by reconnecting the bus to the generator’s high voltage bushings.

On a related topic, a copy of TAW’s work schedule for the generator rotor is attached along with today’s Daily Report.

A new 12” Vv on Unit 2’s Main Steam line will be installed during the weekend. The associated welds will be X rayed on Sunday.

Production of Daily Reports for next week will be dependent on the level and significance of post and planned activities.



Figure 1 New east side rail for Refuse Cranes being lifted for installation in Refuse Building



Figure 2 It appears as though someone has absconded with the tires and wheels which were on one of the new Cat front end loaders

HAPPY

HOLIDAYS

Pinellas WTE Daily Report

Edition: 257 - 12.22.14

Date of Report: Monday, 12/22/14

Tons Received: Beginning Monday, December, 22, 2014, the Plant will be accepting approximately 1,000 T/day and will be under a level 3 diversion until the other units are returned to service.

Tons Processed: Unit 3 will resume operation late today

Pit Level: No data

Weather: Mostly cloudy with 70% chance of rain; high of 77° and a low of 63°

Boiler 1 Steam Flow set point (lbs/hr): Off line for common outage

Boiler 2 Steam Flow set point (lbs/hr): Off line for common outage

Boiler 3 Steam Flow set point (lbs/hr): Is expected to be on-line later today

TG1 Power Produced (MWHrs): Off line due to common outage

TG 2 Power Produced (MWHrs): May be on-line later this evening

Net Power Exported (MWHrs): Zero on 12/21/14

Safety:

No issues to report.

Robert Tilley passed out copies of the Covanta Emergency Response Plan for the Pinellas RRF. Please forward any comments or suggested changes to Robert. Beth with Covanta will review and finalize the plan submitted by Robert.

Environmental Compliance:

No incidents to report.

Rebecca will check that the new blowers for the opacity monitors are working properly.

Waste Forecast – Level 3 diversion is expected for the week.
No deliveries are expected for Thursday, December 25, 2014.

Operations:

Unit 1 – Coded offline @ 1130 Saturday, 12/05/14 for the common outage.

Unit 2 – Coded offline @ 2320 Friday, 12/05/14 for the common outage.

Unit 3 – Burners were ignited at 2330 hrs. Sunday. Operations anticipates Unit 3 may be on line as early as 1600 hrs. today.

TG-1 – was taken off line @ 1020 Saturday, 12/06/14 for replacement of the generator rotor's retaining rings.

TG-2 – was taken off line @ 1020 Friday, 12/05/14 for its fall major outage. Based on Unit 3 coming back at 1600 hrs. today, Operations expects TG-2 to be on-line around 2200 hrs. this evening.

Maintenance

- Number 1 Generator's turbine and exciter ends have been secured with plywood for moisture and heat control.
- There are numerous electrical and controls issues in the RSPB: Waldbesser and GRL are aggressively working to resolve the issues.
- Some of the gallery belt safety pull cord switches are shorted. GRL is inspecting and repairing those switches found to be inoperative.
- Also, some of the wiring and conduit in the waste handling areas may need to be replaced due to faulty wiring.
- The C circulating water pump motor is being "bumped" to check for proper rotation.
- The No. 1 ID Fan motor will also be checked for rotation today; as will the rotation on the magnet.
- The access stairway on the north side of the cooling tower has been completed. Fiberglass reinforced plastic (FRP) was used in its construction.
- The south cooling tower wall has been demo'd. Reconstruction of the south wall should be completed in early January.
- Overall the various contractors have done a good job with "policing"

their areas. Clean-up is continuing today.

- Installation of insulation and lagging on the #2 DA tank is ongoing.
- Lagging on Economizer roofs for Units 2 and 3 are mostly complete.
- Insulators are working on Unit 1 Economizer roof today.
- No. 3 SDA's top slide gate was replaced; checking and repairing air leaks; electrical systems are being checked out.
- Dilution grit screens will be inspected today.
- Grappel on the No. 3 crane has been replaced.
- The 12" valve in the No. 2 Unit Main steam line is in place. Associated welds will be x-rayed later today.

