

Trinity River Authority of Texas - Dashboard

David Naranjo

Centrifuge – Live Calculations



NARANJODL

Monday, August 28, 2023

Liquids

Solids

- Thickening

- WAS

- Centrifuge

- Polymer

- Data Entry

- Reports

- Graphs

- Log Book

Management

Administration

Engineering

KPI

Assets

Rounds

Centrifuge 1

Graphs	Last	Min	Max	Avg	As Of
Feed (GPM)	130	110	150	124	8/25/2023 10:11:00 PM
Blended Sludge Feed Solids (%)	1.57	1.27	2.15	1.73	8/25/2023 10:11:00 PM
Polymer Feed Rate (GPM)	4.0	3.0	40.0	5.0	8/25/2023 10:11:00 PM
Polymer Concentration	0.002	0.000	0.004	0.001	8/28/2023 12:00:00 PM
Centrate TSS	150	25	650	304	8/25/2023 6:32:00 PM

Centrifuge 2

Graphs	Last	Min	Max	Avg	As Of
Feed (GPM)	55	55	145	108	8/17/2023 2:08:00 PM
Blended Sludge Feed Solids (%)	89.00	1.52	89.00	23.40	8/17/2023 2:06:00 PM
Polymer Feed Rate	98.0	3.8	98.0	27.5	8/17/2023 2:06:00 PM
Polymer Concentration	0.002	0.000	0.004	0.001	8/28/2023 12:00:00 PM
Centrate TSS	652	180	652	416	8/17/2023 2:06:00 PM

Centrifuge 3

Graphs	Last	Min	Max	Avg	As Of
Feed (GPM)	65	65	65	65	8/17/2023 2:03:00 PM
Blended Sludge Feed Solids (%)	14.00	14.00	14.00	14.00	8/17/2023 2:03:00 PM
Polymer Feed Rate	25.0	25.0	25.0	25.0	8/17/2023 2:03:00 PM
Polymer Concentration	0.002	0.000	0.004	0.001	8/28/2023 12:00:00 PM
Centrate TSS	25	0	25	13	8/17/2023 2:03:00 PM

