

### Alliance Consulting Engineers, Inc.

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### **Site Observation Report**

PROJECT NAME: LANDFILL MONITORING AND REPORT	RTING FOR THE	<b>PROJECT NO:</b> 17102-0036
DATE: 12/31/2024	ARRIVAL TIME: 12:	30
STAFF PERSONNEL: T. RYAN MERRITT, E.I.T.	DEPARTURE TIME:	2:30 ☐ <b>AM</b> ☐ <b>PM</b>
WEATHER: 50 ° F  ☐ HOT ☐ WARM ☐ COOL ☐ COLD ☐ SNOW ☐ SUNNY ☐ CLOUDY ☐ Lt. RAIN ☐ Hvy. RAIN ☐ BREEZY ☐ CALM		ONTRACTORS ON SITE: Alliance Consulting Engineers, Inc.

#### **ITEMS OBSERVED:**

Arrived on-site Tuesday, December 31, 2024, to conduct the Second (2<sup>nd</sup>) Quarter Fiscal Year 2024-2025 Methane Monitoring at each of the eleven (11) Gas Monitoring Probes (GMPs), evaluate each of the twenty-four (24) Extraction Wells, perform the Operation, Maintenance, and Monitoring for the Soil Gas Extraction System, and observe solid waste management facilities located at the Newberry County Landfill on Cockrell Road.

Due to past persistent elevated methane concentrations in several GMPs, a phased corrective measures approach was implemented by Newberry County starting in 2006. The installation of Passive Gas Vents and a Passive Vent Trench failed to fully reduce methane concentrations below the Lower Explosive Limit (LEL); therefore, an active Soil Gas Extraction System was installed in May 2015. The Passive Vent Trench and the Soil Gas Extraction System remain in service as of this time.

Methane monitoring was conducted on December 31, 2024, using the Gas Measurement Instruments GT 40 Series Gas Detector. The LEL for methane is 5%, and all GMPs registered 0% methane by volume. The attached Methane Summary Chart, Methane Monitoring Field Data Sheets, photographs, and photo key document the gas monitoring activities and results.

The operation of the gas collection system was checked also during the monitoring event. Condensate Sumps CS-A, CS-B, and CS-C were checked during the monitoring event (Photos 7-15). The blower motor is currently operational for the Soil Gas Extraction System and is removing all methane before it reaches the property boundary as designed.

Hurricane Helene made landfall on September 26, 2024, and cause major destruction up the Savannah River corridor. Newberry Landfill is currently being used as a debris management location with debris grinding taking place for the foreseeable future.

Hurricane Helene also caused several trees to fall around the landfill perimeter. The damage sustained to Extraction Well 12 was repaired during this monitoring event (Photos 22 and 23), however GMP 4 is still currently under an oak tree. Until such time as this oak tree can be safely removed, the state of GMP 4 cannot be determined.

ITEMS DISCUSSED WITH CONTRACTOR:
- When staff can be spared, GMP 4 needs to be uncovered.
ACTION ITEMS STATED BY CONTRACTOR:
- N/A
14/71
RESOLUTION TO UNRESOLVED ITEMS:
<ul> <li>Vacuum tubes for the control panel gauges were repaired.</li> </ul>
- Extraction Well 12 was repaired.
ITEMS REQUIRING FOLLOW-UP:
TIEMS REQUIRING FOLLOW-OF.
- Third (3 <sup>rd</sup> ) Quarter Fiscal Year 2024-2025 sampling should be conducted prior to March 31, 2024.
PHOTOS TAKEN: ☐ YES ☐ NO