On Site Contractors and Support Personnel

Contractors working on site today and logged in at the CR:

- Evap Tech (9) – Cooling Tower rehabilitation
- Safeway (4 – scaffolding inside and outside of Unit 3
- Kone Crane (4) – Festoons
- Unitherm (9) – Insulation & Lagging on Penthouse 1, 2, and 3
- Conco (2) – Eddy current testing on No. 2 Bypass Condenser
- GRL (6) – Plant wide electrical support
- USA (1) – Sweeper
- Neu Ideas (1) – Outage management
- MOR PPM (7 on days & 7 on night shift) – Plant wide cleaning

(45) Total Contractors are on site today (including prior night's work)

General Comments:

Installation of the new 18-18 retaining on the TG-1 generator rotor has been completed. The rotor should be loaded and on its way to Georgia today. Covanta's Ron Gall will be witnessing the overspeed tests in Mitsubishi's balance pit.

Paul Grego is trying to determine if the remaining outage time for Units 1 and 2 will accommodate performing diagnostic UT investigations and mapping.



Figure 1 New Number 3 Economizer Stringer Tube Support Hanger System



Figure 2 New Festoon Cables on Number Refuse Crane Trolley

Appendix B

Pictures from 1st Quarter of BY No. 1

Appendix B

Pictures from 1st Quarter of BY No. 1

Figure B-1

**Poor housekeeping on inclined grating along belt conveyor feeding -5" ash to metal recovery system
(October 2014)**



Figure B-2

**Poor housekeeping on stairs around Grizzly Scalper in RSPB
(October 2014)**



Figure B-3
Poor housekeeping around Grizzly Scalper in RSPB
(October 2014)



Figure B-4
Ash from under inclined gallery belt conveyor on Facility roads
(October 2014)



Figure B-5
Ash from under inclined gallery belt conveyor on Facility roads
(October 2014)



Figure B-6
Dumped fly ash stored in belt filter press bunker for transfer to RSPB
(October 2014)



Figure B-7
Ash deposits and clinkers removed from SDA No. 3
(December 2014)



Figure B-8
Approximately 3 cubic yards of scale removed from dilution water tank
(December 2014)



Figure B-9
Example of heavily corroded structural steel members in Boiler Structure
(October 2014)



Figure B-10
Deteriorated and splintering wood frame under deck of cooling tower
(October 2014)



Figure B-11
Repairs being made to cooling tower structure
(December 2014)



Figure B-12
Foreign object which fell off of the top of the C-1 inclined belt conveyor and damaged section of
conveyor emergency stop switch
(October 2014)



Figure B-13
Damaged concrete pedestal for FD Fan No. 1
(October 2014)



Figure B-14
Repairs of concrete pedestal for FD Fan No. 1 underway
(November 2014)



Figure B-15
Repaired concrete pedestal for FD Fan No. 1
(November 2014)



Figure B-16
Crumpled No. 3 SDA hopper on north side
(December 2014)

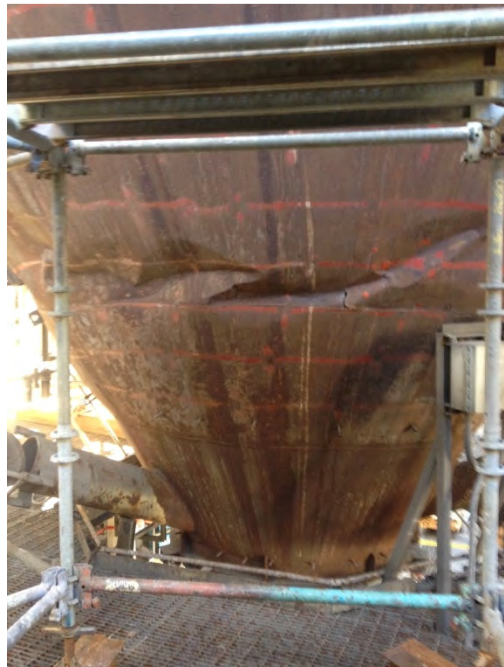


Figure B-17

**Section of tipping floor replaced with high strength fiber reinforced concrete opposite of tipping bays 3-4
(December 2014)**