Centrifuge 1

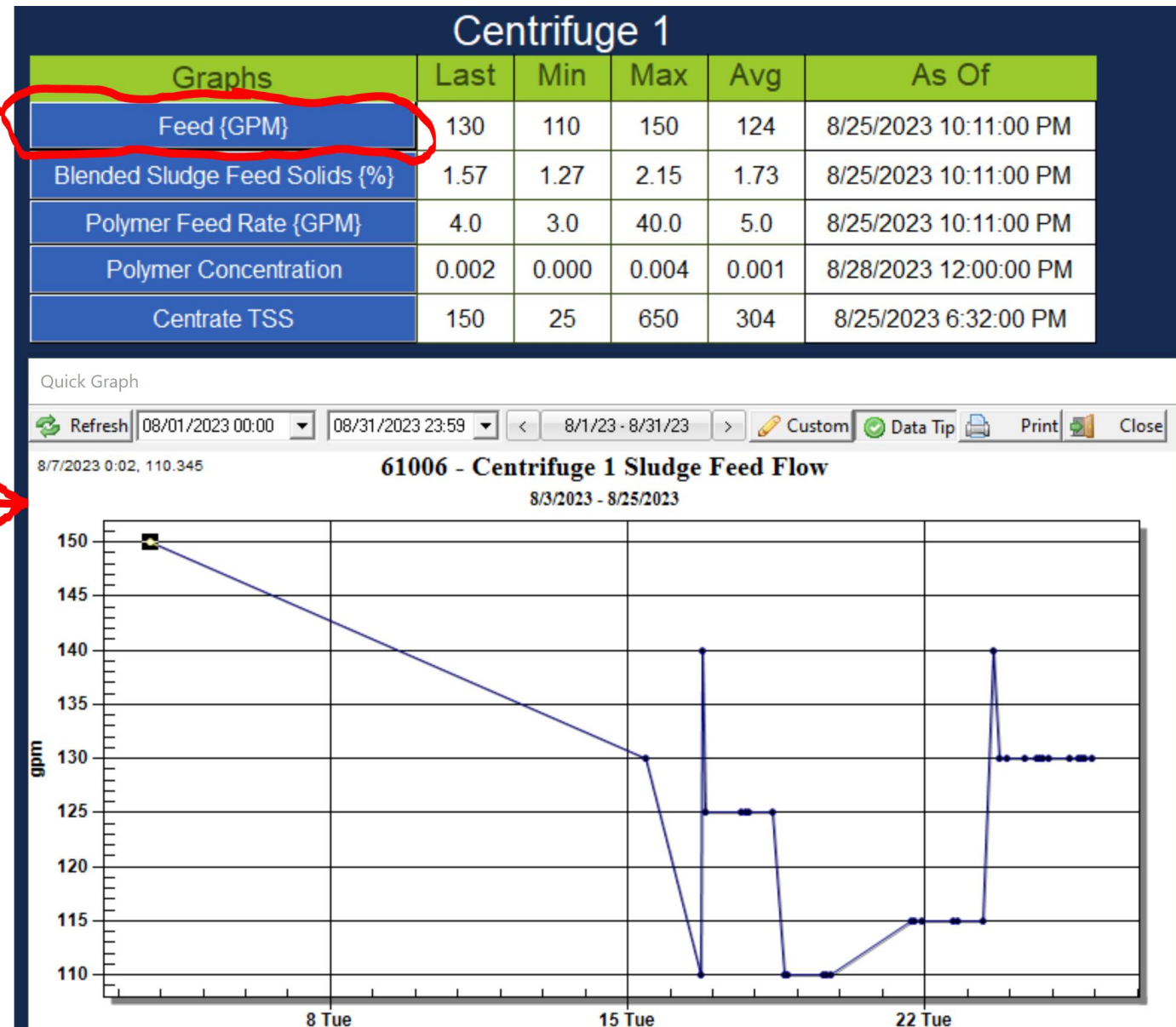
Blended Sludge Feed Solids Rate	Blended Sludge Feed Solids Rate	Blended Sludge Feed Solids Rate
17.02 lbs/min As of: 8/25/2023 22:11	408.24 lbs/min As of: 8/17/2023 14:08	75.89 lbs/min As of: 8/17/2023 14:03
Blended Sludge Feed Throughput	Blended Sludge Feed Throughput	Blended Sludge Feed Throughput
1,021.32 lbs/hr As of: 8/25/2023 22:11	24,494.58 lbs/hr As of: 8/17/2023 14:08	4,553.64 lbs/hr As of: 8/17/2023 14:03
Blended Sludge Feed Solids Rate	Blended Sludge Feed Solids Rate	Blended Sludge Feed Solids Rate
0.009 ton/min As of: 8/25/2023 22:11	0.204 ton/min As of: 8/17/2023 14:08	0.038 ton/min As of: 8/17/2023 14:03
Polymer Solids Rate	Polymer Solids Rate	Polymer Solids Rate
0.000 lbs/min As of: 8/25/2023 22:11	0.016 lbs/min As of: 8/17/2023 14:06	
Neat Polymer Consumption	Neat Polymer Consumption	Neat Polymer Consumption
0.00 lbs/ton As of: 8/25/2023 22:11	0.08 lbs/ton As of: 8/17/2023 14:06	
Active Polymer Consumption	Active Polymer Consumption	Active Polymer Consumption
0.00 lbs/ton As of: 8/25/2023 22:11	0.03 lbs/ton As of: 8/17/2023 14:06	
Feed Sludge Concentration	Feed Sludge Concentration	Feed Sludge Concentration
15,700 mg/l As of: 8/25/2023 22:11	890,000 mg/l As of: 8/17/2023 14:06	140,000 mg/l As of: 8/17/2023 14:03
Solids Capture	Solids Capture	Solids Capture
99.04 % As of: 8/25/2023 18:32	99.93 % As of: 8/17/2023 14:06	99.98 % As of: 8/17/2023 14:03

Centrifuge – Live Calculations

Centrifuge 1

Graphs	Last	Min	Max	Avg	As Of
Feed {GPM}	130	110	150	124	8/25/2023 10:11:00 PM
Blended Sludge Feed Solids {%}	1.57	1.27	2.15	1.73	8/25/2023 10:11:00 PM
Polymer Feed Rate {GPM}	4.0	3.0	40.0	5.0	8/25/2023 10:11:00 PM
Polymer Concentration	0.002	0.000	0.004	0.001	8/28/2023 12:00:00 PM
Centrate TSS	150	25	650	304	8/25/2023 6:32:00 PM