						ANE GAS DE						
				NEWE		Methane By V TY CLASS TH	olume) HREE MSW L	ANDFILL				
GMP No.	Mar-07	Aug-07	Sep-07	Dec-07	Mar-09	Dec-09	Jun-10	Feb-10	Feb-12	Jun-12	Jul-12	Aug-12
GMP-1S	0	-	-	-	-	-	0.1	0	-	-	0	0
GMP-1D	0	-	-	-	-	-	0	0	-	-	0	0
GMP-3S	0	2.4	19.3	4.8	0.1	-	8.9	0.1	-	9.6	-	1.5
GMP-3D	0	3.2	23.3	5.5	0.1	-	9.3	0.1	-	8.8	-	1.8
GMP-4	0.5	60.4	36.1	25.8	60.5	-	36.7	38.3	60.2	-	-	55.2
GMP-5S GMP-5D	2.8	4.2	0.7	0.5	4 18.8	-	0.1 <b>11.5</b>	0.1	0.1	<b>32.9</b> 0.6	-	<b>47.7</b> 1.2
GMP-5D GMP-6S	0.5	43.3	44.3	21.2	0	0.1	52.5	16.8	49.2	-	-	0
GMP-6D	0.5	43.3	44.3	21.2	0	0.1	30.7	0.1	22.6	-	-	0
GMP-7S	0	0	0	0	0.1	-	21.4	0.1	-	-	0.1	0
GMP-7D	-	-	-	-	0	-	10.2	1.5	-	-	0.1	0
CLUB											-	
HOUSE	0	0	0	0	0	0	0	0	0	-	-	0
SHED	0	0	0	0	0	-	0.1	0	-	-	0.1	0
GMP No.	Feb-13	Aug-13	Feb-14	May-14	Nov-14	Feb-15	Jul-15	Aug-15	Sep-15	Oct-15	Nov-15	Dec-15
GMP-1S	0	0.3	-	-	0	0.1	0	-	-	-	-	-
GMP-1D	0	0.2	-	-	0	0.1	0	-	-	-	-	-
GMP-3S	0	52.6	-	30.7	15	8	0.03	0	0	0	0	0
GMP-3D	0	52.8	-	28.5	6.5	6.5	0	0	0	0	0	0
GMP-4	61.3	60.1	-	59	39	37	0.01	0	0	-	0	0
GMP-5S	43.3	58.1	-	57.2	34	27	0	0	0	0	0	0
GMP-5D	2.8	32.4	-	19.1	5.6	2.5	0	0	0	0	0	0
GMP-6S	34.3	57	-	47.1	34	27	14	38.4	48.4	38	34.4	0
GMP-6D GMP-7S	0	49.3		41.8	22	18	17	46.3	54.2	45	15.4	0 -
GMP-75	0	0.2	-	0.1 <b>16.3</b>	0.03	0.08	0	-	-	-	-	-
CLUB			-		-			-	-	-	-	-
HOUSE	0	0.4	-	0.1	0.01	0	0	-	-	-	-	-
01155												
SHED	0	0.2	-	0.1	0.01	0	0	-	-	-	-	-
GMP No.	0 Jan-16	0.2 Feb-16	- Mar-16			0 Jun-16	0 Jul-16	Aug-16	Sep-16	Apr-17	Jul-17	Oct-17
GMP No.		Feb-16	- Mar-16	0.1 Apr-16	0.01 May-16			Aug-16	Sep-16	Apr-17	Jul-17	Oct-17
	Jan-16	<b>Feb-16</b>	- Mar-16 -		May-16			Aug-16	Sep-16	Apr-17 0 0		
GMP No.	Jan-16	Feb-16	-	Apr-16	May-16	Jun-16 -	Jul-16	0	-	0	<b>Jul-17</b>	<b>Oct-17</b>
GMP No. GMP-1S GMP-1D	Jan-16 - -	<b>Feb-16</b> 0 0	-	Apr-16 - -	May-16 - -	Jun-16 - -	Jul-16 - -	0	-	0	<b>Jul-17</b> 0 0	<b>Oct-17</b> 0 0
GMP No. GMP-1S GMP-1D GMP-3S	Jan-16 0 0 0	Feb-16 0 0 0 0 0 0	- - 0 0	Apr-16	May-16	Jun-16 0 0 0	Jul-16	0 0 0 0	- - 0 0	0 0 0	Jul-17 0 0 0 0	Oct-17 0 0
GMP No. GMP-1S GMP-1D GMP-3S GMP-3D GMP-4 GMP-5S	Jan-16 0 0 0 0 0	Feb-16 0 0 0 0 0 0 0 0 0	- - 0 0 0	Apr-16 0 0 0 0 0	May-16	Jun-16	Jul-16	0 0 0 0 0	- - 0 0 0	0 0 0 0 0 <b>24</b>	Jul-17 0 0 0 0 0 0 0 0 0	Oct-17 0 0 0 0 16 0
GMP No. GMP-1S GMP-1D GMP-3S GMP-3D GMP-4 GMP-5S GMP-5D	Jan-16 0 0 0 0 0 0	Feb-16 0 0 0 0 0 0 0 0 0 0 0 0	- - 0 0 0	Apr-16 0 0 0 0 0 0 0	May-16	Jun-16 0 0 0 0 0 0	Jul-16 0 0 0 0 0 0	0 0 0 0 0 0	- - 0 0 0 0	0 0 0 0 0 <b>24</b> 0	Jul-17 0 0 0 0 0 0 0 0 0 0 0 0	Oct-17 0 0 0 0 0 16 0 0
GMP No. GMP-1S GMP-1D GMP-3S GMP-3D GMP-4 GMP-5S GMP-5D GMP-6S	Jan-16 0 0 0 0 0 45.2	Feb-16 0 0 0 0 0 0 0 0 0 42.1	- 0 0 0 0 0 0 45.5	Apr-16 0 0 0 0 0 42.7	May-16	Jun-16 0 0 0 0 0 53.3	Jul-16 0 0 0 0 0 50	0 0 0 0 0 0 0 0 45.7	- - 0 0 0 0 0	0 0 0 0 24 0 0	Jul-17 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0	Oct-17 0 0 0 0 16 0 20
GMP No. GMP-1S GMP-1D GMP-3S GMP-3D GMP-4 GMP-5S GMP-5D GMP-6S GMP-6S	Jan-16 0 0 0 0 0 0 45.2 22.3	Feb-16 0 0 0 0 0 0 0 0 0 42.1	0 0 0 0 0 0 0 45.5	Apr-16	May-16	Jun-16 0 0 0 0 0 0 53.3 36.7	Jul-16	0 0 0 0 0 0 0 0 45.7	- 0 0 0 0 0 0 0 0 0 55	0 0 0 0 24 0 0 0	Jul-17 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0	Oct-17 0 0 0 0 16 0 20 8
GMP No. GMP-1S GMP-1D GMP-3S GMP-3D GMP-4 GMP-5S GMP-5D GMP-6S GMP-6S GMP-6D GMP-7S	Jan-16 0 0 0 0 0 45.2 22.3	Feb-16 0 0 0 0 0 0 0 0 42.1 14.7	- 0 0 0 0 0 0 45.5	Apr-16  0 0 0 0 0 42.7 18.5	May-16 0 0 0 0 0 51.1 31.7	Jun-16  0 0 0 0 0 0 53.3 36.7	Jul-16 0 0 0 0 50 51.3	0 0 0 0 0 0 0 0 45.7 49	- 0 0 0 0 0 0 0 0 0 55 52	0 0 0 0 24 0 0 0	Jul-17 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0	Oct-17 0 0 0 0 16 0 20 8
GMP No. GMP-1S GMP-1D GMP-3S GMP-3D GMP-4 GMP-5S GMP-5D GMP-6S GMP-6G GMP-7S GMP-7S	Jan-16 0 0 0 0 0 0 45.2 22.3	Feb-16 0 0 0 0 0 0 0 0 42.1 14.7	0 0 0 0 0 0 0 45.5	Apr-16	May-16	Jun-16 0 0 0 0 0 0 53.3 36.7	Jul-16	0 0 0 0 0 0 0 0 45.7 49 0	0 0 0 0 0 0 0 0 0 55	0 0 0 0 24 0 0 0	Jul-17 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0	Oct-17 0 0 0 0 16 0 20 8
