

HTW BCT, November 13, 2019

October 2019 Key Events for OU2 Landfills

- TTU Operations
- Owl boxes cleaned

November 2019 Key Events for OU2 Landfills

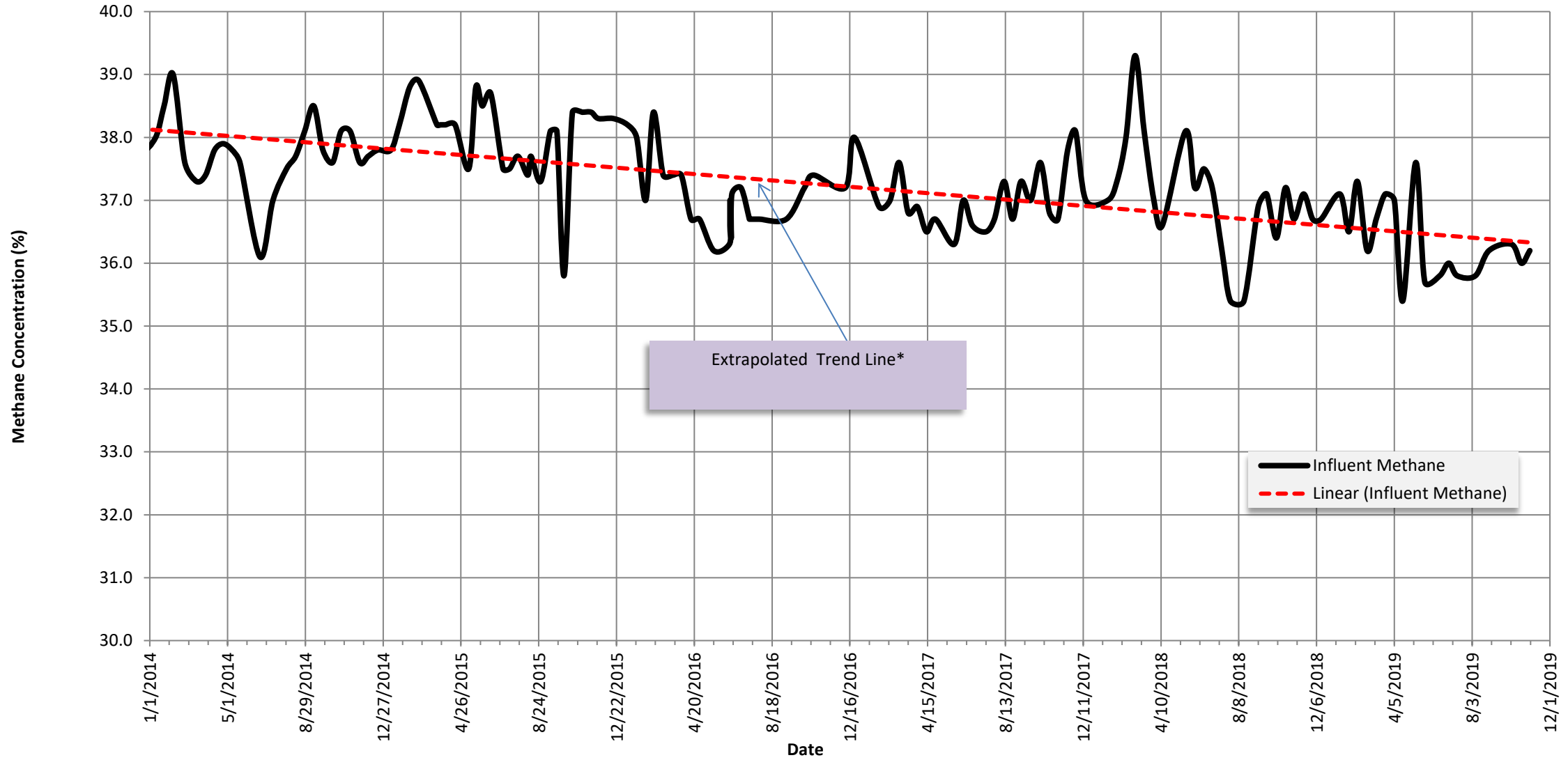
- TTU Operations
- Quarterly Perimeter Probe Monitoring
- Winterization

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 - 2019**

TREATMENT SYSTEM OPERATION SUMMARY	
Treatment System Start Date:	6/4/2001
TTU Start Date:	4/4/2006
Last Reading Date/Time:	10/31/2019 16:32
Historical through 2018 (TTU only):	
Total TTU Hours:	111,672
Total TTU Hours Operated:	33,771
% TTU Operation:	30.2%
Total Pounds of Methane Removed:	3,509,729
Current Year 2019:	
Total Hours:	7,296
Total Hours Operated:	1,207
% TTU Operation:	17%
Total Pounds of Methane Removed:	103,616
Cumulative (since TTU startup in 2006):	
% TTU Operation:	29.4%
Total Pounds of Methane Removed:	3,613,345