Figure B-18

**Scaffolding set up for repairs to refuse pit front wall under tipping bays 3-5
(December 2014)**

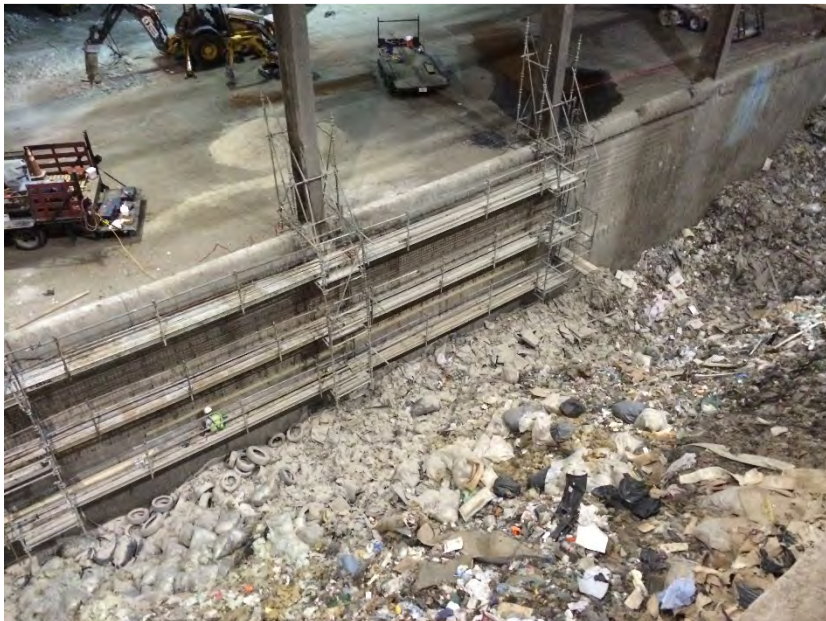


Figure B-19
Close up of refuse pit front wall prior to application of structural mortar
(December 2014)



Figure B-20
Section of front wall of refuse pit under tipping bays 3-5 repaired with structural concrete
(December 2014)



Figure B-21
Economizer screw conveyors for Unit Nos. 2 and 3 staged for fall outages
(October 2014)



Figure B-22
Damaged thimbles removed from baghouse during bag and thimble replacements
(October 2014)



Figure B-23
Weld repairs made to turning vanes upstream of SDA No. 1
(October 2014)



Figure B-24
Repairs to superheater hopper chute / expansion joint on B-102
(November 2014)

