

HTW BCT, September 11, 2019

## August 2019 Key Events for OU2 Landfills

- TTU Operations
- 2019 Q3 Perimeter Probe monitoring

## September 2019 Key Events for OU2 Landfills

- TTU Operations
- Install new O2 sensor
- Install filters on pneumatic valves

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

Ahtna



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

<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>8/29/2019 15:49</b>
<b>Historical through 2018 (TTU only):</b>	
Total TTU Hours:	<b>111,672</b>
Total TTU Hours Operated:	<b>33,771</b>
% TTU Operation:	<b>30.2%</b>
Total Pounds of Methane Removed:	<b>3,509,729</b>
<b>Current Year 2019:</b>	
Total Hours:	<b>5,760</b>
Total Hours Operated:	<b>1,001</b>
% TTU Operation:	<b>17%</b>
Total Pounds of Methane Removed:	<b>86,054</b>
<b>Cumulative (since TTU startup in 2006):</b>	
% TTU Operation:	<b>29.6%</b>
Total Pounds of Methane Removed:	<b>3,595,783</b>

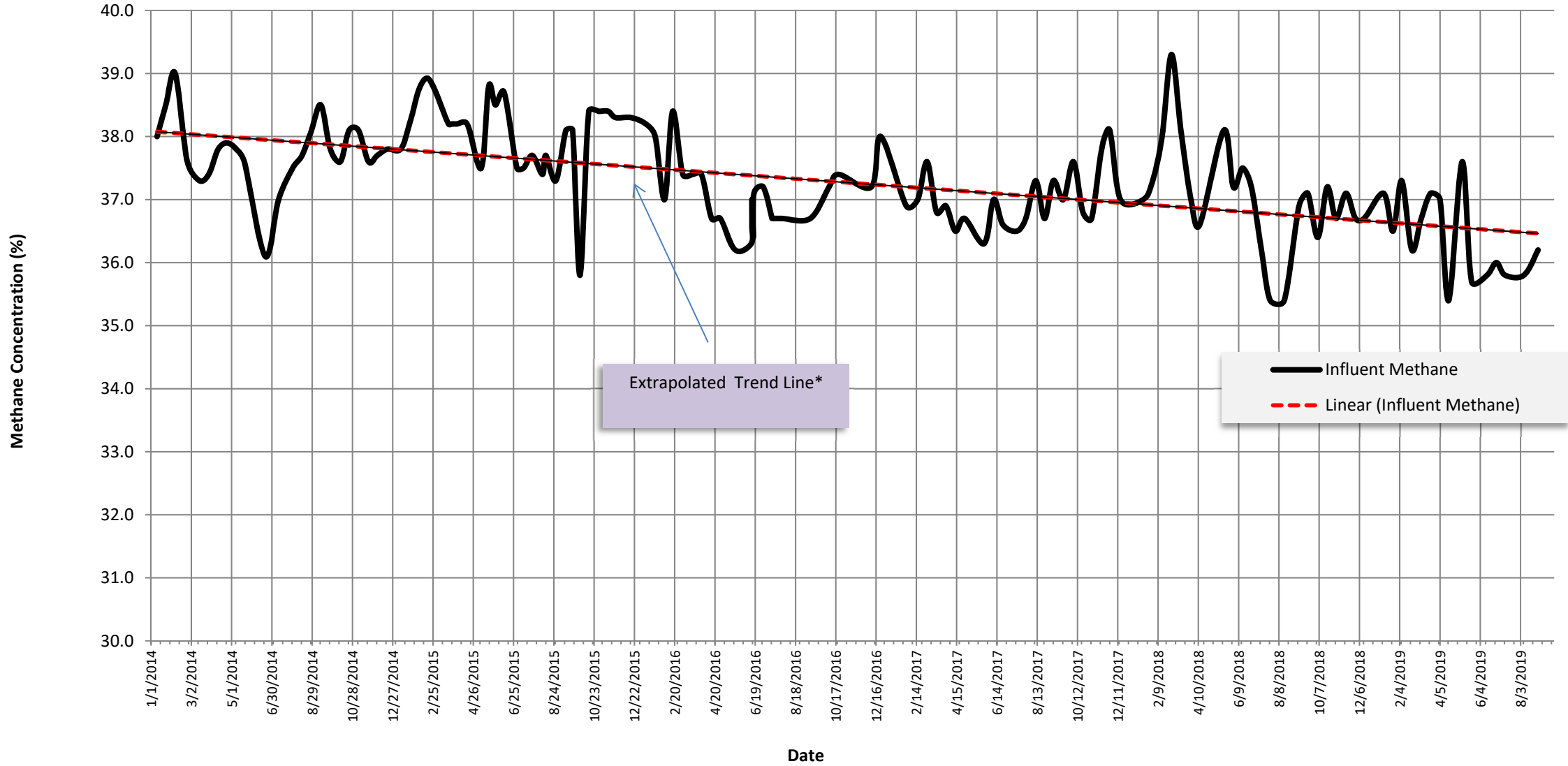
**Thermal Treatment Unit  
Operation Summary  
2006 - 2019**