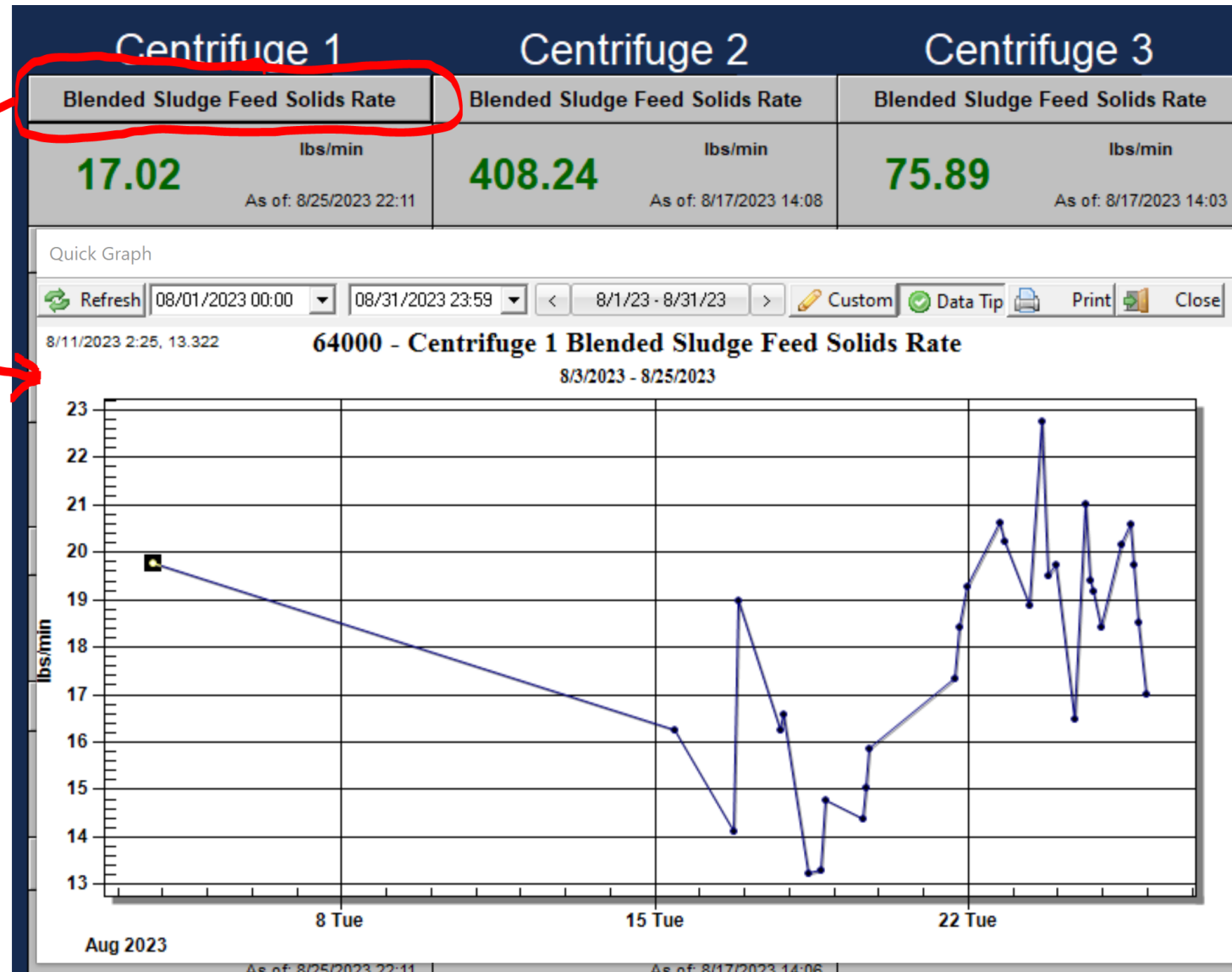
Centrifuge – Live Calculations



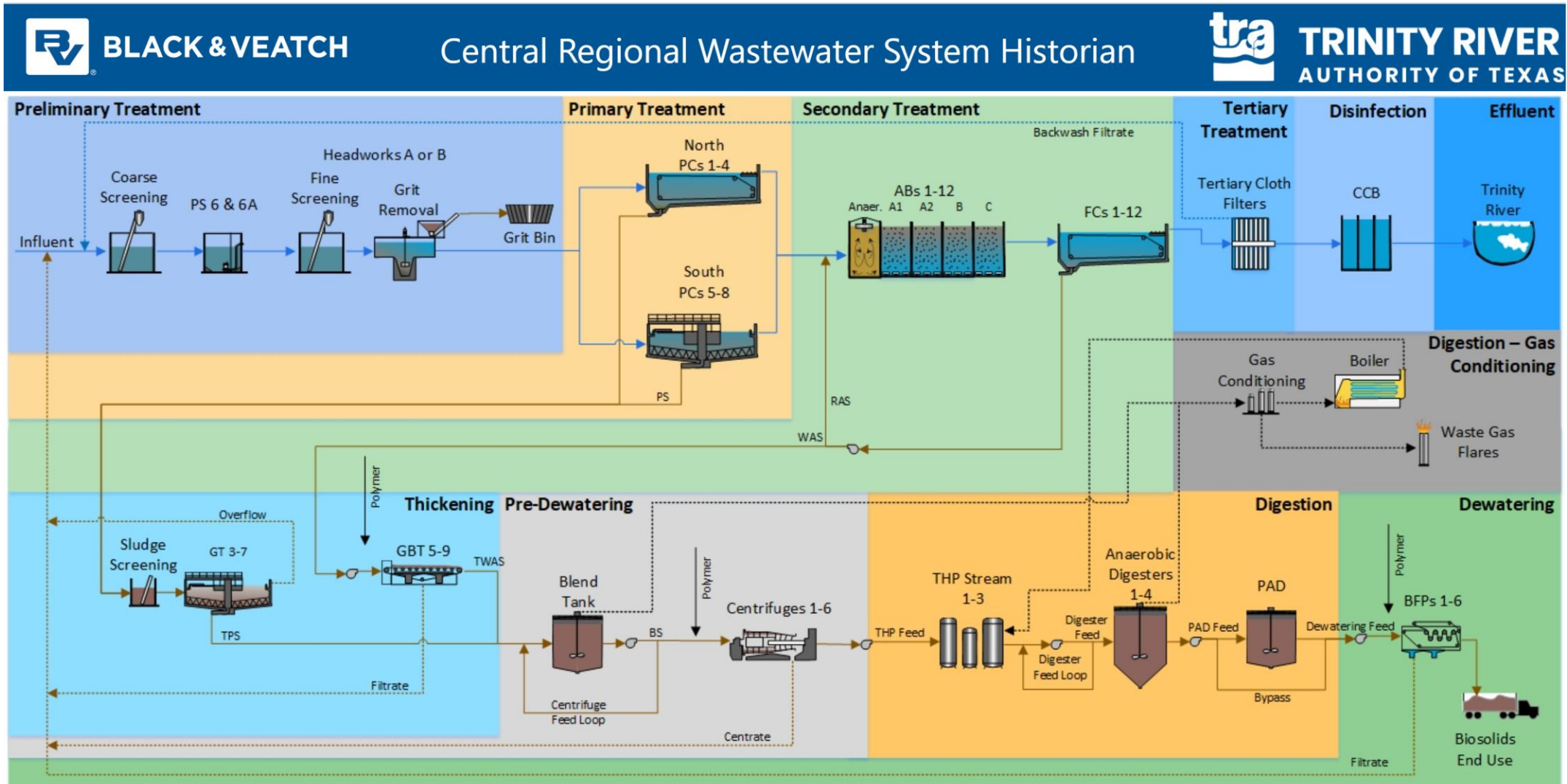
Centrifuge – Live Calculations

Centrifuge 1	
Blended Sludge Feed Solids Rate	
17.02	lbs/min As of: 8/25/2023 22:11
Blended Sludge Feed Throughput	
1,021.32	lbs/hr As of: 8/25/2023 22:11
Blended Sludge Feed Solids Rate	
0.009	ton/min As of: 8/25/2023 22:11
Polymer Solids Rate	
0.000	lbs/min As of: 8/25/2023 22:11
Neat Polymer Consumption	
0.00	lbs/ton As of: 8/25/2023 22:11
Active Polymer Consumption	
0.00	lbs/ton As of: 8/25/2023 22:11
Feed Sludge Concentration	
15,700	mg/l As of: 8/25/2023 22:11
Solids Capture	
99.04	% As of: 8/25/2023 18:32