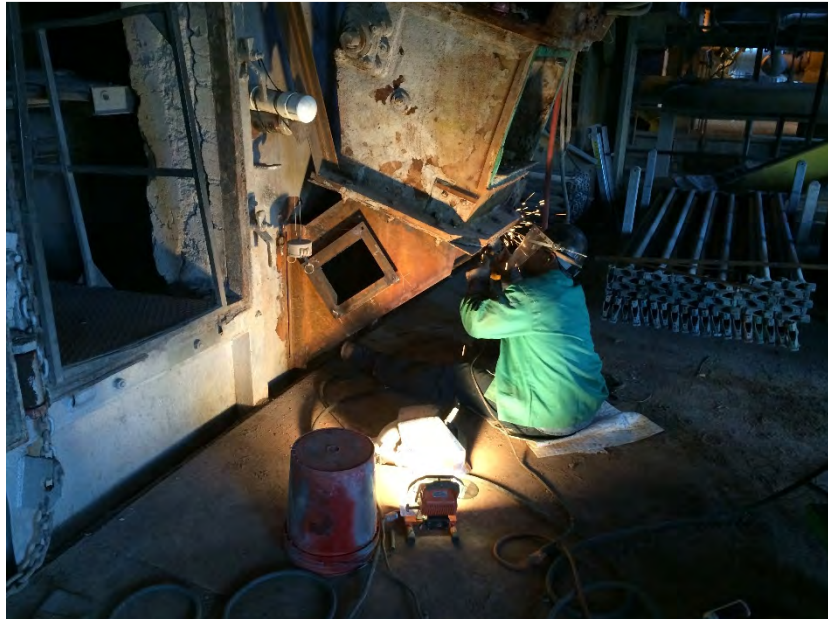


Figure B-25
Replacement of No. 3 economizer stringer tube and hanger support rods
(December 2014)



Figure B-26
New stringer tubes installed in No. 3 economizer roof
(December 2014)



Figure B-27
Replacement of No. 3 economizer stringer tube and hanger support rods
(December 2014)



Figure B-28
New lower header installed on No. 3 economizer
(December 2014)



Figure B-29
Relining of No. 3 feed chute
(December 2014)

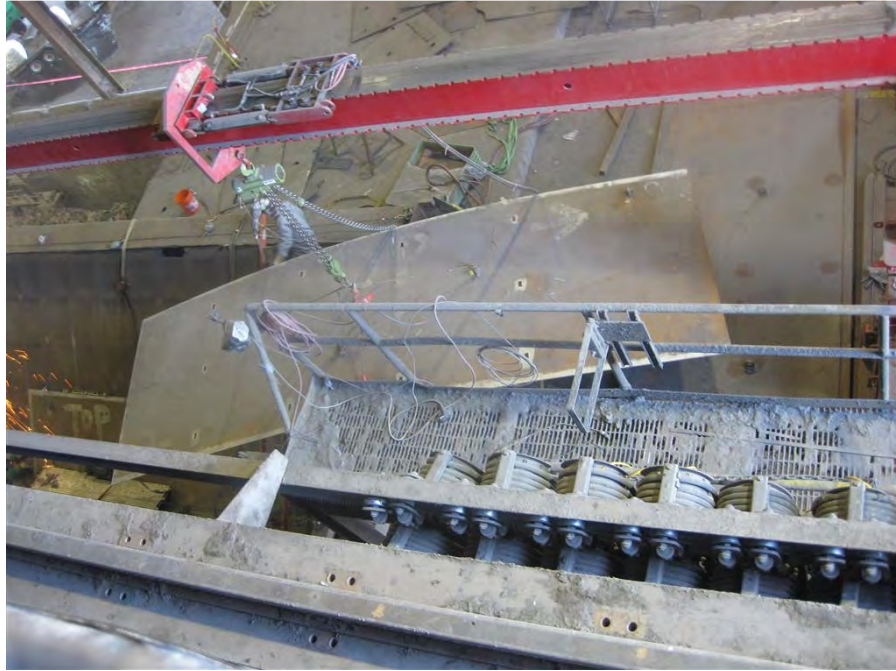


Figure B-30
Repairs being made to No. 2 Deaerator vessel
(December 2014)



Figure B-31
Removal of VC-3 bottom ash conveyor to be replaced
(December 2014)

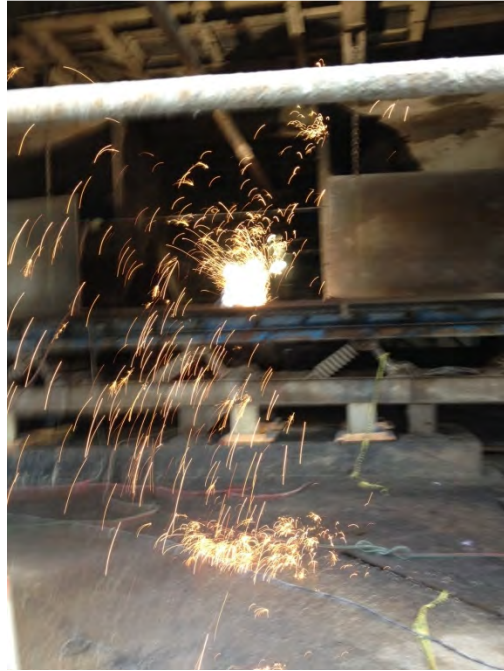


Figure B-32
Installation of new cooling tower riser valve
(December 2014)



