

HTW BCT, January 31, 2020

## December 2019 Key Events for OU2 Landfills

- TTU Operations
- Winterization

## January 2020 Key Events for OU2 Landfills

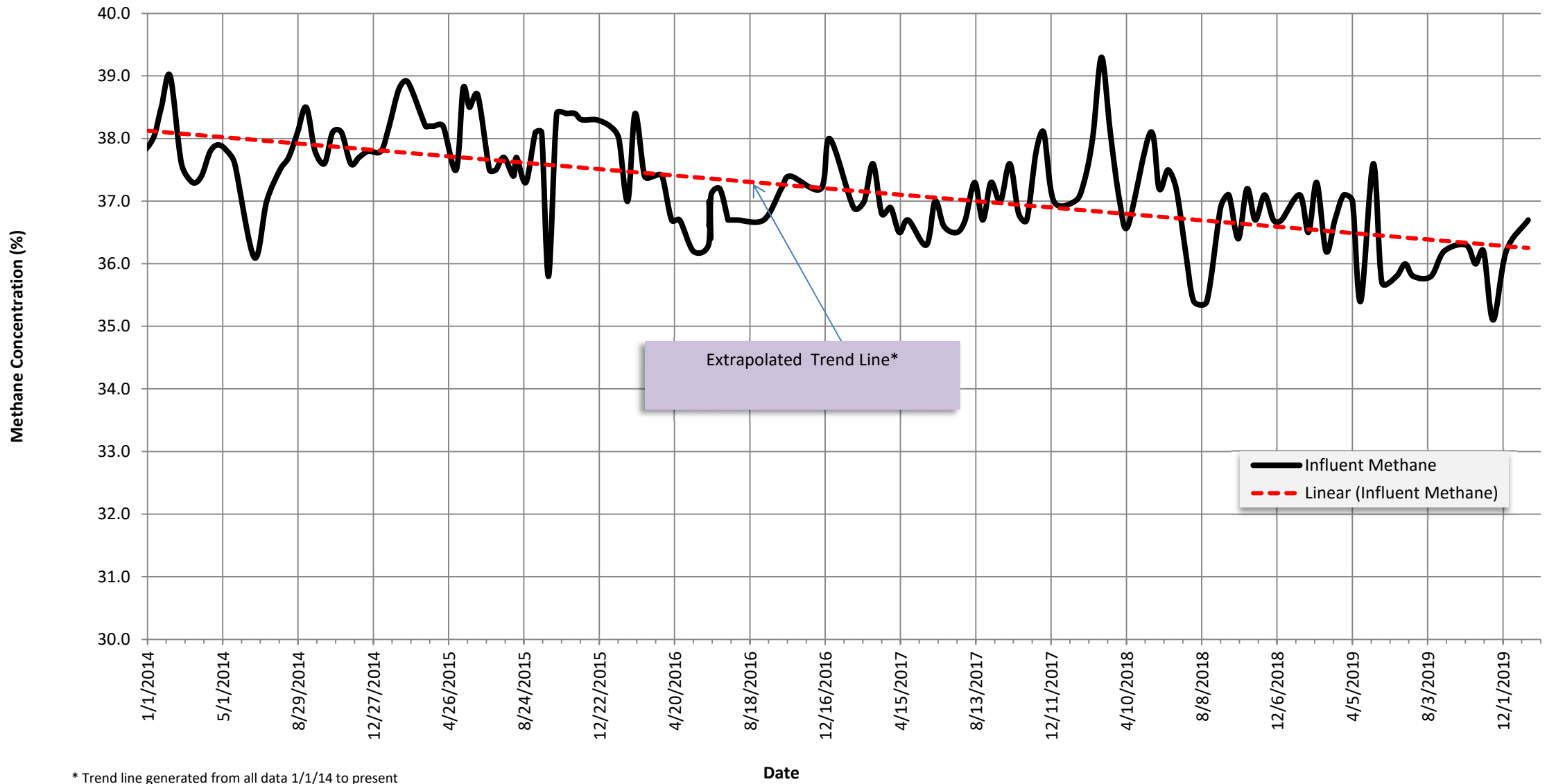
- TTU Operations
- Erosion Maintenance
- Raptor Perch Installation

OU2 Landfills and OU2 Groundwater Monitoring and Treatment System annual reports will be combined starting 3Q 2019 (Oct 1 – Sep 30).

