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**2021 Reporting Years Annual Ambient  
Monitoring Report for Petroleum Refining –  
Industry Standard**

**Shell Canada Limited  
Corunna Facility**

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Prepared by:

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**March 31, 2022**



**LEGEND**

● Ambient Air Monitor

☒ Sensitive Receptor

Last Revised March 2018: added land use designations; receptor locations; and updated drawing title names.



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LEHDER PROJECT NUMBER:  
165178

Sarnia Manufacturing Centre  
Shell Canada Products

DATE:  
January 2017

Location of Property Line  
Monitoring Stations

LEHDER DRAWING NUMBER:  
B-164255B-2



SCALE: 1:15000 (1mm=15meter)



### 2021 Property Line Benzene Monitoring Results

Sample Deployment Date		23-Dec-20	6-Jan-21	20-Jan-21	3-Feb-21	17-Feb-21	3-Mar-21	17-Mar-21	31-Mar-21	14-Apr-21	28-Apr-21	12-May-21	26-May-21	9-Jun-21
Sample Retrieval Date		6-Jan-21	20-Jan-21	3-Feb-21	17-Feb-21	3-Mar-21	17-Mar-21	31-Mar-21	14-Apr-21	28-Apr-21	12-May-21	26-May-21	9-Jun-21	23-Jun-21
UTM Coordinates	Location	ug/m3	ug/m3	ug/m3	ug/m3	ug/m3	ug/m3	ug/m3	ug/m3	ug/m3	ug/m3	ug/m3	ug/m3	ug/m3
382166mE, 4752034mN	Station #1	2.20	3.72	0.98	2.33	2.44	1.02	1.21	1.71	1.69	1.48	2.46	1.60	1.19
382511mE, 4752034mN	Station #2	1.59	No Value <sup>2</sup>	No Value <sup>2</sup>	1.68	1.96	1.07	0.99	1.45	1.23	1.25	1.54	1.09	0.91
383172mE, 4752033mN	Station #3	1.12	1.41	0.78	1.15	1.31	0.88	1.15	1.05	0.85	1.12	0.90	0.81	1.00
383332mE, 4751409mN	Station #4	1.09	1.35	0.84	1.12	1.78	0.88	0.99	1.02	0.93	1.01	0.81	0.72	0.89
382517mE, 4751245mN	Station #5	2.71	2.45	1.70	2.25	1.83	1.66	1.41	1.95	1.95	2.02	1.30	0.61	1.04
382125mE, 4750795mN	Station #6	2.03	1.96	2.33	2.15	1.56	1.90	1.42	1.85	2.31	2.09	0.77	0.81	1.12
381748mE, 4750810mN	Station #7	1.56	1.67	2.69	2.08	1.46	2.03	1.33	1.76	2.66	2.25	0.81	0.93	1.38
381455mE, 4750820mN	Station #8	1.80	5.18	6.24	4.66	1.67	5.87	4.42	4.55	5.55	6.70	2.96	12.20	10.70
381051mE, 4750852mN <sup>3</sup>	Station #9	1.20	1.76	2.32	2.85	2.09	1.13	1.18	0.88	1.87	1.18	0.58	1.32	0.98
381112mE, 4751494mN	Station #10	2.10	1.72	1.98	1.91	2.67	1.34	2.23	3.01	1.62	1.67	0.87	1.33	1.09
381438mE, 4751966mN	Station #11	3.69	2.66	3.40	2.23	5.08	2.50	3.30	6.00	3.61	2.47	1.49	1.19	1.31
381773mE, 4752076mN	Station #12	2.39	5.14	2.07	2.81	4.86	2.61	5.20	4.94	4.83	3.14	4.73	3.06	1.77

**Field QA/QC Data**

Field Blank #1	Location	Station #6	Station #1	Station #2	Station #3	Station #4	Station #5	Station #6	Station #1	Station #2	Station #3	Station #4	Station #5	Station #6
	Value (ug/m3)	<0.31	<0.31	<0.32	<0.32	<0.32	<0.31	<0.31	<0.31	<0.31	<0.31	<0.30	<0.30	<0.30
Field Duplicate	Location	Station #6	Station #7	Station #8	Station #9	Station #10	Station #11	Station #12	Station #1	Station #2	Station #3	Station #4	Station #5	Station #6
	Value (ug/m3)	1.99	1.75	6.21	2.73	2.67	2.56	5.04	1.73	1.20	1.14	0.89	0.75	1.12
	RPD (%)	1.97%	4.79%	0.48%	4.21%	0.00%	2.40%	3.08%	1.17%	2.44%	1.79%	9.88%	22.95%	0.00%
Field Blank #2	Location	Station #12	Station #7	Station #8	Station #9	Station #10	Station #11	Station #12	Station #7	Station #8	Station #9	Station #10	Station #11	Station #12
	Value (ug/m3)	<0.31	<0.31	<0.32	<0.32	<0.32	<0.31	<0.31	<0.31	<0.31	<0.31	<0.30	<0.30	<0.30

Notes:

- 1) RPD is Relative Percent Difference (Difference / Mean expressed as a percent). Used as the default precision evaluation.
- 2) Events 2 and 3, Station 2: No value reported due to oversight by field technician.
- 3) FB sample was lost during short monitor relocation while site maintenance was occurring on Day 14 of Event #16. Monitor re-sited upon conclusion of work and Event #17 was not impacted by maintenance activities.

