

AURORA RIDGE – DATABASE NOTES

Table 1 Database Notes

Data Collection	Data Logger: Data Collection Interval: Collection Method:	2x Red Lion data loggers (1x – WG, FGE, FGF and 1x – Gas analyzer values) 15-minute Automated Frontier Energy Python script; catcher.py
Site Information	DER Unit (make & model): Nameplate Capacity: Heat Recovery Medium: Heat Recovery Uses: Excess Heat:	Guascor SFGLD 480/45 400 kW Hot Water Digester Heating Rejected to atmosphere using dump radiator
DER Electricity Generated (WG)	Engineering Units: Energy Measurement (net/gross): Measurement Type:	kWh Gross Accumulated energy from Intelisys NT engine controller
Biogas to Generator (FGE)	Engineering Units: Measurement type:	cf Accumulated cf from Sage gas meter
Biogas to Flare (FGF)	Engineering Units: Measurement type:	cf Accumulated cf from Sage gas meter
H2S to Scrubber (H2S_IN)	Engineering Units: Measurement type:	ppm INCA gas analyzer; 30-minute samples
H2S to Generator (H2S_OUT)	Engineering Units: Measurement type:	ppm INCA gas analyzer; 30-minute samples
Methane Content (CH4)	Engineering Units: Measurement type:	% CH ₄ INCA gas analyzer; 30-minute samples

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Table 2 Event Timeline

Date	Event
September 2009	Data collection for new ADG system, from initial Red Lion data logger, begins. Data points include WG, FGE, FGF.
June 2015	Scrubber and second Red Lion data logger installation is completed. Scrubber data points CH ₄ , H ₂ S_IN, and H ₂ S_OUT are added to website.
June 2016	Issues with gas analyzer result in H ₂ S readings out of range or invalid (H ₂ S_IN = constant value of 6,000 ppm, H ₂ S_OUT = constant value of 0 ppm)
August 8, 2018 - September 11, 2018	Digester was shut down for cleaning and maintenance.

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Range Checks

Table 3 Range Checks

Data Point	Units	Database Lower Range	Database Upper Range	Notes
DER Electricity Generated	kWh/hour	0	650	
Biogas to Generator	cfh	0	20,000	
Biogas to Flare	cfh	0	20,000	
H2S to Scrubber	ppm	0	4,000	
H2S to Generator	ppm	0	4,000	
Methane Content	%	0	100	
Ambient Temperature	°F	-20	130	NOAA Airport Code - KITH

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Relational Checks

Table 4 Relational Checks

Evaluated Point(s)	Criteria	Result