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		<b>532,130</b>		<b>10,205</b>	<b>6.2</b>	
2008	2,838	<b>-30%</b>	<b>288,458</b>	<b>-46%</b>	<b>5,532</b>	<b>3.1</b>	<b>-51%</b>
2009	4,493	<b>58%</b>	<b>448,154</b>	<b>55%</b>	<b>8,595</b>	<b>3.4</b>	<b>11%</b>
2010	2,421	<b>-46%</b>	<b>212,681</b>	<b>-53%</b>	<b>4,079</b>	<b>1.4</b>	<b>-60%</b>
2011	2,543	<b>5%</b>	<b>228,082</b>	<b>7%</b>	<b>4,374</b>	<b>1.4</b>	<b>0%</b>
2012	2,509	<b>-1%</b>	<b>229,397</b>	<b>1%</b>	<b>4,399</b>	<b>1.2</b>	<b>-13%</b>
2013	2,116	<b>-16%</b>	<b>187,779</b>	<b>-18%</b>	<b>3,601</b>	<b>1.1</b>	<b>-8%</b>
2014	1,961	<b>-7%</b>	<b>174,427</b>	<b>-7%</b>	<b>3,345</b>	<b>1.0</b>	<b>-11%</b>
2015	2,653	<b>35%</b>	<b>237,571</b>	<b>36%</b>	<b>4,556</b>	<b>1.3</b>	<b>29%</b>
2016	2,039	<b>-23%</b>	<b>178,645</b>	<b>-25%</b>	<b>3,426</b>	<b>0.9</b>	<b>-28%</b>
2017	1,554	<b>-24%</b>	<b>135,711</b>	<b>-24%</b>	<b>2,603</b>	<b>0.6</b>	<b>-33%</b>
2018	1,661	<b>-19%</b>	<b>145,174</b>	<b>-19%</b>	<b>2,784</b>	<b>0.6</b>	<b>-9%</b>
2019	876		<b>86,054</b>		<b>2,499</b>		

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

<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	36.7	25.0	541.2	0.2	56409.9	21%
<b>Area F</b>						
EW-31	31.0	1.0	18.3	0.2	4541.1	2%
EW-32	36.4	20.0	429.4	18%	51,808	19%
EW-33	37.9	21.0	469.5	18%	40,422	15%
EW-34	36.6	16.0	345.4	18%	70,281	26%
VF-3	40.8	5.0	120.3	0.2	17302.7	6%
VF-4	46.5	4.0	109.7	0.2	14467.7	5%
VF-5	47.3	1.0	27.9	18%	8113.2	3%
<b>Area D</b>						
VD-2	38.1	1.0	22.5	0.2	5032.2	2%
VD-3	35.2	2.0	41.5	0.2	4856.4	2%
<b>MIXED</b>						
MIXED	36.2	96.0	2049.8	0.2	231227.6	100%