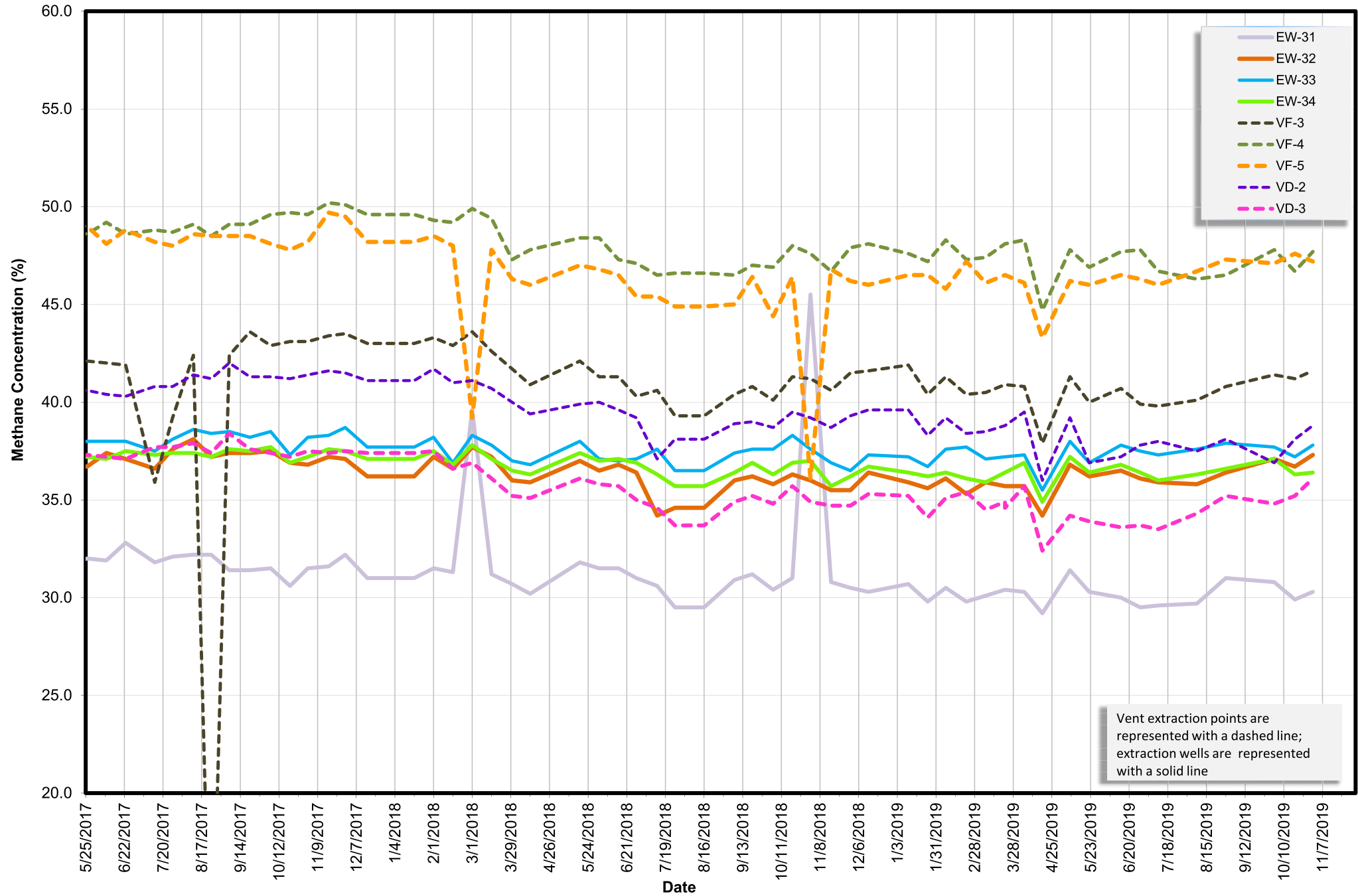
**Thermal Treatment Unit
Operation Summary
2006 - 2019**

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	876		103,616		2,378		

**Thermal Treatment Unit
Operation Summary
2006 - 2019**

EXTRACTION SYSTEM (2019)						
Location	Last Instantaneous Methane Reading (%)	Last Instantaneous Flow Rate Reading (scfm)	Current Methane Removal Rate (lbs/day)	2018 % Operation	2018 Methane Removed (Lbs)	% Contribution of Each Extraction Source
Area E						
EP-36	36.2	25.0	533.8	0.2	60998.9	21%
Area F						
EW-31	30.3	1.0	17.9	0.2	4694.7	2%
EW-32	37.3	17.0	374.0	18%	55,468	19%
EW-33	37.8	18.0	401.3	18%	44,328	15%
EW-34	36.4	15.0	322.1	18%	73,261	25%
VF-3	41.6	5.0	122.7	0.2	18422.2	6%
VF-4	47.7	5.0	140.7	0.2	15323.8	5%
VF-5	47.2	9.0	250.6	18%	8851.1	3%
Area D						
VD-2	38.8	1.0	22.9	0.2	5223.7	2%
VD-3	36.1	2.0	42.6	0.2	5088.9	2%
MIXED						
MIXED	36.2	96.0	2049.8	0.2	248789.7	100%

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



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