GMP No. GMP-1S GMP-1D GMP-3S GMP-3D GMP-4 GMP-5S GMP-5D GMP-6S GMP-6S GMP-6D GMP-7S	Jan-16 0 0 0 0 0 45.2 22.3	Feb-16 0 0 0 0 0 0 0 0 42.1 14.7	- 0 0 0 0 0 0 45.5	Apr-16  0 0 0 0 0 42.7 18.5	May-16 0 0 0 0 0 51.1 31.7	Jun-16  0 0 0 0 0 0 53.3 36.7	Jul-16 0 0 0 0 50 51.3	0 0 0 0 0 0 0 0 45.7 49	- 0 0 0 0 0 0 0 0 0 55 52	0 0 0 0 24 0 0 0	Jul-17 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0	Oct-17 0 0 0 0 16 0 20 8
GMP No. GMP-1S GMP-1D GMP-3S GMP-3D GMP-4 GMP-5S GMP-5S GMP-6S GMP-6S GMP-6S GMP-7S GMP-7D CLUB	Jan-16 0 0 0 0 0 45.2 22.3	Feb-16 0 0 0 0 0 0 0 0 42.1 14.7	- 0 0 0 0 0 0 0 0 0 45.5 17.7	Apr-16  0 0 0 0 0 42.7 18.5	May-16 0 0 0 0 0 51.1 31.7 -	Jun-16 0 0 0 0 0 0 53.3 36.7 -	Jul-16 0 0 0 0 50 51.3	0 0 0 0 0 0 0 0 45.7 49 0	- 0 0 0 0 0 0 0 55 52	0 0 0 0 24 0 0 0 0	Jul-17 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0	Oct-17 0 0 0 0 16 0 20 8
GMP No. GMP-1S GMP-1D GMP-3S GMP-3D GMP-4S GMP-5S GMP-5D GMP-6S GMP-6S GMP-7D CLUB HOUSE SHED	Jan-16 0 0 0 0 0 45.2 22.3 0	Feb-16 0 0 0 0 0 0 0 0 0 42.1 14.7 - 0 0	- 0 0 0 0 0 0 0 45.5 17.7	Apr-16	May-16 0 0 0 0 0 51.1 31.7	Jun-16 0 0 0 0 0 53.3 36.7	Jul-16 0 0 0 0 0 50 51.3	0 0 0 0 0 0 0 45.7 49 0 0.65	- 0 0 0 0 0 0 0 55 55 	0 0 0 24 0 0 0 0 0 0	Jul-17 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0	Oct-17 0 0 0 0 16 0 0 20 8 0 0
GMP No. GMP-1S GMP-1D GMP-3S GMP-3D GMP-4 GMP-5S GMP-5D GMP-6S GMP-6D GMP-7S GMP-7S GMP-7D CLUB HOUSE SHED	Jan-16 0 0 0 0 0 0 45.2 22.3 0 Feb-18	Feb-16 0 0 0 0 0 0 0 0 0 42.1 14.7 - 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0	- 0 0 0 0 0 0 0 45.5 17.7	Apr-16	May-16 0 0 0 0 0 51.1 31.7	Jun-16 0 0 0 0 0 53.3 36.7	Jul-16 0 0 0 0 0 50 51.3 Nov-19	0 0 0 0 0 0 0 45.7 49 0 0.65	- 0 0 0 0 0 0 0 55 52	0 0 0 24 0 0 0 0 0 0 0	Jul-17 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 Jul-20	Oct-17 0 0 0 0 16 0 20 8 0 -
GMP No. GMP-1S GMP-1D GMP-3S GMP-3D GMP-4 GMP-5S GMP-5D GMP-6S GMP-6D GMP-7D CLUB HOUSE SHED GMP No. GMP-1S	Jan-16 0 0 0 0 0 0 45.2 22.3 0 Feb-18	Feb-16 0 0 0 0 0 0 0 0 0 42.1 14.7 - 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0	- 0 0 0 0 0 0 0 0 45.5 17.7	Apr-16  0 0 0 0 0 42.7 18.5 Sep-18	May-16 0 0 0 0 0 51.1 31.7	Jun-16 0 0 0 0 0 53.3 36.7	Jul-16 0 0 0 0 0 50 51.3 Nov-19	0 0 0 0 0 0 0 0 45.7 49 0 0.65 0	- 0 0 0 0 0 0 0 0 0 55 52	0 0 0 0 24 0 0 0 0 0 0 0	Jul-17 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 Jul-20	Oct-17 0 0 0 0 16 0 20 8 0 Cot-20 0
GMP No. GMP-1S GMP-3S GMP-3D GMP-4 GMP-5S GMP-5D GMP-6S GMP-6D GMP-7S GMP-7D CLUB HOUSE SHED GMP-1S GMP-1S GMP-1S	Jan-16 0 0 0 0 0 45.2 22.3 0 Feb-18 0	Feb-16 0 0 0 0 0 0 0 0 0 42.1 14.7 - 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0	- 0 0 0 0 0 0 0 0 45.5 17.7	Apr-16  0 0 0 0 0 42.7 18.5 Sep-18 0 0	May-16 0 0 0 0 0 51.1 31.7	Jun-16  0 0 0 0 0 53.3 36.7	Jul-16	0 0 0 0 0 0 0 0 45.7 49 0 0.65 0	0 0 0 0 0 0 0 55 52 Jan-20 0 0	0 0 0 0 24 0 0 0 0 0 0 0 0	Jul-17 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 Jul-20 0 0	Oct-17 0 0 0 0 16 0 20 8 0 Oct-20 0 0
GMP No. GMP-1S GMP-1D GMP-3S GMP-3D GMP-4 GMP-5S GMP-5D GMP-6S GMP-6D GMP-7D CLUB HOUSE SHED GMP No. GMP-1S	Jan-16 0 0 0 0 0 0 45.2 22.3 0 Feb-18	Feb-16 0 0 0 0 0 0 0 0 0 42.1 14.7 - 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0	- 0 0 0 0 0 0 0 0 45.5 17.7	Apr-16	May-16 0 0 0 0 0 51.1 31.7	Jun-16 0 0 0 0 0 0 53.3 36.7	Jul-16 0 0 0 0 0 50 51.3 Nov-19	0 0 0 0 0 0 0 0 45.7 49 0 0.65 0	- 0 0 0 0 0 0 0 0 0 55 52	0 0 0 0 24 0 0 0 0 0 0 0	Jul-17 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 Jul-20	Oct-17 0 0 0 0 0 16 0 0 20 8 0 0 Oct-20 0 0 24
GMP No. GMP-1S GMP-1D GMP-3S GMP-3D GMP-4S GMP-5S GMP-5D GMP-6S GMP-6S GMP-7C CLUB HOUSE SHED GMP No. GMP-1D GMP-1D GMP-1D GMP-1D	Jan-16 0 0 0 0 0 45.2 22.3 0 Feb-18 0 0	Feb-16  0 0 0 0 0 0 0 0 42.1 14.7 - 0 0 0 Apr-18 0 0 0	- 0 0 0 0 0 0 0 45.5 17.7	Apr-16  0 0 0 0 0 42.7 18.5 Sep-18 0 0	May-16 0 0 0 0 0 51.1 31.7	Jun-16 0 0 0 0 0 53.3 36.7	Jul-16 0 0 0 0 0 50 51.3 0 Nov-19 0 0	0 0 0 0 0 0 0 0 45.7 49 0 0.65 0	0 0 0 0 0 0 0 555 52	0 0 0 24 0 0 0 0 0 0 0 0 0	Jul-17 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 Jul-20 0 0 22	Oct-17 0 0 0 0 16 0 20 8 0 Oct-20 0 0