*Ahtna*



Methane Concentration Time Series Plot  
Thermal Treatment Unit Influent  
01/01/2014 to present



\* Trend line generated from all data 1/1/14 to present

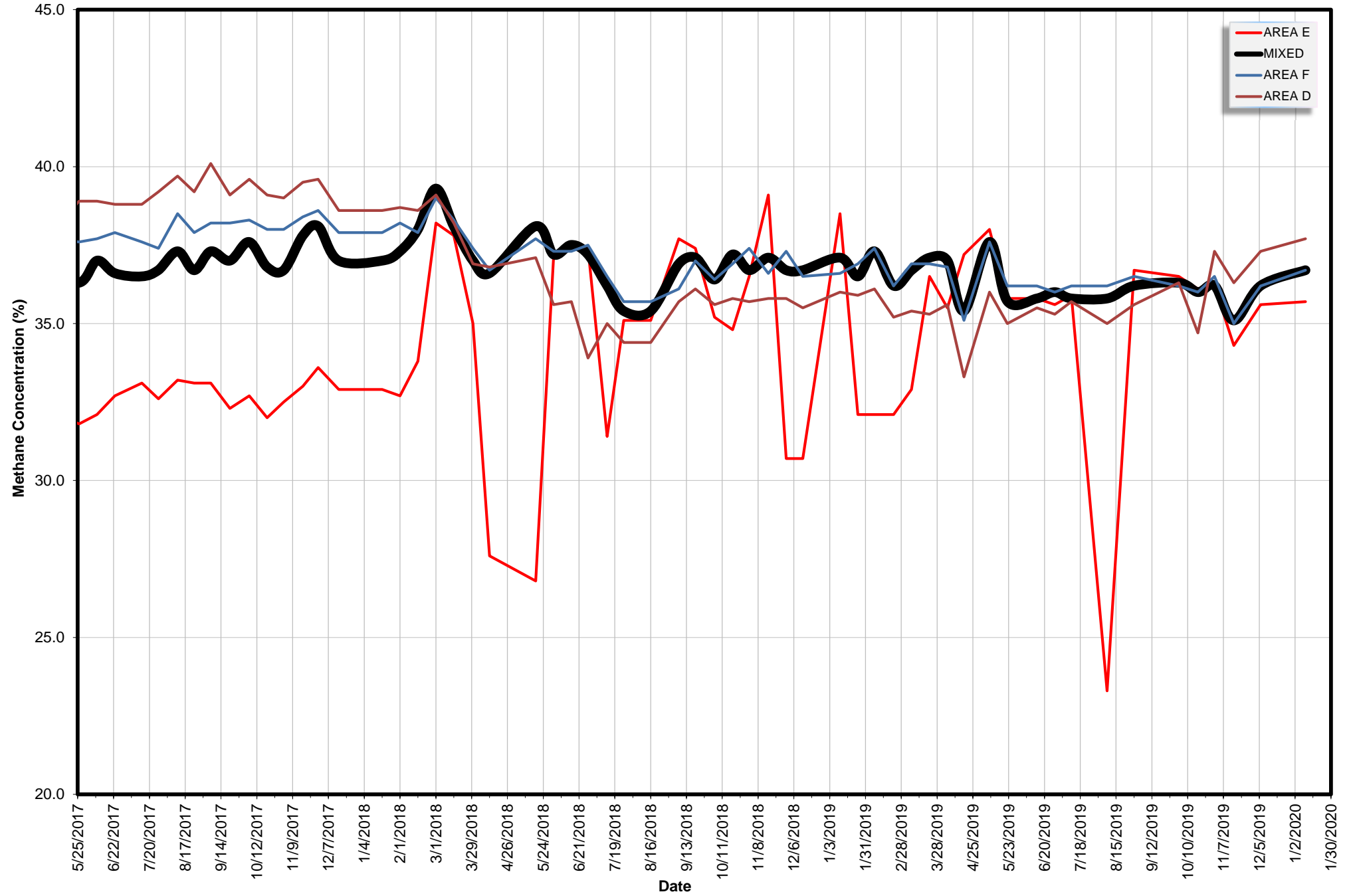
**Thermal Treatment Unit  
Operation Summary  
2006 - 2020**