Figure B-33
East crane rails being removed in refuse building
(December 2014)



Figure B-34
Replacement of refuse crane rails in northeast corner of refuse building
(December 2014)

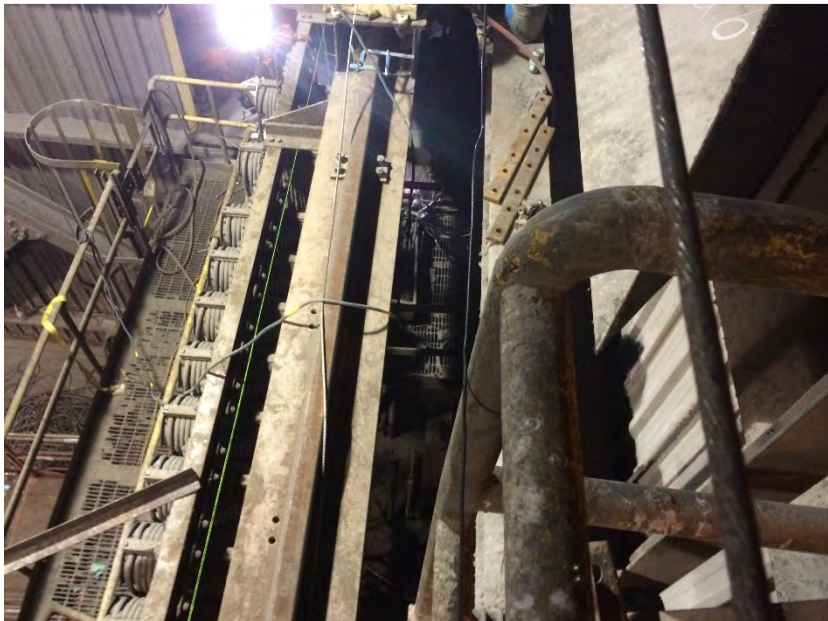


Figure B-35
New runway festoon cables staged for installation in refuse building
(December 2014)



Figure B-36
Openings in north face of refuse building for installation of new runway festoon cables
(December 2014)



Figure B-37
New trolley festoon cables for refuse crane
(December 2014)



Figure B-38
Bypass condenser No. 2 open for eddy current inspection of tubes
(December 2014)



Figure B-39
Removing elbows from the No. 1 main surface condenser
(December 2014)



Figure B-40
Eddy current testing of No. 1 main surface condenser
(December 2014)



Figure B-41
Damage on the No. 3 flue
(December 2014)



Figure B-42
Repairs to lower stack liners with replacement of lower 5 feet of liner
(December 2014)



Figure B-43

Majority of B-103 platform light fixtures have not worked for years, but were repaired during 1st Quarter (October 2014)



Figure B-44

Damaged sections of TG-1 generator bus suspected to be the result of moisture intrusion (December 2014)



Figure B-45

**Grounding cluster installed prior to cleaning and testing the switchyard 13 KV SF6 circuit breaker
(December 2014)**

**Figure B-46**

**New Side 1 Ametek UPS inverter
(December 2014)**



Figure B-47
TG-2 watt-hour meter testing and calibration
(December 2014)



Figure B-48
TG-1 thrust bearing – active face
(December 2014)



Figure B-49
Refurbished TG-1 generator field in TAW's Miami shop
(December 2014)



Figure B-50
Arc flash incident with mobile crane too close to overhead transmission lines from switchyard
(December 2014)



Figure B-51
Location of ground discharge under mobile crane
(December 2014)



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