

HTW BCT, August 21, 2019



July 2019 Key Events for OU2 Landfills

- Landfill Repairs
 - Area F Interior Line Levelling
 - Area E/F Erosion
 - Perimeter Roads
- TTU not in operation during repairs

- Condensate water removed

August 2019 Key Events for OU2 Landfills

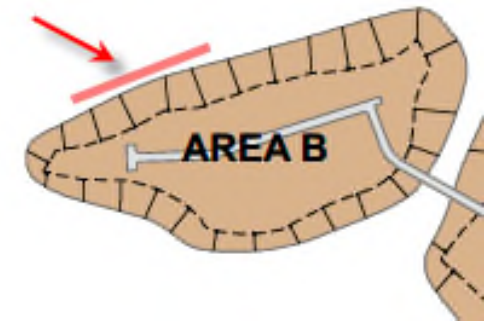
- TTU Operations
- 2019 Q3 Perimeter Probe monitoring

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

Ahtna

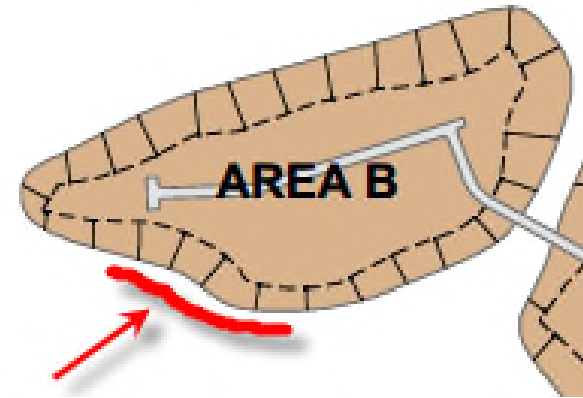


Perimeter Road Repair
North Side Area B



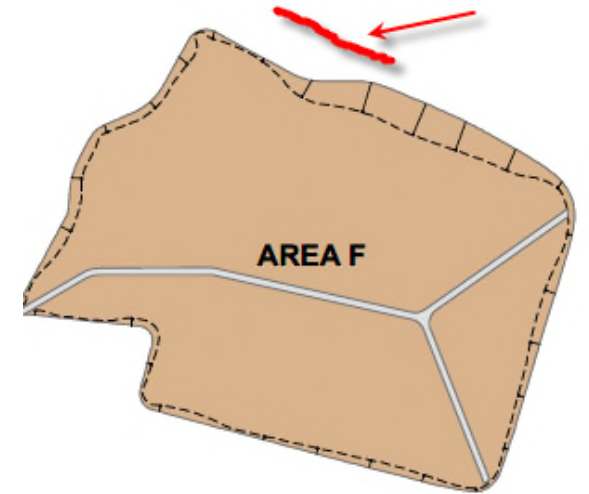


Perimeter Road Repair South Side Area B



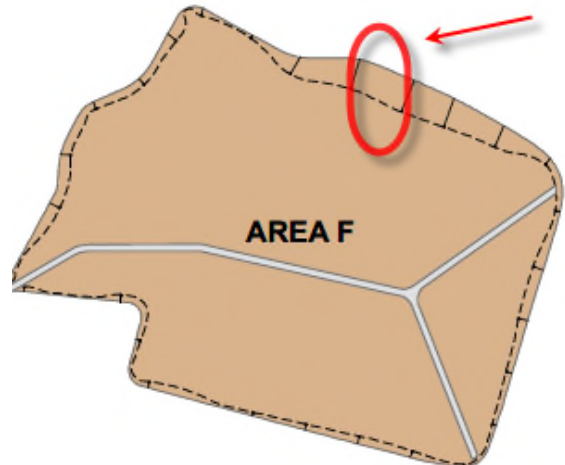


Perimeter Road Repair
