

Seaside – Database Notes

Table 1 Database Notes

Data Collection	Data Logger: Data Collection Interval: Collection Method: Timestamp Reference:	Obvius Aquisuite (CDH) 1-minute Phone Eastern Standard Time
Site Information	Cogeneration Units: Nameplate Capacity: Heat Recovery Medium: Heat Recovery Uses: Excess Heat Use:	1 - Tecogen Inverde-100 100 kW Hot water Domestic Hot Water, Boiler (2 separate loops) Rejected from DHW loop heat exchanger connected to dump radiator
DG/CHP Generator Electrical Output	Engineering Units: Energy Measurement (net/gross): Measurement Type: Generator Power Measurements: Parasitic Power Measurements:	kWh Net calculated: Gross minus parasitic Accumulated energy per interval One – pulse meter Parasitic Load – one time measurements
DG/CHP Generator Electrical Output Demand	Engineering Units: Measurement Type:	kW Average power measurement, based on peak 1-minute power
DG/CHP Generator Fuel Input	Engineering Units: Measurement Type:	CF Pulse, stipulated based on Electrical Efficiency curve (gas meter not working properly)
DG/CHP Useful Heat Recovery	Engineering Units: Heat Measurement Type:	MBtu (calculated value) Two thermal loops – DHW loop has flowmeter and two temperature sensors Boiler has flowmeter and two temperature sensors Data is sum of heat transfer on both loops.

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DG/CHP Unused Heat Recovery	Engineering Units: Heat Measurement Type:	MBtu DHW loop flowmeter and 2 temperature measurements across dump HX.
DG/CHP Status/Runtime	Engineering Units:	0 – 1, System ON/System Off
Facility Purchased Energy	Engineering Units:	Not collected
Facility Purchased Demand	Engineering Units:	Not collected
Other Facility Gas Use	Engineering Units:	Not collected

Note: See addendum for further details

Table 2 Event Timeline

Date	Event
February 1, 2013	Logging begins.
February 29, 2013	CDH on site to verify flow and temperature sensor measurements. Collect instantaneous DG/CHP measurements for meter verification. Installed strap on temperature sensor and fix gas meter wiring. Reversed polarity, gas meter still not working.
April 19, 2013	CDH on site to replace 4" thermistors with 6" thermistors and to re-verify temperatures
July 24, 2013	CDH on site to replace 4" thermistor with new 6" thermistor. All temperatures verified.

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Range Checks

Table 3. Range Checks

Data Point	Hourly Data Method	Units	Sensor Lower Range	Sensor Upper Range	Database Lower Range	Database Upper Range	Notes
DG/CHP Generator Output	Sum	kWh/int	0	100/int	-10	150	Database range account for parasitic loads
DG/CHP Generator Output Demand	Max	kW	0	100	0	600	
DG/CHP Generator Gas Use	Sum	cf/int	0	3000	0	3000	
Total Facility Purchased Energy	Sum	kWh/int	-	-	-	-	Not installed
Total Facility Purchased Demand	Max	kW	-	-	-	-	Not installed
Other Facility Gas Use	Sum	cf/int	-	-	-	-	Not installed
Useful Heat Recovery	Sum	MBtu/int	0	6000	-500	6000	Calculated Value
Unused Heat Recovery	Sum	MBtu/int	0	6000	0	6000	Calculated Value
Status/Runtime of DG/CHP Generator	On/Off	On/Off	0	1	0	1	0 – 1, System On/System Off
Ambient Temperature	Avg	°F	-20	130	-20	130	WUG Airport Code - JFK

Notes:

1. This table contains values from *seaside.csv*

Relational Checks

Table 4. Relational Checks

Evaluated Point	Criteria	Result
FG	WG > 25 and FGE <=0	DQ Level for FG set to 2

Notes: FG – DG/CHP Generator Gas Use
 WG – DG/CHP Generator Output