<b>TREATMENT SYSTEM OPERATION SUMMARY</b>	
<b>Treatment System Start Date:</b>	<b>6/4/2001</b>
<b>TTU Start Date:</b>	<b>4/4/2006</b>
<b>Last Reading Date/Time:</b>	<b>1/10/2020 15:38</b>
<b>Historical through 2019 (TTU only):</b>	
Total TTU Hours:	<b>120,432</b>
Total TTU Hours Operated:	<b>35,094</b>
% TTU Operation:	<b>29.1%</b>
Total Pounds of Methane Removed:	<b>3,623,172</b>
<b>Current Year 2020:</b>	
Total Hours:	<b>384</b>
Total Hours Operated:	<b>71</b>
% TTU Operation:	<b>18%</b>
Total Pounds of Methane Removed:	<b>6,147</b>
<b>Cumulative (since TTU startup in 2006):</b>	
% TTU Operation:	<b>29.1%</b>
Total Pounds of Methane Removed:	<b>3,629,319</b>

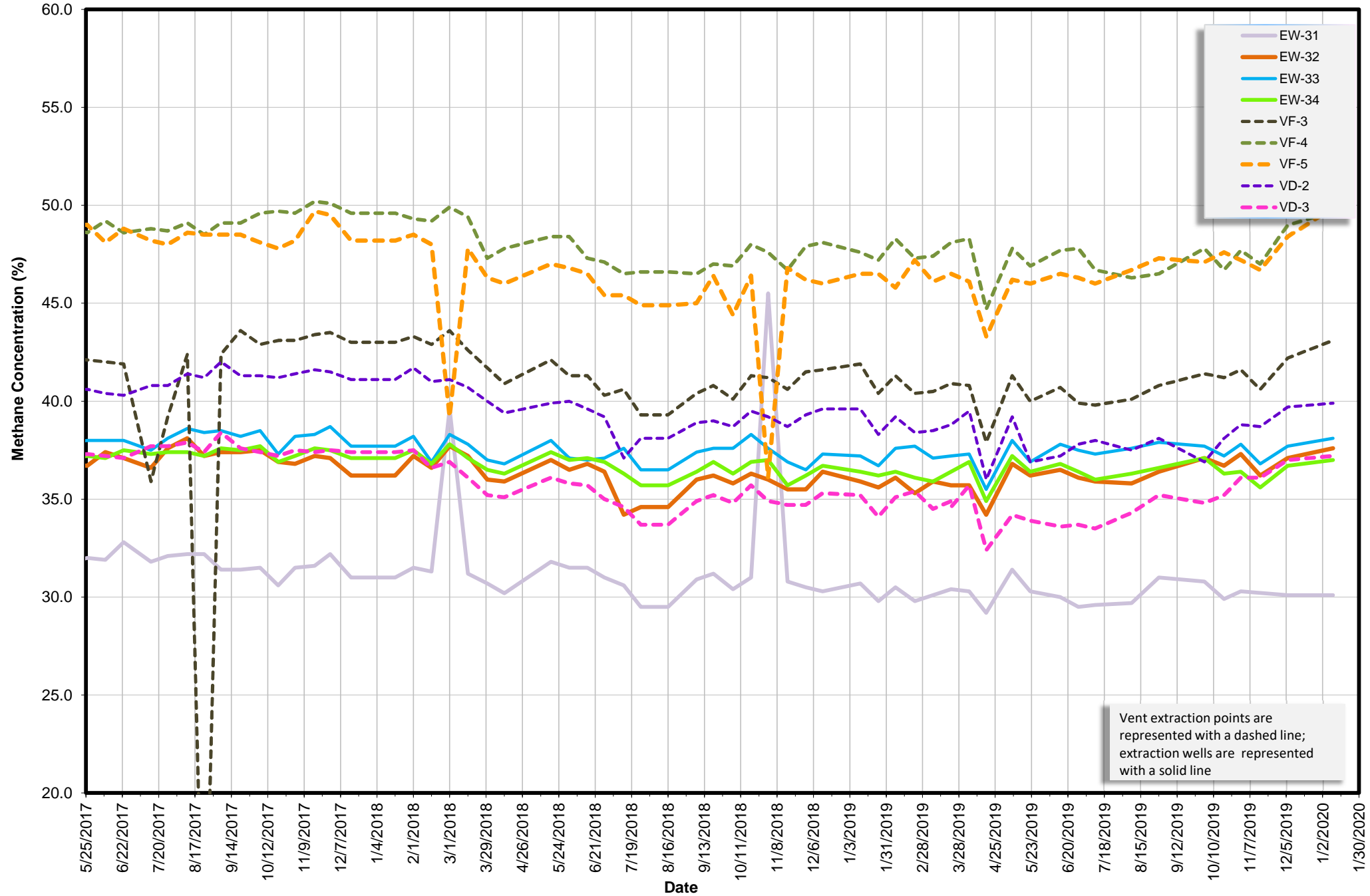
**Thermal Treatment Unit  
Operation Summary  
2006 - 2020**