GMP No. GMP-1S GMP-1D GMP-3S GMP-3D GMP-5S GMP-5D GMP-6S GMP-6C GMP-7S GMP-7C CLUB HOUSE SHED GMP No. GMP-1S GMP-1S GMP-1S GMP-3S GMP-3S	Jan-16 0 0 0 0 0 45.2 22.3 0 Feb-18 0 0 0	Feb-16 0 0 0 0 0 0 0 0 0 42.1 14.7 - 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0	- 0 0 0 0 0 0 45.5 17.7 	Apr-16	May-16 0 0 0 0 0 51.1 31.7	Jun-16	Jul-16 0 0 0 0 50 51.3 Nov-19 0 0 0	0 0 0 0 0 0 0 45.7 49 0 0.65 0	- 0 0 0 0 0 0 0 55 52	0 0 0 24 0 0 0 0 0 0 0 - - - - - 0 0 0 0 0 0 0	Jul-17 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 Jul-20 0 0 0 9	Oct-17 0 0 0 0 16 0 20 8 0 Oct-20 0 0 24 31
GMP No. GMP-1S GMP-1D GMP-3S GMP-3D GMP-4S GMP-5D GMP-6S GMP-6D GMP-7D CLUB HOUSE SHED GMP-1S GMP-1S GMP-1S GMP-1S GMP-1S GMP-1S GMP-1S GMP-3D GMP-3D GMP-3D	Jan-16	Feb-16 0 0 0 0 0 0 0 0 0 42.1 14.7 - 0 0 0  Apr-18 0 0 0 0 22	- 0 0 0 0 0 0 0 45.5 17.7	Apr-16	May-16	Jun-16	Jul-16	0 0 0 0 0 0 0 0 45.7 49 0 0.65 0	- 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0	0 0 0 0 24 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0	Jul-17 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 Jul-20 0 0 22 9	Oct-17 0 0 0 0 16 0 20 8 0 0 Oct-20 0 0 24 31
GMP No. GMP-1S GMP-1D GMP-3S GMP-3D GMP-4 GMP-5D GMP-6S GMP-6C GMP-6C GMP-7D CLUB HOUSE SHED  GMP-1S GMP-1S GMP-1S GMP-1S GMP-1S GMP-1A GMP-3S GMP-4 GMP-5S	Jan-16 0 0 0 0 0 45.2 22.3 0 Feb-18 0 0 0 0 0	Feb-16 0 0 0 0 0 0 0 0 42.1 14.7 - 0 0 0 0 0 2 22 0	- 0 0 0 0 0 0 0 45.5 17.7 	Apr-16	May-16	Jun-16  0 0 0 0 0 0 53.3 36.7 42 0	Jul-16	0 0 0 0 0 0 0 45.7 49 0 0.65 0	0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0	0 0 0 0 24 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0	Jul-17 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 Jul-20 0 0 22 9 25 0	Oct-17 0 0 0 0 16 0 20 8 0 Oct-20 0 0 24 31 52 30
GMP No. GMP-1S GMP-1D GMP-3S GMP-3D GMP-4 GMP-5D GMP-5D GMP-6S GMP-6D GMP-7D CLUB HOUSE SHED GMP-1S GMP-1D GMP-1S GMP-1D GMP-3S GMP-3S GMP-3D GMP-4 GMP-5S GMP-5S GMP-6S GMP-6S	Jan-16 0 0 0 0 0 0 45.2 22.3 0 Feb-18 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0	Feb-16 0 0 0 0 0 0 0 0 0 42.1 14.7 - 0 0 0  Apr-18 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0	- 0 0 0 0 0 0 0 0 45.5 17.7	Apr-16	May-16	Jun-16	Jul-16	0 0 0 0 0 0 0 0 45.7 49 0 0.65 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0		0 0 0 0 24 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0	Jul-17 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0	Oct-17 0 0 0 0 16 0 0 20 8 0 0 Oct-20 0 0 24 31 52 30 6 34 37
GMP No. GMP-1S GMP-3S GMP-3D GMP-4S GMP-5D GMP-5D GMP-6S GMP-6D GMP-7S GMP-7D CLUB HOUSE SHED  GMP-1S GMP-1S GMP-1S GMP-3S GMP-1D GMP-3S GMP-3D GMP-4 GMP-5S GMP-5S GMP-5D GMP-6D GMP-7S	Jan-16	Feb-16 0 0 0 0 0 0 0 0 0 42.1 14.7 - 0 0 0  Apr-18 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0		Apr-16	May-16	Jun-16  0 0 0 0 0 0 53.3 36.7 42 0 0 0 0 3 0	Jul-16  0 0 0 0 0 50 51.3  Nov-19 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0	0 0 0 0 0 0 0 0 45.7 49 0 0.65 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0		0 0 0 0 0 24 0 0 0 0 0 0 0 0 0 0 0 0 0 0	Jul-17 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0	Oct-17 0 0 0 0 16 0 20 8 0 0 Oct-20 0 0 24 24 31 52 30 6 34 37 0
GMP No. GMP-1D GMP-3S GMP-3D GMP-4S GMP-5D GMP-6S GMP-6S GMP-7D CLUB HOUSE SHED GMP-1S	Jan-16 0 0 0 0 0 0 45.2 22.3 0 Feb-18 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0	Feb-16 0 0 0 0 0 0 0 0 0 42.1 14.7 - 0 0 0  Apr-18 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0	- 0 0 0 0 0 0 0 0 45.5 17.7	Apr-16	May-16	Jun-16	Jul-16	0 0 0 0 0 0 0 0 45.7 49 0 0.65 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0		0 0 0 0 24 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0	Jul-17 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0	Oct-17 0 0 0 0 16 0 20 8 0 0 Oct-20 0 0 24 31 52 30 6 34 37
GMP No. GMP-1S GMP-3S GMP-3D GMP-4S GMP-5D GMP-5D GMP-6S GMP-6D GMP-7S GMP-7D CLUB HOUSE SHED  GMP-1S GMP-1S GMP-1S GMP-3S GMP-1D GMP-3S GMP-3D GMP-4 GMP-5S GMP-5S GMP-5D GMP-6D GMP-7S	Jan-16	Feb-16 0 0 0 0 0 0 0 0 0 42.1 14.7 - 0 0 0  Apr-18 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0		Apr-16	May-16	Jun-16  0 0 0 0 0 0 53.3 36.7 42 0 0 0 0 3 0	Jul-16  0 0 0 0 0 50 51.3  Nov-19 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0	0 0 0 0 0 0 0 0 45.7 49 0 0.65 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0		0 0 0 0 0 24 0 0 0 0 0 0 0 0 0 0 0 0 0 0	Jul-17 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0	Oct-17 0 0 0 0 16 0 20 8 0 0 Oct-20 0 0 24 31 52 30 6 34 37 0