North Side Area F





Erosion Repair
North Side Area F



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

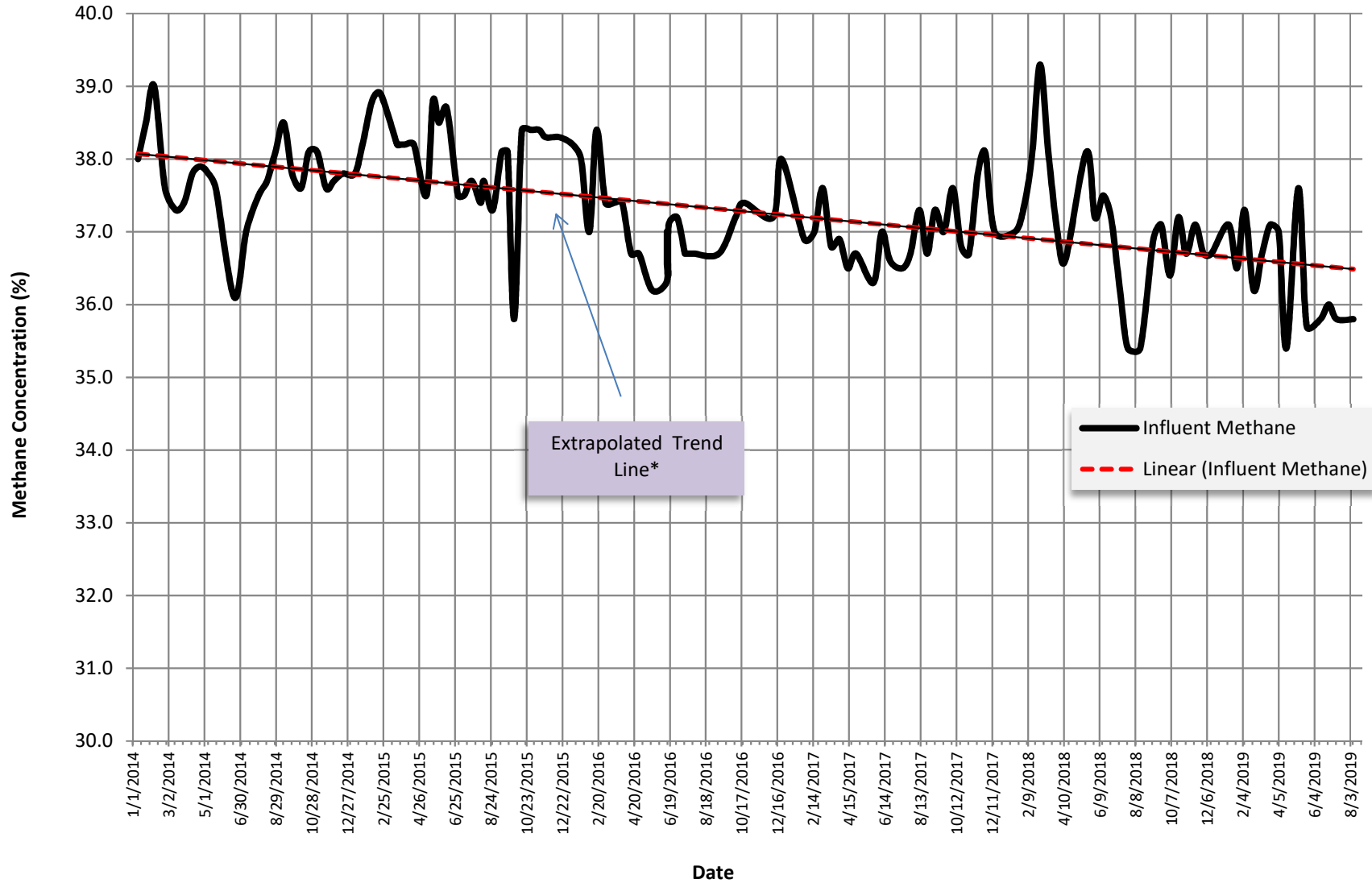
TREATMENT SYSTEM OPERATION SUMMARY	
Treatment System Start Date:	6/4/2001
TTU Start Date:	4/4/2006
Last Reading Date/Time:	8/8/2019 18:05
Historical through 2018 (TTU only):	
Total TTU Hours:	111,672
Total TTU Hours Operated:	33,771
% TTU Operation:	30.2%
Total Pounds of Methane Removed:	3,509,729
Current Year 2019:	
Total Hours:	5,424
Total Hours Operated:	972
% TTU Operation:	18%
Total Pounds of Methane Removed:	83,586
Cumulative (since TTU startup in 2006):	
% TTU Operation:	29.7%
Total Pounds of Methane Removed:	3,593,315

