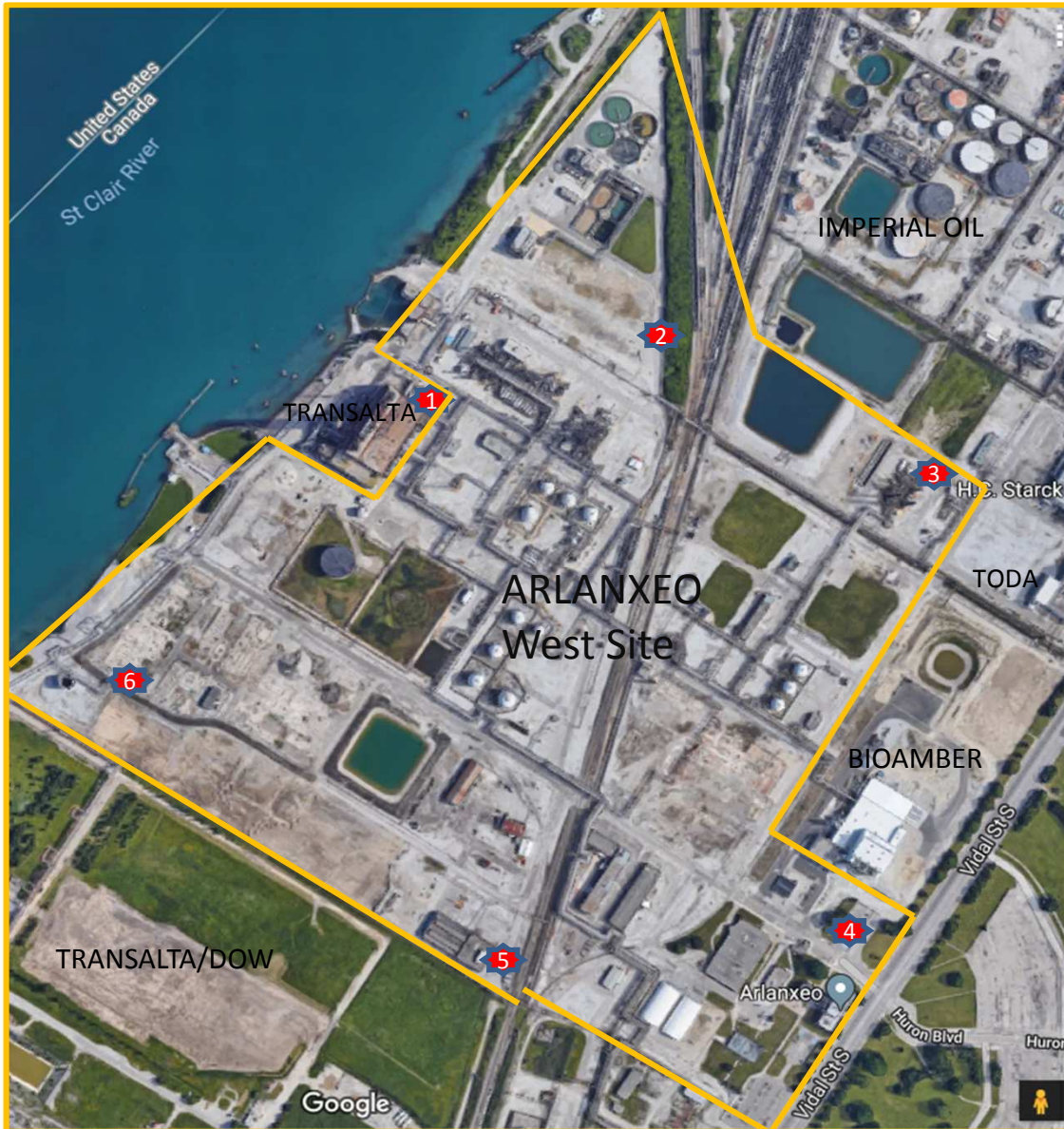


# ARLANXEO 1,3-Butadiene Monitors



	September 19, 2018 ( $\mu\text{g}/\text{m}^3$ )	Average (YTD) ( $\mu\text{g}/\text{m}^3$ )
1	0.66	0.81
2	0.73	4.30
3	<0.33	1.54
4	0.64	0.46
5	2.08	1.44
6	<0.33	0.20

Point of Impingement Limit =  $2.0 \mu\text{g}/\text{m}^3$   
(annual averaging basis)