Year	Operating Hours	Change from Previous Year	Methane			OU2 Groundwater COCs	
			Pounds Removed	Change from Previous Year	Pounds/week	Pounds Removed	Change from Previous Year
2007	4,035		532,130		10,205	6.2	
2008	2,838	-30%	288,458	-46%	5,532	3.1	-51%
2009	4,493	58%	448,154	55%	8,595	3.4	11%
2010	2,421	-46%	212,681	-53%	4,079	1.4	-60%
2011	2,543	5%	228,082	7%	4,374	1.4	0%
2012	2,509	-1%	229,397	1%	4,399	1.2	-13%
2013	2,116	-16%	187,779	-18%	3,601	1.1	-8%
2014	1,961	-7%	174,427	-7%	3,345	1.0	-11%
2015	2,653	35%	237,571	36%	4,556	1.3	29%
2016	2,039	-23%	178,645	-25%	3,426	0.9	-28%
2017	1,554	-24%	135,711	-24%	2,603	0.6	-33%
2018	1,661	-19%	145,174	-19%	2,784	0.6	-9%
2019	1,227	-21%	113,443	-16%	2,176	0.6	9%
2020	876		6,147		2,531		

Methane Concentration Time Series Plot  
OU2 Landfill Extraction Legs  
5/2017 to present



Methane Concentration Time Series Plot  
OU2 Landfill Individual Extraction Sources  
5/2017 to present



**Thermal Treatment Unit  
Operation Summary  
2006 - 2020**

<b>EXTRACTION SYSTEM (2019)</b>						
<b>Location</b>	<b>Last Instantaneous Methane Reading (%)</b>	<b>Last Instantaneous Flow Rate Reading (scfm)</b>	<b>Current Methane Removal Rate (lbs/day)</b>	<b>2018 % Operation</b>	<b>2018 Methane Removed (Lbs)</b>	<b>% Contribution of Each Extraction Source</b>
<b>Area E</b>						
EP-36	35.7	25.0	526.4	0.2	65066.4	21%
<b>Area F</b>						
EW-31	30.1	10.0	177.5	0.2	5270.6	2%
EW-32	37.6	15.0	332.7	17%	58,310	19%
EW-33	38.1	16.0	359.6	17%	47,464	15%
EW-34	37.0	12.0	261.9	17%	75,504	25%
VF-3	43.1	5.0	127.1	0.2	19407.4	6%
VF-4	49.7	6.0	175.9	0.2	16060.5	5%
VF-5	49.9	5.0	147.2	17%	9868.6	3%
<b>Area D</b>						
VD-2	39.9	1.0	23.5	0.2	5466.1	2%
VD-3	37.2	1.0	21.9	0.2	5258.3	2%
<b>MIXED</b>						
MIXED	36.7	96.0	2078.1	0.2	264763.9	100%