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

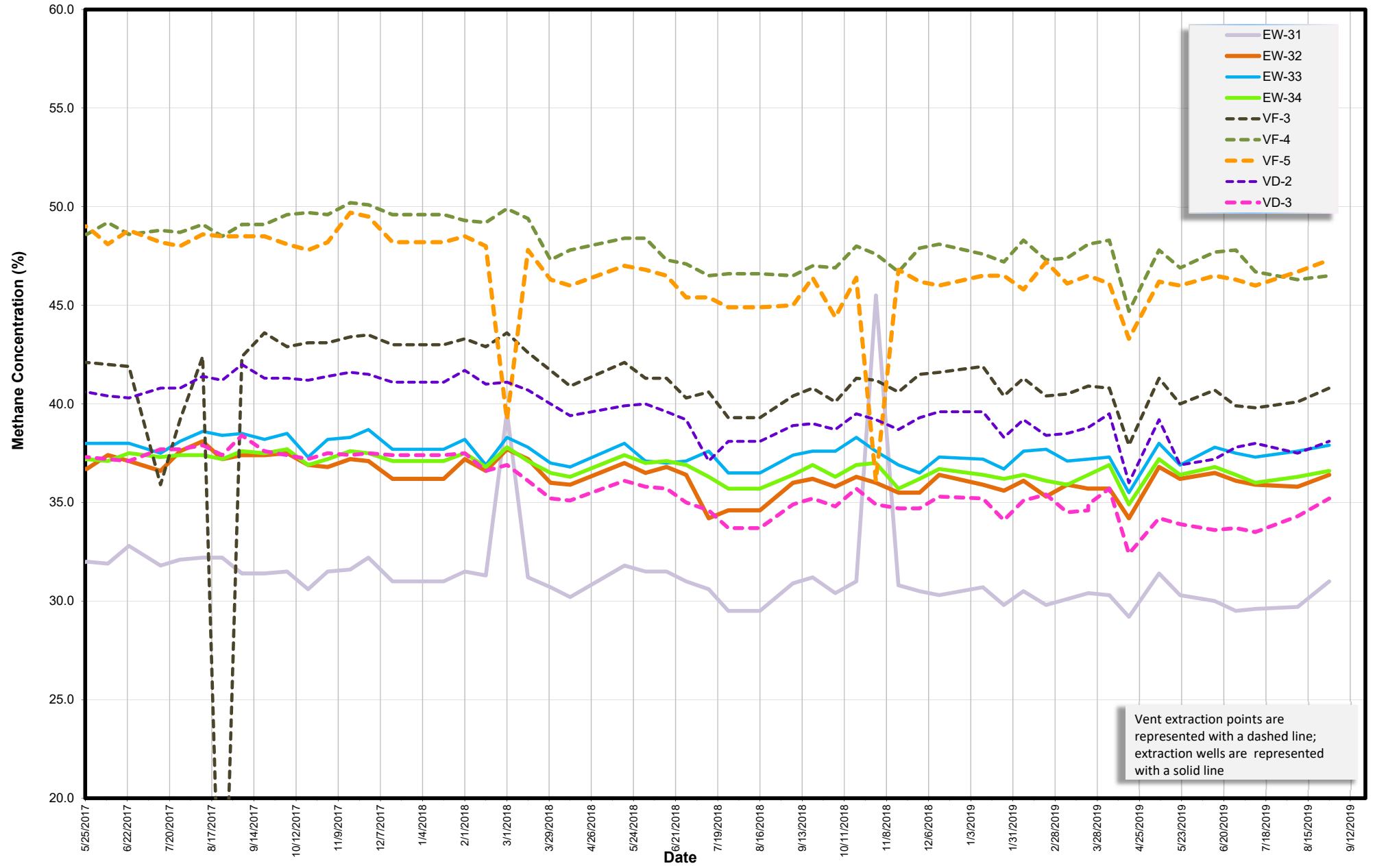


\* Trend line generated from all data 1/1/14 to present

# Methane Concentration vs. Time

## OU2 Landfill Extraction Sources

### 1/1/2011 to present



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

