Data Based Observations

Overall Data Trend

Table 5.5 provides a comparison of site-wide emission rates (in tons/yr) for selected chemicals from the August 2023, March 2024, November 2024 and March 2025 flux chamber testing events. These data demonstrate that although there was a significant increase in emissions from the first to the second test, resulting from major upset conditions that occurred during the second test, the results of the third event, and even more for the Fourth Event, show a substantial decrease in emissions compared to the earlier events, for most of the species analyzed. This trend is likely a result of improvements in gas recovery and cover systems at the Landfill. Note that for most of the speciated compounds, the laboratory results were near or below the method detection limit. Therefore, there will likely be limited further reductions in quantifiable emissions for those compounds in future events due to the limitations of the performance of the chemical analysis for the gas samples.

Table 5.5 Comparison of Site-wide Surface Emissions (tons/yr) for the Four Test Events.

	Event			
Compound	**1 (8/23)**	**2 (3/24)**	**3 (11/24)**	**4 (3/25)**
Carbon dioxide	41,312	327,049	216,177	92,326
Methane	3,357	11,456	6,880	3,007
Total VOC	207	853	61	20
Ethanol	18.3	NQ	0.42	0.2
Acetone	17.6	51	1.30	1.3
Dimethyl sulfide	15.2	57.9	0.93	1.0
Tetrahydrofuran	13.6	107	0.06	0.2
Benzene	9.33	104	0.27	0.90
Methanol	9.09	NQ	0.51	0.77
Methyl ethyl ketone (MEK)	9.06	51.2	0.24	0.25
Propylene	6.62	29.8	0.69	0.26
Isopropyl alcohol (IPA)	3.72	15.2	0.18	0.51
Isopropyl toluene	3.25	13.7	0.25	0.41
Toluene	2.00	18.6	0.22	0.27
Total Xylenes	1.52	9.79	0.30	0.44
Ethylbenzene	1.14	10.1	0.16	0.19
Hydrogen sulfide	0.13	3.81	0.72	0.23
Note: NQ = Not Quantified				