S = shallow well
D = deep well
Shaded concentrations exceed LEL
LEL = lower explosive limit (5.00% Methane by volume)





METHANE GAS DETECTION (% Methane By Volume) NEWBERRY COUNTY CLASS THREE MSW LANDFILL												
GMP No.	Apr-21	Jul-21	Sep-21	Dec-21	Mar-22	Dec-22	Mar-23	Jun-23	Sep-23	Dec-23	Mar-24	Jun-24
GMP-1S	0	0	0	0	0	0	0	0	0	0	0	0
GMP-1D	0	0	0	0	0	0	0	0	0	0	0	0
GMP-3S	0	0	0	0	0	7	20	4	3	0	0	0
GMP-3D	0	0	0	0	0	0	15	0	0	0	4	0
GMP-4	31	0	0	0	0	25	52	0	17	0	47	0
GMP-5S	28	2	0	0	0	0	3	0	0	0	22	0
GMP-5D	1	3	0	0	0	0	4	0	0	0	4	0
GMP-6S	35	0	0	0	0	16	29	0	0	0	10	0
GMP-6D	5	0	0	0	0	0	0	0	0	0	0	0
GMP-7S	0	0	0	0	0	0	0	0	0	0	0	0
GMP-7D	0	0	0	0	0	0	0	0	0	0	0	0
CLUB HOUSE	-	-	-	-	-	-	-	-	-	-	-	-
SHED	-	-	-	-	-	-	-	-	-	-	-	-
GMP No.	Nov-24	Dec-24										
GMP-1S	0	0										
GMP-1D	0	0										
GMP-3S	0	0										
GMP-3D	0	0										
GMP-4	N/A	N/A										
GMP-5S	0	0										
GMP-5D	0	0										
GMP-6S	0	0										
GMP-6D	0	0										
GMP-7S	0	0										
GMP-7D	0	0										
CLUB HOUSE	-	-										
SHED	-	-										