Centrifuge – Live Calculations



THP – PowerBI Co-Op



Digester Health

THP – PowerBI – Co-Op

SQLQuery1.sql - TR...RG\naranjodl (57)*

```
1 select * from tra_CRWS_Solids_THP_Dashboard
2
3 select * from tra_CRWS_Solids_THP_Dashboard_VarSetup
```

88 %

Results Messages

	Date	Varid	Variable Name	Location	Value	Units
1	2023-06-14 07:45:00.000	3485	Stream 2 Cooler Water Discharge Temp 15M Reading	THP	125.52	Deg F
2	2023-06-14 09:00:00.000	3485	Stream 2 Cooler Water Discharge Temp 15M Reading	THP	128.62	Deg F
3	2023-06-14 09:30:00.000	3485	Stream 2 Cooler Water Discharge Temp 15M Reading	THP	122.12	Deg F
4	2023-06-14 09:45:00.000	3485	Stream 2 Cooler Water Discharge Temp 15M Reading	THP	124.14	Deg F
5	2023-06-14 10:00:00.000	3485	Stream 2 Cooler Water Discharge Temp 15M Reading	THP	126.31	Deg F
6	2023-05-04 14:30:00.000	3486	Stream 3 Cooler Water Discharge Temp 15M Reading	THP	120.93	Deg F
7	2023-05-04 15:00:00.000	3486	Stream 3 Cooler Water Discharge Temp 15M Reading	THP	123.32	Deg F
8	2023-05-04 15:15:00.000	3486	Stream 3 Cooler Water Discharge Temp 15M Reading	THP	121.3	Deg F
9	2023-05-04 16:00:00.000	3486	Stream 3 Cooler Water Discharge Temp 15M Reading	THP	112.8	Deg F
10	2023-05-04 16:30:00.000	3486	Stream 3 Cooler Water Discharge Temp 15M Reading	THP	147.56	Deg F
11	2023-05-04 18:15:00.000	3486	Stream 3 Cooler Water Discharge Temp 15M Reading	THP	144.61	Deg F
12	2023-05-04 18:45:00.000	3486	Stream 3 Cooler Water Discharge Temp 15M Reading	THP	128.16	Deg F
13	2023-05-04 20:30:00.000	3486	Stream 3 Cooler Water Discharge Temp 15M Reading	THP	138.4	Deg F
14	2023-05-04 20:45:00.000	3486	Stream 3 Cooler Water Discharge Temp 15M Reading	THP	146.92	Deg F
15	2023-05-04 21:00:00.000	3486	Stream 3 Cooler Water Discharge Temp 15M Reading	THP	148.87	Deg F
16	2023-05-04 23:15:00.000	3486	Stream 3 Cooler Water Discharge Temp 15M Reading	THP	142.24	Deg F
17	2023-05-04 23:45:00.000	3486	Stream 3 Cooler Water Discharge Temp 15M Reading	THP	143.82	Deg F
18	2023-05-05 00:00:00.000	3486	Stream 3 Cooler Water Discharge Temp 15M Reading	THP	143.53	Deg F
19	2023-06-14 11:30:00.000	3485	Stream 2 Cooler Water Discharge Temp 15M Reading	THP	126.00	Deg F

