

Table 1
Summary of Gas Flare Shutdowns – 2017
London W12A Landfill, London, ON

	Date	Time	Re-start Date	Re-start Time	Reason for Shutdown	Action Taken	Duration (hours)
1	1/4/2017	16:02:13	1/4/2017	16:30:19	flare flame out	Restart by Comcor	0.5
2	1/5/2017	19:34:00	1/6/2017	11:37:30	gas analyzer low CH4	Restart by Comcor	16.1
3	1/20/2017	09:20:43	1/20/2017	09:48:43	scheduled maintenance	Restart by Comcor	0.5
4	1/25/2017	23:25:26	1/26/2017	13:59:57	air compressor low pressure	Suspected air leak – Restart by Comcor	14.6
5	1/30/2017	04:37:34	1/30/2017	10:50:13	flare flame out	Restart by Comcor	6.2
6	2/28/2017	11:07:00	2/28/2017	14:27:27	flare flame out	Restart by Comcor	3.3
7	3/22/2017	08:38:34	3/22/2017	13:55:37	burner control lock out	Restart by Comcor	5.3
8	4/2/2017	09:46:03	4/2/2017	12:40:13	gas analyzer low CH4	Restart by Comcor	2.9
9	4/2/2017	18:56:16	4/3/2017	13:29:00	flare flame out	Restart by Comcor	18.5
10	4/7/2017	00:30:44	4/7/2017	13:41:03	flare flame out	Restart by Comcor	13.2
11	4/18/2017	08:56:15	4/18/2017	10:08:45	burner tip inspection	Restart by Comcor	1.2
12	4/20/2017	17:39:33	4/21/2017	09:43:39	gas analyzer low CH4	Restart by Comcor	16.1
13	5/2/2017	10:23:09	5/2/2017	11:45:10	burner control lock out	Restart by Comcor	1.4
14	5/10/2017	07:07:49	5/10/2017	11:08:16	power failure	Restart by Comcor	4.0
15	5/13/2017	06:10:38	5/13/2017	12:26:40	flare flame out	Restart by Comcor	6.3
16	5/13/2017	22:34:35	5/14/2017	08:34:15	flare flame out	Restart by Comcor	10.0
17	6/26/2017	11:23:14	6/26/2017	15:38:55	high temp cut out	Replaced thermocouple – restart	4.3
18	6/29/2017	12:20:14	6/29/2017	13:12:15	flare flame out	Restart by Comcor	0.9
19	7/4/2017	11:55:47	7/4/2017	13:03:47	gas analyzer low CH4	Restart by Comcor	1.1
20	7/5/2017	06:27:54	7/5/2017	09:32:31	flare flame out	Restart by Comcor	3.1
21	7/16/2017	22:10:15	7/17/2017	10:41:04	flare flame out	Restart by Comcor	12.5
22	7/19/2017	20:33:29	7/20/2017	11:05:39	air compressor low pressure	Restart by Comcor	14.5
23	7/25/2017	21:10:44	7/26/2017	13:56:55	burner tip inspection	Restart by Comcor	16.8
24	7/27/2017	22:09:12	7/28/2017	10:15:17	burner tip work	Restart by Comcor	12.1
25	7/30/2017	18:51:45	8/3/2017	15:03:07	Shutdown – Flare down for burner tip and refractory replacement		92.2
26	8/21/2017	19:35:58	8/22/2017	11:22:13	air compressor low pressure	Restart by Comcor	15.8
27	8/27/2017	21:15:18	8/28/2017	12:23:26	power failure	Restart by Comcor	15.1
28	9/11/2017	07:24:55	9/11/2017	09:38:59	power failure	Restart by Comcor	2.2
29	9/13/2017	11:03:26	9/13/2017	14:05:13	flare flame out	Restart by Comcor	3.0
30	9/25/2017	08:59:47	9/25/2017	12:19:49	air compressor low pressure	Restart by Comcor	3.3
31	9/25/2017	13:41:49	9/25/2017	14:19:50	air compressor low pressure	Restart by Comcor	0.6
32	10/2/2017	11:31:08	10/2/2017	11:47:08	scheduled maintenance	Restart by Comcor	0.3
33	11/8/2017	11:09:58	11/8/2017	11:33:58	gas analyzer low CH4	Restart by Comcor	0.4
34	11/10/2017	07:22:10	11/10/2017	11:44:50	gas analyzer low CH4	Restart by Comcor	4.4
35	11/15/2017	21:13:29	11/16/2017	10:41:44	air compressor low pressure	Restart by Comcor	13.5
36	11/19/2017	02:40:55	11/19/2017	11:09:01	flare flame out	Restart by Comcor	8.5
37	11/29/2017	11:15:57	11/29/2017	11:27:57	failsafe valve failure	Restart by Comcor	0.2
38	12/12/2017	17:55:52	12/13/2017	13:56:36	air compressor low pressure	Restart by Comcor	20.0
39	12/13/2017	14:40:36	12/14/2017	10:48:41	burner control lock out	Restart by Comcor	20.1
40	12/15/2017	00:39:59	12/15/2017	10:29:11	gas analyzer high O2	Restart by Comcor	9.8
41	12/16/2017	10:18:52	12/17/2017	12:35:51	gas analyzer low CH4	Restart by Comcor	26.3

Reason for Shutdown	Occurrences	% of Shutdowns
Flare Low/High Temp	1	2
Flare Flameout	12	29
Air Compressor Fault	7	17
Power Fault	3	7
Burner Control Fault	3	7
Maintenance/Upgrade	6	15
Other	0	0
Failsafe Valve Failure	1	2
No Alarm	0	0
Low Methane/High O2	8	20
	41	100