S = shallow well
D = deep well
Shaded concentrations exceed LEL
LEL = lower explosive limit (5.00% Methane by volume)
N/A = not available for testing











Photograph 1 – Gas Monitoring Probe GMP-1



**Photograph 2 – Gas Monitoring Probe GMP-3** 





Photograph 3 – Approximate location of GMP-4



**Photograph 4 – Gas Monitoring Probe GMP-5** 





**Photograph 5 – Gas Monitoring Probe GMP-6** 



**Photograph 6 – Gas Monitoring Probe GMP-7** 





Photograph 7 – Condensate Pump A



Photograph 8 – Condensate Pump A Gauge





Photograph 9 – Condensate Pump A Counter



Photograph 10 – Condensate Pump B





Photograph 11 – Condensate Pump B Gauge



**Photograph 12 – Condensate Pump B Counter** 





Photograph 13 – Condensate Pump C



Photograph 14 – Condensate Pump C Gauge





Photograph 15 – Condensate Pump C Counter



Photograph 16 – Air Compressor





Photograph 17 – Control Panel and Overgrowth



Photograph 18 – Flow Rate through Blower Motor before Well Adjustment





Photograph 19 – Flow Rate through Blower Motor after Well Adjustment



Photograph 20 – Inside Blower Motor Enclosure





Photograph 21 – Soil Vapor Extraction System



**Photograph 22 – Damaged Extraction Well 12** 





Photograph 23 – Repaired Extraction Well 12



**Photograph 24 – Vacuum Zones before Tube Replacement** 





Photograph 25 – Vacuum Zones after Tube Replacement

#### **Newberry County Landfill Gas Extraction System O&M Forms**

Date 12/31/24 Technician Ryan Merritt

Equipment	Condition/Comments
Blower Enclosure	OK
Blower	OK
Knockout Tank (KOP)	OK Liquid Level 0
Transfer Pump	OK
Gages	OK
KOP Inlet Vacuum	OK
KOP Outlet Vacuum	OK
Carbon Vessel (Odors)	None
Storage Tank	OK Liquid Level 0
Air Compressor	OK Pressure 138 psi
Air Compressor Shed	OK
Process Control Panel	OK
Actuated Valves	OK

<b>Condensate Sumps</b>	Time	Pressure	Counter
CS-A	1:16	56 psi	101,202
CS-B	1:57	78 psi	23,342
CS-C	2:05	72 psi	6,771

### **Initial Readings (Before Measuring/Adjusting Well Field)**

Time: 1:30 PM Weather: Sunny and Breezy Temp.: 50 °F Bar. Pres.: 30.31 mm Hg

<b>Control Panel Gauges</b>	Vacuum	Methane	Oxygen
Zone A	N/A	N/A	-
Zone B	N/A	N/A	-
Zone C	N/A	N/A	-

Other Gauges		
KOP Inlet Vacuum	-32	Inch H <sub>2</sub> O
KOP Outlet Vacuum	-48	Inch H <sub>2</sub> O
Inlet-Outlet	16	Inch H <sub>2</sub> O
Flow Rate	22	x10 SCFM

#### **Check the following:**

$\checkmark$	All 3 Zones are C	)pen

Each well has a vacuum of 1 to 10 or the flow rate is ~10 scfm (Wells with <2% methane can be turned off)

X Pressure drops across KOP is < 6 inch  $H_2O$ 

\_\_\_ ✓ Air compressor oil is above the "add" level

\_\_\_ ✓ \_\_ Air compressor filter is clean



#### Final Readings (After Measuring/Adjusting Well Field)

Time: 2:20 PM Weather: Sunny and Breezy Temp.: 52 °F Bar. Pres.: 30.28 mm Hg

<b>Control Panel Gauges</b>	Vacuum	Methane	Oxygen
Zone A	N/A	N/A	-
Zone B	N/A	N/A	-
Zone C	N/A	N/A	-

Other Gauges		
KOP Inlet Vacuum	-58	Inch H <sub>2</sub> O
KOP Outlet Vacuum	-72	Inch H <sub>2</sub> O
Inlet-Outlet	14	Inch H <sub>2</sub> O
Flow Rate	19	x10 SCFM

#### **Maintenance Performed/Comments:**

- During quarterly maintenance vacuum tubes for the control panel gauges were replaced and appeared in proper working order upon departure.
- During Hurricane Helene trees fell around the boundary of the landfill. One (1) of these trees damaged Extraction Well #12. Extraction Well #12 has been repaired and appeared in proper working order upon departure.
- During next quarterly inspection the Knock Out pot will be inspected for a dirty filter to attempt to alleviate on of the vacuum being pulled across the tank.