Ontario Ministry of the Environment, Conservation and Parks (MECP)  
 Petroleum Industry Refining Standard (PRIS)  
 Shell Canada Products Sarnia Manufacturing Centre  
 Sarnia, Ontario Canada



Sample Deployment Date	23-Jun-21	7-Jul-21	21-Jul-21	4-Aug-21	18-Aug-21	1-Sep-21	15-Sep-21	29-Sep-21	13-Oct-21	27-Oct-21	10-Nov-21	24-Nov-21	8-Dec-21	
Sample Retrieval Date	7-Jul-21	21-Jul-21	4-Aug-21	18-Aug-21	1-Sep-21	15-Sep-21	29-Sep-21	13-Oct-21	27-Oct-21	10-Nov-21	24-Nov-21	8-Dec-21	22-Dec-21	
UTM Coordinates	Location	ug/m3	ug/m3	ug/m3	ug/m3	ug/m3	ug/m3	ug/m3	ug/m3	ug/m3	ug/m3	ug/m3	ug/m3	
382166mE, 4752034mN	Station #1	1.86	1.12	1.20	2.12	1.53	1.19	1.20	1.27	1.70	2.24	1.56	2.14	2.66
382511mE, 4752034mN	Station #2	1.27	0.99	0.92	1.91	2.43	1.12	1.00	1.12	1.39	1.76	1.39	1.62	1.65
383172mE, 4752033mN	Station #3	1.18	1.02	0.87	1.07	1.00	0.96	0.75	1.10	1.16	1.08	0.94	1.08	1.03
383332mE, 4751409mN	Station #4	1.03	0.93	0.84	1.04	1.01	0.97	0.74	1.14	1.29	1.07	0.91	0.99	1.09
382517mE, 4751245mN	Station #5	1.13	1.08	1.46	1.43	1.17	1.64	0.89	1.20	1.84	1.94	1.59	1.98	1.46
382125mE, 4750795mN	Station #6	1.20	1.10	1.19	1.10	1.54	1.34	1.05	1.89	1.66	1.23	1.07	1.64	1.53
381748mE, 4750810mN	Station #7	0.96	1.19	1.22	1.06	1.85	1.26	0.97	1.02	2.00	1.05	0.74	1.51	1.61
381455mE, 4750820mN	Station #8	5.13	9.85	6.55	4.87	11.70	5.38	5.99	2.99	6.46	3.41	0.62	1.59	4.79
381051mE, 4750852mN <sup>3</sup>	Station #9	0.59	2.39	0.86	1.93	2.25	1.28	1.24	1.70	2.25	1.59	0.49	0.58	2.01
381112mE, 4751494mN	Station #10	0.71	1.74	1.33	2.00	2.92	1.82	1.72	3.14	4.71	1.89	0.96	1.64	2.63
381438mE, 4751966mN	Station #11	1.43	1.75	1.32	2.23	2.31	1.57	2.38	2.64	2.44	1.74	3.30	2.75	4.92
381773mE, 4752076mN	Station #12	3.41	1.38	1.80	1.84	2.41	2.29	1.59	2.45	2.71	5.15	3.99	2.71	7.09

Field QA/QC Data

Field Blank #1	Location	Station #1	Station #2	Station #3	Station #4	Station #5	Station #6	Station #1	Station #2	Station #3	Station #4	Station #5	Station #4	Station #5
	Value (ug/m3)	<0.30	<0.30	<0.30	<0.30	<0.30	<0.30	<0.30	<0.30	<0.31	<0.31	<0.31	<0.31	<0.31
Field Duplicate	Location	Station #7	Station #8	Station #9	Station #10	Station #11	Station #12	Station #1	Station #2	Station #3	Station #4	Station #5	Station #4	Station #5
	Value (ug/m3)	0.96	9.58	0.86	2.03	2.30	2.74	1.24	1.16	1.12	1.08	1.39	1.04	1.34
	RPD (%)	0.00%	2.74%	0.00%	1.50%	0.43%	19.65%	3.33%	3.57%	3.45%	0.93%	12.58%	5.05%	8.22%
Field Blank #2	Location	Station #7	Station #8	Station #9 <sup>3</sup>	Station #10	Station #11	Station #12	Station #7	Station #8	Station #9	Station #10	Station #11	Station #10	Station #11
	Value (ug/m3)	<0.30	<0.30	N/A	<0.30	<0.30	<0.30	<0.30	<0.30	<0.31	<0.31	<0.31	<0.31	<0.31