	Varid	Variable Name	Location	Tag	Data Source
1	37	PS #13 MLVSS	PS13	PLANT_TSSVSS_VOLATILE_SUSPENDED_SOLIDS	LIMS
2	39	TRA_CRWSPS #13A-1 MLVSS	PS13A	PLANT_TSSVSS_VOLATILE_SUSPENDED_SOLIDS	LIMS
3	184	GBT Influent Mixed Liquor Suspended Solids	GBT	((C332/C183)*C335) + ((C333/C183)*C334) + ((C1096/...	CALCULATION
4	197	PS-BTS Primary Total Tons Feed	Gravity Thickeners	((C245+C246)*1440*8.34)*(C203/100)/2000	CALCULATION
5	198	GT 7 % Solids (Ops)	Gravity Thickeners	OPSCENTR:110-46J:#7 GT N:Meterless	MAXIMO
6	205	GT Overflow Total Suspended Solids (Lab)	Gravity Thickeners	PLANT_TSS_TOTAL_SUSPENDED_SOLIDS	LIMS
7	206	GT NE % Solids (Ops)	Gravity Thickeners	OPSCENTR:110-46J:#6 GT NE:Meterless	MAXIMO
8	207	GT NW % Solids (Ops)	Gravity Thickeners	OPSCENTR:110-46J:#4 GT NW:Meterless	MAXIMO
9	208	GT SE % Solids (Ops)	Gravity Thickeners	OPSCENTR:110-46J:#5 GT SE:Meterless	MAXIMO
10	209	GT SW % Solids (Ops)	Gravity Thickeners	OPSCENTR:110-46J:#3 GT SW:Meterless	MAXIMO
11	213	BT % Solids (Ops)	Blend Tank	OPSCENTR:110-44A:Blend Tank Solids:Meterless	MAXIMO
12	234	BT Sludge % Volatile Solids (Lab)	Blend Tank	PLANT_PERC_S_VS_PERCENT_VOLATILE_SOLIDS	LIMS
13	258	GBT Filtrate Total Suspended Solids	GBT	NO TAG SET	NO SOURCE SET
14	259	BFP Combined Sludge Feed	Belt Filter Presses	C538+C539	CALCULATION
15	451	BFP Polymer Total Feed	Belt Filter Presses	OPSCENTR:110-48I:Total Polymer Gal.:Meterless	MAXIMO
16	458	BFP Total Wet Tons	Belt Filter Presses	(V260/(V270*.01))	CALCULATION
17	461	BFP Combined Dry Poylmer Used	Belt Filter Presses	V451*8.3817 *.0055	CALCULATION
18	625	S. Train Cake % Solids Before Lime (Lab)	Belt Filter Presses	PLANT_PERC_S_VS_PERCENT_SOLIDS	LIMS
19	626	S. Train Cake % Volatile Solids Before Lim	Belt Filter Presses	PLANT_PERC_S_VS_PERCENT_VOLATILE_SOLIDS	LIMS

Query executed successfully.

TRAHWIMS (15.0 RTM) TRAORG\naranjodl (57) OPSCENTR 00:00:42 533,500 rows

THP – PowerBI Co-Op

Power BI

Deployment pipelines

Search

3

Settings

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Create

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OneLake data hub

Apps

Metrics

Deployment pipelines

Black & Veatch Water Information

Contains reports/datasets that pertain to water operations co-developed by Black & Veatch and TRA ITSS.

Deployment history

Manage Access

Settings

...

Development

Test

Production

Black & Veatch Water Information Development

0

Dataflows

0

Datamarts

1

Datasets

Deploy

Black & Veatch Water Infor...

Deployed: 27/06/2023

0

Dataflows

0

Datamarts

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Datasets

Deploy

Water Information Producti...