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		83,586		2,578		

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

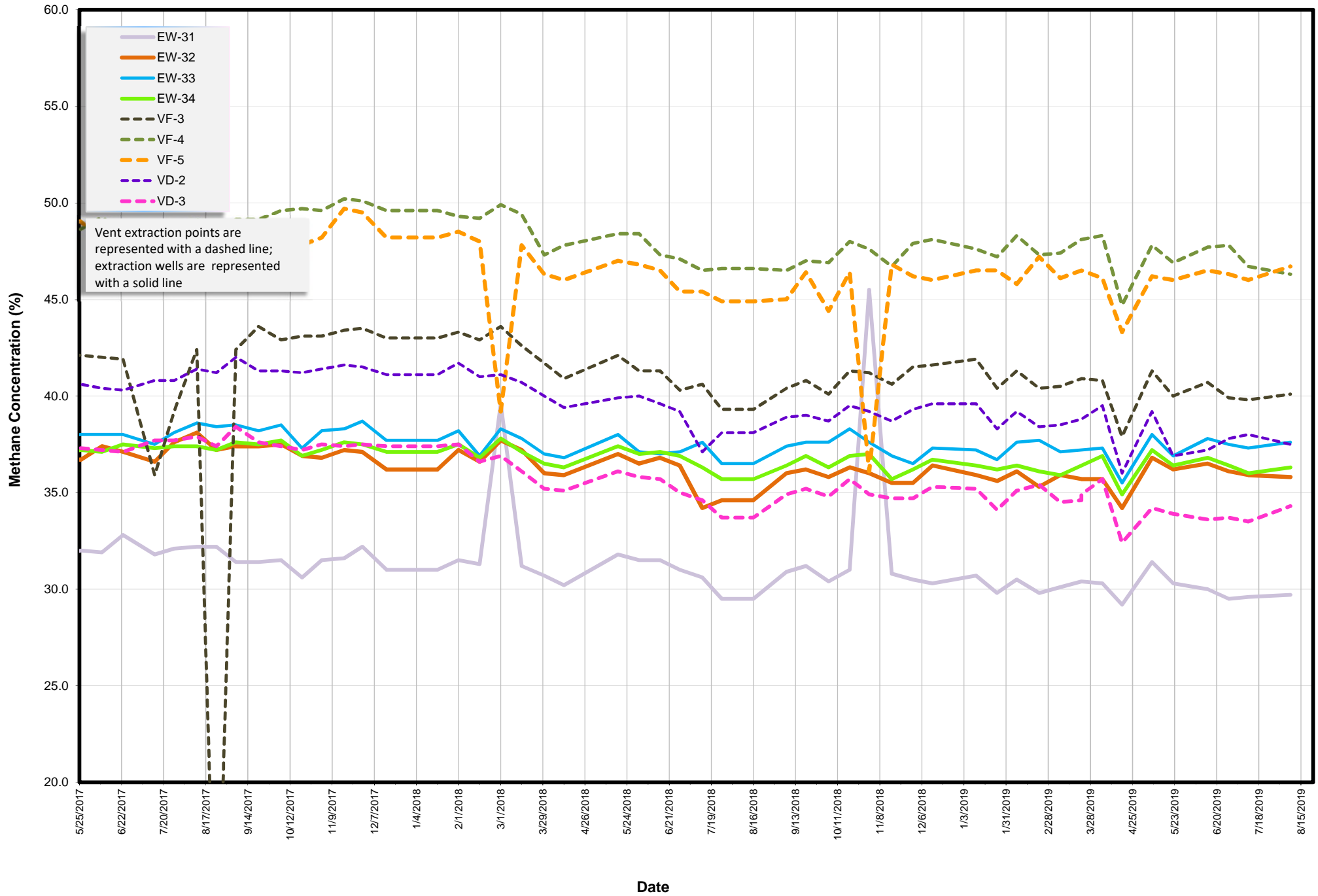
EXTRACTION SYSTEM (2019)						
Location	Last Instantaneous Methane Reading (%)	Last Instantaneous Flow Rate Reading (scfm)	Current Methane Removal Rate (lbs/day)	2018 % Operation	2018 Methane Removed (Lbs)	% Contribution of Each Extraction Source
Area E						
EP-36	23.3	25.0	343.6	0.2	55758.4	21%
Area F						
EW-31	29.7	1.0	17.5	0.2	4519.1	2%
EW-32	35.8	28.8	608.1	19%	51,291	19%
EW-33	37.6	29.6	656.5	19%	39,857	15%
EW-34	36.3	21.6	462.5	19%	69,865	26%
VF-3	40.1	7.2	170.3	0.2	17157.8	6%
VF-4	46.3	7.2	196.6	0.2	14335.7	5%
VF-5	46.7	1.0	27.5	19%	8079.6	3%
Area D						
VD-2	37.5	1.0	22.1	0.2	5005.1	2%
VD-3	34.3	1.0	20.2	0.2	4806.4	2%
MIXED						
MIXED	35.8	96.0	2027.2	0.2	228760.0	100%

Methane Concentration Time Series Plot
OU2 Landfill Extraction Sources
01/01/2014 to present



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

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



Methane Concentration vs. Time

OU2 Landfill Extraction Sources

1/1/2011 to present