# ARLANXEO: 1,3-Butadiene Fenceline Monitoring - 2018

## Monitor Location #1

Sample Start Date	Sample End Date	1,3-Butadiene (ug/m <sup>3</sup> )
December 27/17	January 10	1.55
January 10	January 24	<0.34
January 24	February 7	<0.34
February 7	February 21	<0.34
February 21	March 7	0.35
March 7	March 21	<0.34
March 21	April 4	1.94
April 4	April 18	<0.34
April 18	May 2	1.19
May 2	May16	<0.33
May 16	May 30	0.94
May 30	June 13	1.22
June 13	June 27	0.68
June 27	July 11	1.05
July 11	July 25	2.51
July 25	August 8	1.33
August 8	August 22	0.56
August 22	September 5	0.39
September 5	September 19	0.66
Average		0.81

## Monitor Location #2

Sample Start Date	Sample End Date	1,3-Butadiene (ug/m <sup>3</sup> )
December 27/17	January 10	2.87
January 10	January 24	2.37
January 24	February 7	1.58
February 7	February 21	7.12
February 21	March 7	0.69
March 7	March 21	<0.34
March 21	April 4	0.83
April 4	April 18	0.59
April 18	May 2	3.7
May 2	May16	39.1*
May 16	May 30	5.17
May 30	June 13	1.87
June 13	June 27	0.84
June 27	July 11	5.08
July 11	July 25	1.6
July 25	August 8	1.98
August 8	August 22	0.87
August 22	September 5	4.57
September 5	September 19	0.73
Average		4.30

## Monitor Location #3

Sample Start Date	Sample End Date	1,3-Butadiene (ug/m <sup>3</sup> )
December 27/17	January 10	4.13
January 10	January 24	<0.34
January 24	February 7	1.41
February 7	February 21	0.58
February 21	March 7	0.59
March 7	March 21	2.09
March 21	April 4	1.36
April 4	April 18	1.12
April 18	May 2	2.81
May 2	May16	0.52
May 16	May 30	1.6
May 30	June 13	2.59
June 13	June 27	0.93
June 27	July 11	3.25
July 11	July 25	3.17
July 25	August 8	0.92
August 8	August 22	0.61
August 22	September 5	1.24
September 5	September 19	<0.33
Average		1.54

## Monitor Location #4

Sample Start Date	Sample End Date	1,3-Butadiene (ug/m <sup>3</sup> )
December 27/17	January 10	<0.34
January 10	January 24	<0.34
January 24	February 7	0.67
February 7	February 21	<0.34
February 21	March 7	<0.34
March 7	March 21	0.89
March 21	April 4	0.57
April 4	April 18	<0.34
April 18	May 2	1
May 2	May16	0.59
May 16	May 30	no sample
May 30	June 13	0.74
June 13	June 27	0.54
June 27	July 11	1.12
July 11	July 25	<0.33
July 25	August 8	<0.33
August 8	August 22	<0.33
August 22	September 5	<0.33
September 5	September 19	0.64
Average		0.46

## Monitor Location #5

Sample Start Date	Sample End Date	1,3-Butadiene (ug/m <sup>3</sup> )
December 27/17	January 10	<0.34
January 10	January 24	<0.34
January 24	February 7	<0.34
February 7	February 21	<0.34
February 21	March 7	0.48
March 7	March 21	1.89
March 21	April 4	0.45
April 4	April 18	<0.34
April 18	May 2	3.72
May 2	May16	6.36
May 16	May 30	4.71
May 30	June 13	2.48
June 13	June 27	0.86
June 27	July 11	1.68
July 11	July 25	1.12
July 25	August 8	0.38
August 8	August 22	<0.33
August 22	September 5	<0.33
September 5	September 19	2.08
Average		1.44

## Monitor Location #6

Sample Start Date	Sample End Date	1,3-Butadiene (ug/m <sup>3</sup> )
December 27/17	January 10	<0.34
January 10	January 24	<0.34
January 24	February 7	<0.34
February 7	February 21	<0.34
February 21	March 7	<0.34
March 7	March 21	<0.34
March 21	April 4	0.47
April 4	April 18	<0.34
April 18	May 2	<0.33
May 2	May16	<0.33
May 16	May 30	0.35
May 30	June 13	0.32
June 13	June 27	<0.33
June 27	July 11	<0.33
July 11	July 25	<0.33
July 25	August 8	<0.33
August 8	August 22	<0.33
August 22	September 5	<0.33
September 5	September 19	<0.33
Average		0.20

\* rail car loading hose valve failure: discovered May 5th and repaired May 7th  
 two additional valves have been installed upstream of failed valve location to prevent emissions in the event of valve failure (completed June 29th)