Facility: Newberry County Landfill
Sampling Date: December 31, 2024
Sampling Time: 12:30
Sampler's Name: T. Ryan Merritt
Monitoring Equipment: Gas Measurement Instruments GT 40
Equipment Calibration (By): Safety Plus, Inc.
Next Equipment Calibration (Date): October 4, 2025
Monitoring Point Location:  GMP
Climate and Physical Conditions:  • Ambient Temperature: 46 °F
General Weather Condition
General Soil Moisture Condition     □ DRY    □ MOIST    □ WET
• Condition of Surrounding Area (stressed vegetation, etc.)
Water Present in Probe ☐ YES ☒ NO
<ul> <li>General Conditions of GMP</li> <li>☐ LOCKED ☐ SEALED ☐ CLEARLY LABELED</li> <li>☐ OTHER (SEVERELY RUSTED, WEAK FOUNDATION, ETC.)</li> </ul>
Measurements:
Methane:      Methane By Volume
Notes:
Sampler's Signature: CallA



Facility: Newberry County Landfill
Sampling Date: December 31, 2024
Sampling Time:
Sampler's Name: T. Ryan Merritt
Monitoring Equipment: Gas Measurement Instruments GT 40
Equipment Calibration (By): Safety Plus, Inc.
Next Equipment Calibration (Date): October 4, 2025
Monitoring Point Location:  GMP On-Site Structure  Site Boundary  □ Off-Site Structure
Climate and Physical Conditions:  • Ambient Temperature: 46 °F
General Weather Condition
● General Soil Moisture Condition  DRY  MOIST  WET
Condition of Surrounding Area (stressed vegetation, etc.)
Water Present in Probe ☐ YES ☒ NO
<ul> <li>General Conditions of GMP</li> <li>         □LOCKED □ SEALED □ CLEARLY LABELED         □ OTHER (SEVERELY RUSTED, WEAK FOUNDATION, ETC.)</li> </ul>
Measurements:
Methane:      METHANE BY VOLUME
Notes:
Sampler's Signature:



Facility: Newberry County Landfill
Sampling Date: December 31, 2024
Sampling Time: $2:10$ $\square$ A.M. $\boxtimes$ P.M.
Sampler's Name: T. Ryan Merritt
Monitoring Equipment: Gas Measurement Instruments GT 40
Equipment Calibration (By): Safety Plus, Inc.
Next Equipment Calibration (Date): October 4, 2025
Monitoring Point Location:  GMP3_5  □ On-Site Structure  ⊠ Site Boundary □ Off-Site Structure
Climate and Physical Conditions:  • Ambient Temperature: 52 °F
General Weather Condition
General Soil Moisture Condition
Condition of Surrounding Area (stressed vegetation, etc.)
Water Present in Probe ☐ YES ☒ NO
<ul> <li>General Conditions of GMP</li> <li>LOCKED ☐ SEALED ☐ CLEARLY LABELED</li> <li>☐ OTHER (SEVERELY RUSTED, WEAK FOUNDATION, ETC.)</li> </ul>
Measurements:
Methane:
Notes:
Sampler's Signature:   Relity



Facility: Newberry County Landfill
Sampling Date: December 31, 2024
Sampling Time:
Sampler's Name: T. Ryan Merritt
Monitoring Equipment: Gas Measurement Instruments GT 40
Equipment Calibration (By): Safety Plus, Inc.
Next Equipment Calibration (Date): October 4, 2025
Monitoring Point Location:  GMP
Climate and Physical Conditions:  • Ambient Temperature: 52 °F
General Weather Condition
<ul> <li>General Soil Moisture Condition         ☐ DRY ☐ MOIST ☐ WET</li> <li>Condition of Surrounding Area (stressed vegetation, etc.)</li> </ul>
<ul> <li>Water Present in Probe ☐ YES ☒ NO</li> <li>General Conditions of GMP</li> <li>☐ LOCKED ☐ SEALED ☐ CLEARLY LABELED</li> <li>☐ OTHER (SEVERELY RUSTED, WEAK FOUNDATION, ETC.)</li> </ul>
Measurements:  Methane: \( \sqrt{\text{\text{M}}} \) \( \text{\text{M}} \) METHANE BY VOLUME
Notes:
Sampler's Signature: ACALL



Facility: Newberry County Landfill
Sampling Date: December 31, 2024
Sampling Time:
Sampler's Name: T. Ryan Merritt
Monitoring Equipment: Gas Measurement Instruments GT 40
Equipment Calibration (By): Safety Plus, Inc.
Next Equipment Calibration (Date): October 4, 2025
Monitoring Point Location:  GMP  □ On-Site Structure  □ Site Boundary  □ Off-Site Structure
Climate and Physical Conditions:  • Ambient Temperature: 50 °F
General Weather Condition
<ul> <li>General Soil Moisture Condition</li></ul>
<ul> <li>Water Present in Probe ☐ YES ☐ NO</li> <li>General Conditions of GMP</li> <li>☐ LOCKED ☐ SEALED ☐ CLEARLY LABELED</li> <li>☐ OTHER (SEVERELY RUSTED, WEAK FOUNDATION, ETC.)</li> </ul>
Measurements:  • Methane:   ✓   ✓   ✓   ✓   ✓   ✓   ✓   ✓   ✓
Notes:  6MP 4 could not be located. Likely denegras by a follow pak tree from Humiane Helene.
Sampler's Signature:



Facility: Newberry County Landfill
Sampling Date: December 31, 2024
Sampling Time:   A.M.   P.M.
Sampler's Name: T. Ryan Merritt
Monitoring Equipment: Gas Measurement Instruments GT 40
Equipment Calibration (By): Safety Plus, Inc.
Next Equipment Calibration (Date): October 4, 2025
Monitoring Point Location:  GMP 5
Climate and Physical Conditions:  • Ambient Temperature: 50 °F
General Weather Condition
<ul> <li>General Soil Moisture Condition</li> <li>☑ DRY ☐ MOIST ☐ WET</li> </ul>
Condition of Surrounding Area (stressed vegetation, etc.)
Water Present in Probe ☐ YES ☒ NO
<ul> <li>General Conditions of GMP</li> <li>LOCKED ☐ SEALED ☐ CLEARLY LABELED</li> <li>☐ OTHER (SEVERELY RUSTED, WEAK FOUNDATION, ETC.)</li> </ul>
Measurements:
Methane:      METHANE BY VOLUME
Notes:
Sampler's Signature:   CRUMT