Deployed: 27/06/2023

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Dataflows

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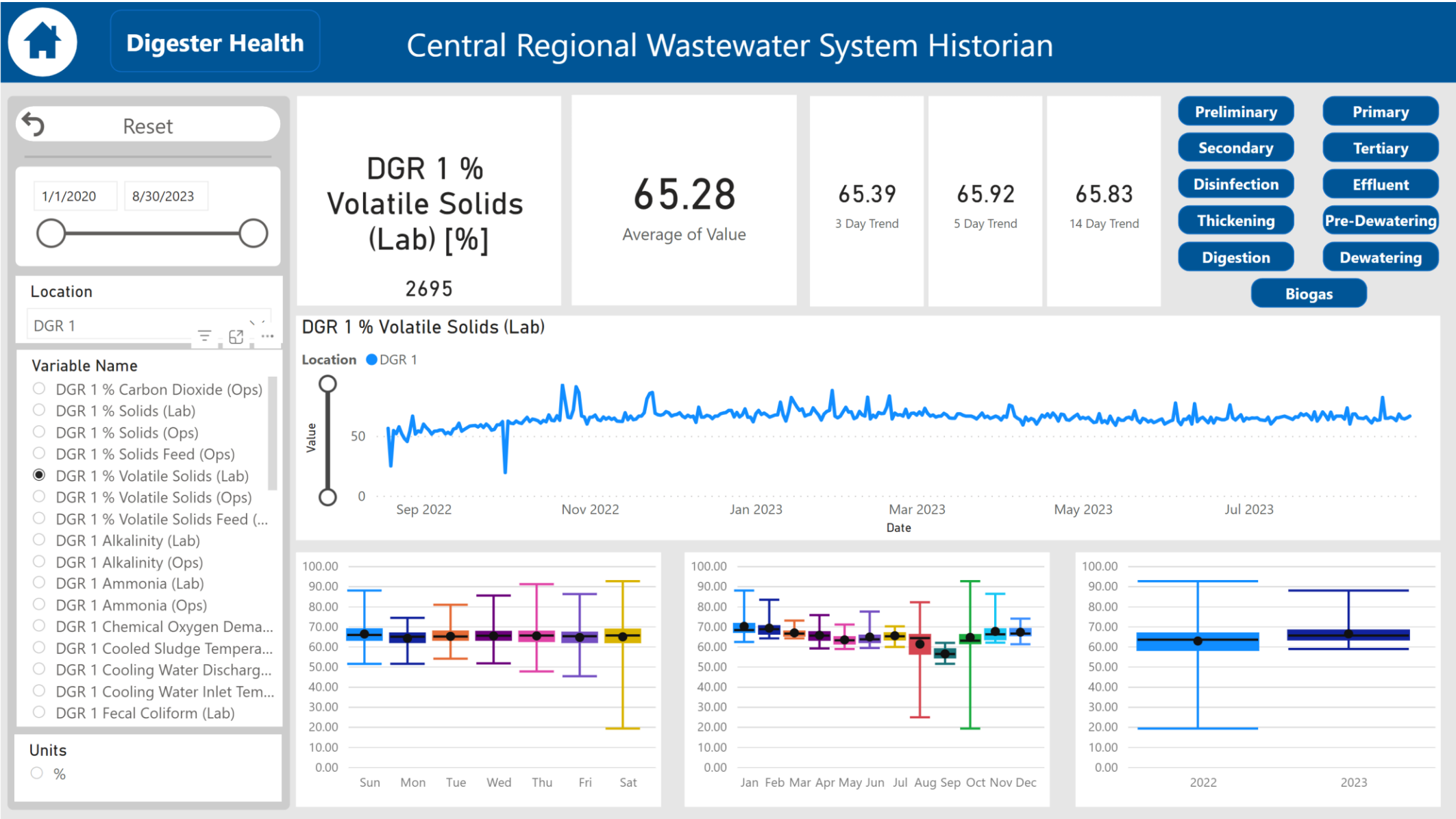
Datamarts

3

Datasets

Deploy

THP – PowerBI Co-Op



THP – PowerBI Co-Op

Location

DGR 1

Variable Name

- ☐ DGR 1 % Carbon Dioxide (Ops)
- ☐ DGR 1 % Solids (Lab)
- ☐ DGR 1 % Solids (Ops)
- ☐ DGR 1 % Solids Feed (Ops)
- ☒ DGR 1 % Volatile Solids (Lab)
- ☐ DGR 1 % Volatile Solids (Ops)
- ☐ DGR 1 % Volatile Solids Feed (...)
- ☐ DGR 1 Alkalinity (Lab)
- ☐ DGR 1 Alkalinity (Ops)
- ☐ DGR 1 Ammonia (Lab)
- ☐ DGR 1 Ammonia (Ops)
- ☐ DGR 1 Chemical Oxygen Dema...
- ☐ DGR 1 Cooled Sludge Tempera...
- ☐ DGR 1 Cooling Water Discharg...
- ☐ DGR 1 Cooling Water Inlet Tem...
- ☐ DGR 1 Fecal Coliform (Lab)

THP – PowerBI Co-Op



Trinity River Authority of Texas
Enriching the Trinity basin as a resource for Texans

Preliminary

Primary

Secondary

Tertiary

Disinfection

Effluent

Thickening

Pre-Dewatering

Digestion

Dewatering

Biogas

THP – PowerBI Co-Op