Facility: Newberry County Landfill
Sampling Date: December 31, 2024
Sampling Time: $\square$ A.M. $\boxtimes$ P.M.
Sampler's Name: T. Ryan Merritt
Monitoring Equipment: Gas Measurement Instruments GT 40
Equipment Calibration (By): Safety Plus, Inc.
Next Equipment Calibration (Date): October 4, 2025
Monitoring Point Location:  GMP S D  ☐ On-Site Structure  ☑ Site Boundary  ☐ Off-Site Structure
Climate and Physical Conditions:  • Ambient Temperature: 50 °F
General Weather Condition
General Soil Moisture Condition     □ DRY    □ MOIST    □ WET
• Condition of Surrounding Area (stressed vegetation, etc.)
• Water Present in Probe ☐ YES ☒ NO
<ul> <li>General Conditions of GMP</li> <li>✓ LOCKED ☐ SEALED ☐ CLEARLY LABELED</li> <li>☐ OTHER (SEVERELY RUSTED, WEAK FOUNDATION, ETC.)</li> </ul>
Measurements:
Methane:
Notes:
Sampler's Signature:



Facility: Newberry County Landfill
Sampling Date: December 31, 2024
Sampling Time: $\square$ A.M. $\boxtimes$ P.M.
Sampler's Name: T. Ryan Merritt
Monitoring Equipment: Gas Measurement Instruments GT 40
Equipment Calibration (By): Safety Plus, Inc.
Next Equipment Calibration (Date): October 4, 2025
Monitoring Point Location:  GMP S On-Site Structure  ⊠ Site Boundary Off-Site Structure
Climate and Physical Conditions:  • Ambient Temperature: 50 °F
General Weather Condition
General Soil Moisture Condition     □ DRY    □ MOIST    □ WET
Condition of Surrounding Area (stressed vegetation, etc.)
Water Present in Probe ☐ YES ☒ NO
<ul> <li>General Conditions of GMP</li> <li>LOCKED ☐ SEALED ☐ CLEARLY LABELED</li> <li>☐ OTHER (SEVERELY RUSTED, WEAK FOUNDATION, ETC.)</li> </ul>
Measurements:
Methane: ✓
Notes:
Sampler's Signature:  (Rull)



Facility: Newberry County Landfill
Sampling Date: December 31, 2024
Sampling Time: $\underline{\hspace{1cm}}$ $\square$ A.M. $\boxtimes$ P.M.
Sampler's Name: T. Ryan Merritt
Monitoring Equipment: Gas Measurement Instruments GT 40
Equipment Calibration (By): Safety Plus, Inc.
Next Equipment Calibration (Date): October 4, 2025
Monitoring Point Location:  GMP
Climate and Physical Conditions:  • Ambient Temperature: 50 °F
General Weather Condition
General Soil Moisture Condition     □ DRY □ MOIST □ WET
• Condition of Surrounding Area (stressed vegetation, etc.)
Water Present in Probe ☐ YES ☒ NO
<ul> <li>General Conditions of GMP</li> <li>LOCKED ☐ SEALED ☐ CLEARLY LABELED</li> <li>☐ OTHER (SEVERELY RUSTED, WEAK FOUNDATION, ETC.)</li> </ul>
Measurements:  • Methane:
Notes:
Sampler's Signature:   All Color



Facility: Newberry County Landfill
Sampling Date: December 31, 2024
Sampling Time: A.M. \( \times \) P.M.
Sampler's Name: T. Ryan Merritt
Monitoring Equipment: Gas Measurement Instruments GT 40
Equipment Calibration (By): Safety Plus, Inc.
Next Equipment Calibration (Date): October 4, 2025
Monitoring Point Location:  GMP7_5  ☐ On-Site Structure  ☑ Site Boundary ☐ Off-Site Structure
Climate and Physical Conditions:  • Ambient Temperature: 46 °F
General Weather Condition
General Soil Moisture Condition     □ DRY □ MOIST □ WET
Condition of Surrounding Area (stressed vegetation, etc.)
• Water Present in Probe ☐ YES ☒ NO
<ul> <li>General Conditions of GMP</li> <li>         □ LOCKED □ SEALED □ CLEARLY LABELED         □ OTHER (SEVERELY RUSTED, WEAK FOUNDATION, ETC.)</li> </ul>
Measurements:
Methane:      Methane by Volume
Notes:
Sampler's Signature:



Facility: Newberry County Landfill
Sampling Date: December 31, 2024
Sampling Time: 2:37 A.M. $\boxtimes$ P.M.
Sampler's Name: T. Ryan Merritt
Monitoring Equipment: Gas Measurement Instruments GT 40
Equipment Calibration (By): Safety Plus, Inc.
Next Equipment Calibration (Date): October 4, 2025
Monitoring Point Location:  GMP  On-Site Structure  Site Boundary  Off-Site Structure
Climate and Physical Conditions:  • Ambient Temperature: 46°F
General Weather Condition
● General Soil Moisture Condition  □ DRY □ MOIST □ WET
• Condition of Surrounding Area (stressed vegetation, etc.)
Water Present in Probe ☐ YES ☒ NO
<ul> <li>General Conditions of GMP</li> <li>☐ LOCKED ☐ SEALED ☐ CLEARLY LABELED</li> <li>☐ OTHER (SEVERELY RUSTED, WEAK FOUNDATION, ETC.)</li> </ul>
Measurements:
Methane:      Methane By Volume
Notes:
Sampler's Signature:

