WASTE CONNECTIONS INC.
Connect with the Future®

11400 Parkside Drive, Suite 500, Knoxville, TN 37934 865.200.7650 nelsonb@wasteconnections.com

July 24, 2023

Mrs. Amy Tempus-Doom
Division for Air Quality
300 Sower Blvd., 2nd Floor
Frankfort, KY 40601

RE: Laurel Ridge Landfill, LLC
AI# - 2581
Permit # V-18-047
Title V Permit Renewal

Dear Mrs. Tempus-Doom:

In accordance with air quality permit requirements, Laurel Ridge Landfill is submitting this renewal application for Title V Permit No. V-18-047 for the municipal solid waste landfill located near London, Kentucky. This renewal application is being submitted at least six months prior to expiration of the current permit in accordance with Section G(2) of the permit and Kentucky Regulation 401 KAR 52:020, Section 12.

401 KAR 52:020, Section 4(2)(c) states that applications for permit renewals shall provide only the information that is new or different from the most recent source-wide permit application. No new emission units were applied for or installed, nor have any physical or operational changes occurred at the facility that would affect the permit. Although this is the case, US EPA finalized 40 CFR 62 Subpart OOO which superseded 40 CFR 60 Subpart WWW and finalized revisions to 40 CFR 63 Subpart AAAA. The issuance of the new and revised regulations resulted in changes to the emissions threshold, operating parameter limitations, monitoring, recordkeeping and reporting requirements. Therefore, the applicable DEP7007V Form is included for this renewal submittal. In addition to DEP7007 Series Forms, the 2022 RY LandGEM Report, the 2022 RY Greenhouse Gas Report and an up-to-date general site map are included.

For any questions pertaining to this renewal application, please contact Joel Falbo at (606) 864-7996.

Sincerely,

Nelson Breeden
Region Engineer

Enclosures

DEP7007 PERMIT FORMS

Division for Air Quality

300 Sower Boulevard

Frankfort, KY 40601

(502) 564-3999

DEP7007AI

Administrative Information

___ Section AI.1: Source Information

___ Section AI.2: Applicant Information

___ Section AI.3: Owner Information

___ Section AI.4: Type of Application

___ Section AI.5: Other Required Information

___ Section AI.6: Signature Block

___ Section AI.7: Notes, Comments, and Explanations

Additional Documentation

___ Additional Documentation attached

Source Name: **Laurel Ridge Landfill, LLC**

KY EIS (AFS) #: **21- 125-00089**

Permit #: **V-18-047**

Agency Interest (AI) ID: **2581**

Date: **7/24/2023**

Section AI.1: Source Information

Physical Location Address:	**Street:**	3612 East Highway 552				
	City:	Lily	**County:**	Laurel	**Zip Code:**	40740
Mailing Address:	**Street or P.O. Box:**	P.O. Box 808				
	City:	Lily	**State:**	KY	**Zip Code:**	40740

Standard Coordinates for Source Physical Location

Longitude: -84.091944 (decimal degrees) **Latitude:** 37.033333 (decimal degrees)

Primary (NAICS) Category: Solid Waste Landfill **Primary NAICS #:** 562212

Classification (SIC) Category: Refuse Systems **Primary SIC #:** 4953

Briefly discuss the type of business conducted at this site: Laurel Ridge Landfill is a Municiple Solid Waste Landfill. The Landfill operates a Gas Collection and Control System that routes collected LFG to an Open Flare or off-site for beneficial reuse.

Description of Area Surrounding Source: ☑ Rural Area ☐ Industrial Park ☐ Residential Area ☐ Urban Area ☐ Industrial Area ☐ Commercial Area

Is any part of the source located on federal land? ☐ Yes ☑ No

Number of Employees: 11

Approximate distance to nearest residence or commercial property: *100 ft*

Property Area: **348.5 acres**

Is this source portable? ☐ Yes ☑ No

What other environmental permits or registrations does this source currently hold or need to obtain in Kentucky?

NPDES/KPDES:	☑ Currently Hold	☐ Need	☐ N/A
Solid Waste:	☑ Currently Hold	☐ Need	☐ N/A
RCRA:	☐ Currently Hold	☐ Need	☑ N/A
UST:	☐ Currently Hold	☐ Need	☑ N/A

Type of Regulated Waste Activity:

☐ Mixed Waste Generator ☐ Generator ☐ Recycler ☐ Other: _____

☐ U.S. Importer of Hazardous Waste ☐ Transporter ☐ Treatment/Storage/Disposal Facility ☑ N/A

Section AI.2: Applicant Information

Applicant Name: Laurel Ridge Landfill, LLC

Title: (if individual)

Mailing Address: **Street or P.O. Box:** P.O. Box 808
City: Lily **State:** KY **Zip Code:** 40740

Email: (if individual)

Phone: (606) 864-7996

Technical Contact

Name: Joel Falbo

Title: District Manager

Mailing Address: **Street or P.O. Box:** P.O. Box 808
City: Lily **State:** KY **Zip Code:** 40740

Email: joel.falbo@wasteconnections.com

Phone: (606) 864-7996

Air Permit Contact for Source

Name: Joel Falbo

Title: District Manager

Mailing Address: **Street or P.O. Box:** P.O. Box 808
City: Lily **State:** KY **Zip Code:** 40740

Email: joel.falbo@wasteconnections.com

Phone: (606) 864-7996

Section AI.3: Owner Information

☐ **Owner same as applicant**

Name: Waste Connections, Inc.

Title:

Mailing Address:

Street or P.O. Box: Waterway Plaza Two, 10001 Woodloch Forest Drive, Suite 400

City: The Woodlands **State:** TX **Zip Code:** 77380

Email:

Phone: (877) 288-9269

List names of owners and officers of the company who have an interest in the company of 5% or more.

Name	Position

Section AI.4: Type of Application

Current Status: ☑ Title V ☐ Conditional Major ☐ State-Origin ☐ General Permit ☐ Registration ☐ None

Requested Action: *(check all that apply)*

☐ Name Change	☐ Initial Registration	☐ Significant Revision	☐ Administrative Permit Amendment
☑ Renewal Permit	☐ Revised Registration	☐ Minor Revision	☐ Initial Source-wide OperatingPermit
☐ 502(b)(10)Change	☐ Extension Request	☐ Addition of New Facility	☐ Portable Plant Relocation Notice
☐ Revision	☐ Off Permit Change	☐ Landfill Alternate Compliance Submittal	☐ Modification of Existing Facilities
☐ Ownership Change	☐ Closure		

Requested Status: ☑ Title V ☐ Conditional Major ☐ State-Origin ☐ PSD ☐ NSR ☐ Other: _____

Is the source requesting a limitation of potential emissions? ☐ Yes ☐ No

Pollutant:	Requested Limit:	Pollutant:	Requested Limit:
☐ Particulate Matter		☐ Single HAP	
☐ Volatile Organic Compounds (VOC)		☐ Combined HAPs	
☐ Carbon Monoxide		☐ Air Toxics (40 CFR 68, Subpart F)	
☐ Nitrogen Oxides		☐ Carbon Dioxide	
☐ Sulfur Dioxide		☐ Greenhouse Gases (GHG)	
☐ Lead		☐ Other	

For New Construction:

Proposed Start Date of Construction: *(MM/YYYY)* _____ **Proposed Operation Start-Up Date:** *(MM/YYYY)* _____

For Modifications:

Proposed Start Date of Modification: *(MM/YYYY)* _____ **Proposed Operation Start-Up Date:** *(MM/YYYY)* _____

Applicant is seeking coverage under a permit shield. ☐ **Yes** ☐ **No** **Identify any non-applicable requirements for which permit shield is sought on a separate attachment to the application.**

Section AI.5 Other Required Information

Indicate the documents attached as part of this application:

- ☐ DEP7007A Indirect Heat Exchangers and Turbines
- ☐ DEP7007B Manufacturing or Processing Operations
- ☐ DEP7007C Incinerators and Waste Burners
- ☐ DEP7007F Episode Standby Plan
- ☐ DEP7007J Volatile Liquid Storage
- ☐ DEP7007K Surface Coating or Printing Operations
- ☐ DEP7007L Mineral Processes
- ☐ DEP7007M Metal Cleaning Degreasers
- ☐ DEP7007N Source Emissions Profile
- ☐ DEP7007P Perchloroethylene Dry Cleaning Systems
- ☐ DEP7007R Emission Offset Credit
- ☐ DEP7007S Service Stations
- ☐ DEP7007T Metal Plating and Surface Treatment Operations
- ☑ DEP7007V Applicable Requirements and Compliance Activities
- ☐ DEP7007Y Good Engineering Practice and Stack Height Determination
- ☐ DEP7007AA Compliance Schedule for Non-complying Emission Units
- ☐ DEP7007BB Certified Progress Report
- ☐ DEP7007CC Compliance Certification
- ☐ DEP7007DD Insignificant Activities
- ☐ DEP7007EE Internal Combustion Engines
- ☐ DEP7007FF Secondary Aluminum Processing
- ☐ DEP7007GG Control Equipment
- ☐ DEP7007HH Haul Roads
- ☐ Confidentiality Claim
- ☐ Ownership Change Form
- ☐ Secretary of State Certificate
- ☐ Flowcharts or diagrams depicting process
- ☐ Digital Line Graphs (DLG) files of buldings, roads, etc.
- ☐ Site Map
- ☐ Map or drawing depicting location of facility
- ☐ Safety Data Sheet (SDS)
- ☐ Emergency Response Plan
- ☑ Other: 2022 LandGEM NMOC Rpt., 2022 GHG Rpt.

Section AI.6: Signature Block

I, the undersigned, hereby certify under penalty of law, that I am a responsible official*, and that I have personally examined, and am familiar with, the information submitted in this document and all its attachments. Based on my inquiry of those individuals with primary responsibility for obtaining the information, I certify that the information is on knowledge and belief, true, accurate, and complete. I am aware that there are significant penalties for submitting false or incomplete information, including the possibility of fine or imprisonment.

Authorized Signature	7/24/2023 **Date**
Nelson Breeden	Region Engineer
Type or Printed Name of Signatory	**Title of Signatory**

*Responsible official as defined by 401 KAR 52:001.

Section AI.7: Notes, Comments, and Explanations

Division for Air Quality

300 Sower Boulevard
Frankfort, KY 40601
(502) 564-3999

DEP7007V

Applicable Requirements and Compliance Activities

___ Section V.1: Emission and Operating Limitation(s)
___ Section V.2: Monitoring Requirements
___ Section V.3: Recordkeeping Requirements
___ Section V.4: Reporting Requirements
___ Section V.5: Testing Requirements
___ Section V.6: Notes, Comments, and Explanations

Additional Documentation

___ Complete DEP7007AI

Source Name: **Laurel Ridge Landfill, LLC**
KY EIS (AFS) #: **21-125-00089**
Permit #: **V-18-047**
Agency Interest (AI) ID: **2581**
Date: **7/24/2023**

Section V.1: Emission and Operating Limitation(s)

Emission Unit #	Emission Unit Description	Applicable Regulation or Requirement	Pollutant	Emission Limit (if applicable)	Voluntary Emission Limit or Exemption (if applicable)	Operating Requirement or Limitation (if applicable)	Method of Determining Compliance with the Emission and Operating Requirement(s)
02	Municipal Solid Waste Landfill	40 CFR 62.16714(b) and (c)				Install an active gas collection and control system complying with the requirements of 40 CFR 62, Subpart OOO	Install an active gas collection and control system complying with the requirements of 40 CFR 62.16714(b) an (c) according to the regulatory schedule. Monthly and quarterly monitoring, recordkeeping, and reporting
		40 CFR 62.16714(f)	NMOC	<34 Mg		Meet requirements prior to GCCS Removal	Submit Closure Report, Operate GCCS at least 15 years, Testing for NMOC emission rate.

Section V.1: Emission and Operating Limitation(s)

Emission Unit #	Emission Unit Description	Applicable Regulation or Requirement	Pollutant	Emission Limit (if applicable)	Voluntary Emission Limit or Exemption (if applicable)	Operating Requirement or Limitation (if applicable)	Method of Determining Compliance with the Emission and Operating Requirement(s)
		40 CFR 62.16716(a) and 62.16720(b)				Install and operate gas collection and control system complying with the requirements of 40 CFR 62, Subpart OOO	Collect gas in areas where waste has been in place 5 yrs if active or 2 yrs if closed.
		40 CFR 62.16716(b) and 62.16720(a)(3)				Operate GCCS at each wellhead with negative gauge pressure.	Monitor gauge pressure at least monthly. Meet corrective action and analysis timeframes. Recordkeeping and reporting
		40 CFR 62.16716(c) and 62.16720(a)(4)				Operate each wellhead at less than 131 °F.	Monitor temperature at least monthly. Meet corrective action and analysis timeframes. Recordkeeping and reporting
		40 CFR 62.16716(d) and 62.16720(c) and (d)				Operate the GCCS with the CH4 surface emission concentration < 500 ppm above background.	Monitor for surface emissions quarterly. Recordkeeping and reporting
		40 CFR 62.16716(e)				Operate and design the GCCS per 40 CFR 62.16714(c). Upon shutdown, close valves within 1-hour.	Operate and design the GCCS per 40 CFR 62.16714(c). Upon shutdown, close valves within 1-hour. Continuous monitoring, initial testing, recordkeeping, and reporting
		40 CFR 62.16716(f)				Operate the control system at all times gas is routed to the system	Operate the control system at all times gas is routed to the system. Continuous monitoring, recordkeeping, and reporting

Section V.1: Emission and Operating Limitation(s)

Emission Unit #	Emission Unit Description	Applicable Regulation or Requirement	Pollutant	Emission Limit (if applicable)	Voluntary Emission Limit or Exemption (if applicable)	Operating Requirement or Limitation (if applicable)	Method of Determining Compliance with the Emission and Operating Requirement(s)
		40 CFR 62.16716(g)				Upon monitoring of exceedances, corrective actions shall be taken.	Upon monitoring of exceedances, corrective actions shall be taken. Monthly and quarterly monitoring, recordkeeping, and reporting
		40 CFR 62.16718(b)				Meet requirements prior to GCCS removal after Landfill Closure	Submit Closure Report, Operate GCCS at least 15 years, Testing for NMOC emission rate.
		40 CFR 62.16718(d)				Initial determination heating value and exit velocity of the flare gas.	Initial testing for heating value and actual exit velocity at the flare.
		40 CFR 62.16728(a)				Site extraction devices at a sufficient density	Site extraction devices at a sufficient density following procedures specified by 40 CFR 62.16728(a)
		40 CFR 62.16728(b)				Construct collection devices as specified	Construct collection devices following procedures specified by 40 CFR 62.16728(b)
		40 CFR 63.1930(b)				No later than September 27, 2021, meet the requirements of 40 CFR 63 Subpart AAAA at all times, inculding periods of SSM and the SSM requirements fo the General Provisions of 60 CFR 63 do not apply	Meeting operating, monitoring, recordkeeping, and reporting requirements specified by 40 CFR 63 Subpart AAAA at all times including periods of SSM.
		40 CFR 63.1955(c)				Beginning September 27, 2021, operate and maintain the facility to minimize emissions	Operate and maintain the MSW Landfill and GCCS in a manner that minimizes emissions. Operating, monitoring, recordkeeping, reporting.

Section V.1: Emission and Operating Limitation(s)

Emission Unit #	Emission Unit Description	Applicable Regulation or Requirement	Pollutant	Emission Limit (if applicable)	Voluntary Emission Limit or Exemption (if applicable)	Operating Requirement or Limitation (if applicable)	Method of Determining Compliance with the Emission and Operating Requirement(s)
		40 CFR 63.1957(a)				Operate the gas collection and control system in accordance with 40 CFR 63.1958, 1960, and 1961	Meet design and operational requirements, monthly GCCS and quarterly SEM monitoring, recordkeeping, and reporting
		40 CFR 63.1958(a) and 63.1960(b)				Install and operate gas collection and control system complying with the requirements of 40 CFR 63, Subpart AAAA	Collect gas in areas where waste has been in place 5 yrs if active or 2 yrs if closed.
		40 CFR 63.1958(b) and 63.1960(a)(3)				Operate GCCS at each wellhead with negative gauge pressure.	Monitor gauge pressure at least monthly. Meet corrective action and analysis timeframes. Recordkeeping and reporting
		40 CFR 63.1958(c)(1)and 63.1960(a)(4)				Beginning September 27, 2021, the temperature level of the landfill gas at each wellhead shall be less than 145 °F.	Monitor temperature at least monthly. Meet corrective action and analysis timeframes. Recordkeeping and reporting
		40 CFR 63.1958(d)(1) and (2) and 63.1960(c) and (d)				Operate the GCCS with the CH4 surface emission concentration < 500 ppm above background.	Monitor for surface emissions quarterly. Recordkeeping and reporting
		40 CFR 63.1958(e)(1)				No later than September 27, 2021, operate and design the GCCS per 40 CFR 63.1955(c) and 63.1959(b)(2)(iii). Upon shutdown, close valves within 1-hour.	Operate and design the GCCS per 40 CFR 63.1955(c) and 63.1959(b)(2)(iii). Upon shutdown, close valves within 1-hour. Continuous monitoring, initial testing, recordkeeping, and reporting

Section V.1: Emission and Operating Limitation(s)

Emission Unit #	Emission Unit Description	Applicable Regulation or Requirement	Pollutant	Emission Limit (if applicable)	Voluntary Emission Limit or Exemption (if applicable)	Operating Requirement or Limitation (if applicable)	Method of Determining Compliance with the Emission and Operating Requirement(s)
		40 CFR 63.1958(f)				Operate the control system at all times gas is routed to the system	Operate the control system at all times gas is routed to the system. Continuous monitoring, recordkeeping, and reporting
		40 CFR 63.1958(g)				Upon monitoring of exceedances, corrective actions shall be taken.	Upon monitoring of exceedances, corrective actions shall be taken. Monthly and quarterly monitoring, recordkeeping, and reporting
		40 CFR 63.1959(b)(2)				Design, install, and operate a gas collection and control system complying with the requirements of 40 CFR 63, Subpart AAAA	Continuous control device monitoring, monthly GCCS and quarterly SEM monitoring, recordkeeping, and reporting
		40 CFR 63.1962(a)				Site extraction devices at a sufficient density	Site extraction devices at a sufficient density following procedures specified by 40 CFR 63.1962(a)
		40 CFR 63.1962(b)				Construct collection devices as specified	Construct collection devices following procedures specified by 40 CFR 63.1962(b)
		40 CFR 63.1962(c)				Convey landfill gas to the control system via header. The gas mover must be sized to handle the maximum gas generation rate.	Install and operate gas collection and control system complying with the requirements of 40 CFR 63, Subpart AAAA
		40 CFR 63.1964(b)				After September 27, 2021, compliance with emissions and operating standards is required at all times. SSM Provisions no longer apply.	Meeting testing, monitoring, recordkeeping requirements specified by 40 CFR 63 Subpart AAAA at all times including periods of SSM.

Section V.2: Monitoring Requirements

Emission Unit #	Emission Unit Description	Pollutant	Applicable Regulation or Requirement	Parameter Monitored	Description of Monitoring
			40 CFR 62.16722(a)	Guage pressure, oxygen level, and temperature	Perform monthly wellfield monitoring to measure gauge pressure, temperature, and oxygen. Adjustment to correct well parameters within 5 days. Develope and submit root cause analysis, corrective action analysis, and implementation schedules as necessary.
			40 CFR 62.16722(c)	Flare temperature (flame presence) and Flow to or bypass of the control device	Continuously monitor flare for a flame presence using a thermocouple; Install, calibrate, and maintain a gas flow rate measuring device that records the flow to the control device at least every 15 minutes
			40 CFR 62.16722(e)	Provide design, operating, and monitoring information for a collection system not meeting 40 CFR 62.16728	Provide alternative design, operating, and monitoring information for a collection system not meeting 40 CFR 62.16728
		CH4	40 CFR 62.16722(f)	Surface emissions of methane concentration.	Quarterly surface monitoring to ensure the methane concentration is < 500 ppm above background.
			40 CFR 62.16722(g)	Flow to or bypass of the treatment system, or secure the bypass	Install, calibrate, and maintain a gas flow rate measuring device that records the flow to the treatement system at least every 15 minutes. Secure bypass valve, inspect seal at least monthly to ensure closure and gas flow is not diverted through the bypass.
			40 CFR 62.16722(h)	40 CFR 62.16722 apply at all times except during monitoring system malfunction or repair.	Continuous control device monitoring, monthly GCCS and quarterly SEM monitoring, recordkeeping, and reporting.
			40 CFR 63.1961(a)	Measure guage pressure, oxygen level, and temperature on a monthly basis	Perform monthly wellfield monitoring to measure gauge pressure, temperature, and oxygen. Adjustment to correct well parameters within 5 days. Develope and submit root cause analysis, corrective action analysis, and implementation schedules as necessary.
			40 CFR 63.1961(c)	Monitor open flare for temperature (flame presence). Monitor and record flow to or bypass of the control device, or secure the bypass	Continuously monitor flare for a flame presence using a thermocouple; Install, calibrate, and maintain a gas flow rate measuring device that records the flow to the control device at least every 15 minutes

Section V.2: Monitoring Requirements

Emission Unit #	Emission Unit Description	Pollutant	Applicable Regulation or Requirement	Parameter Monitored	Description of Monitoring
			40 CFR 63.1961(e)	Provide design, operating, and monitoring information for a collection system not meeting 40 CFR 63.1958 thru 63.1962	Provide alternative design, operating, and monitoring information for a collection system not meeting 40 CFR 63.1958 thru 63.1962
		CH4	40 CFR 63.1961(f)	Surface emissions of methane concentration.	Quarterly surface monitoring to ensure the methane concentration is < 500 ppm above background.
			40 CFR 63.1961(g)	Flow to or bypass of the treatment system, or secure the bypass	Install, calibrate, and maintain a gas flow rate measuring device that records the flow to the treatement system at least every 15 minutes. Secure bypass valve, inspect seal at least monthly to ensure closure and gas flow is not diverted through the bypass.
			40 CFR 63.1961(h)	40 CFR 63.1961 apply at all times except during monitoring system malfunction or repair.	Continuous control device monitoring, monthly GCCS and quarterly SEM monitoring, recordkeeping, and reporting.

Section V.3: Recordkeeping Requirements

Emission Unit #	Emission Unit Description	Pollutant	Applicable Regulation or Requirement	Parameter Recorded	Description of Recordkeeping
			40 CFR 62.16726(a)	Design capacity, annual waste acceptance, and total waste in-place	Maintain for 5 yrs-the records of waste in-place and acceptance rates per 40 62.16726(a).
			40 CFR 62.16726(b)	Performance test and control equipment records	Maintain for the life of the control system records of performance test and control equipment records per 40 CFR 62.16726(b).
			40 CFR 62.16726(c)	Operating parameter monitoring data and exceedances	Maintain for 5-yrs records of operating parameter monitoring data and exceedances per 40 CFR 62.16726(c).
			40 CFR 62.16726(d)	Existing and planned GCCS collector. Waste/areas excluded from the GCCS.	Maintain records for the life of the collection system per 40 CFR 62.16726(d).
			40 CFR 62.16726(e)	Parameter exceedances, root cause and corrective action analysis.	Maintain for 5 yrs-the records of control system exceedances per 40 62.16726(e).
			40 CFR 62.16726(h)	GCCS parameter monitoring data	Maintain for 5 yrs-the records of control system exceedances per 40 CFR 62.16726(h).
			40 CFR 62.16726(l)	Records associated with Liquid Addition	Maintain records of calculations, leachate quantities, and surface areas required to complete the Liquid Addition Reporting
			40 CFR 63.1983(a)	Design capacity, annual waste acceptance, and total waste in-place	Maintain for 5 yrs-the records of waste in-place and acceptance rates per 40 63.1983(a).
			40 CFR 63.1983(b)	Performance test and control equipment records	Maintain for the life of the control system records of performance test and control equipment records per 40 CFR 63.1983(b).
			40 CFR 63.1983(c)	Operating parameter monitoring data and exceedances	Maintain for 5-yrs records of operating parameter monitoring data and exceedances per 40 CFR 63.1983(c).

Section V.3: Recordkeeping Requirements

Emission Unit #	Emission Unit Description	Pollutant	Applicable Regulation or Requirement	Parameter Recorded	Description of Recordkeeping
			40 CFR 63.1983(d)	Existing and planned GCCS collector. Waste/areas excluded from the GCCS.	Maintain records for the life of the collection system per 40 CFR 63.1983(d).
			40 CFR 63.1983(e)	Parameter exceedances, root cause and corrective action analysis.	Maintain for 5 yrs-the records of control system exceedances per 40 CFR 63.1983(e).
			40 CFR 63.1983(g)	GCCS parameter monitoring data	Maintain for 5 yrs-the records of control system exceedances per 40 CFR 63.1983(g).
			40 CFR 63.1983(h)	Landfill gas temperature. Enhanced temperature monitoring data.	Maintain records of monthly temperature monitoring data. Maintain records of any enhanced monitoring data for well with a temperature $\geq$ 145 °F.

Section V.4: Reporting Requirements

Emission Unit #	Emission Unit Description	Pollutant	Applicable Regulation or Requirement	Parameter Reported	Description of Reporting
			40 CFR 62.16711(h)		Legacy controlled landfills are not requried to resubmit reports listed by 40 CFR 6216711(h)
			40 CFR 62.16714(d)	Initial or amended design capacity report.	Submit an initial or amended design capacity report.if construction, reconstruction or modification occurred
			40 CFR 62.16714(e)	NMOC emission rate report if <34Mg or GCCS Design Plan if >34Mg NMOC.	Submit every 5 -yr NMOC emission rate report if <34Mg or GCCS Design Plan if >34Mg NMOC.
			40 CFR 62.16724(a) and (b)	Initial or amended design capacity report	Legacy controlled landfills are not requried to resubmit reports listed by 40 CFR 6216711(h).
			40 CFR 62.16724(c)	NMOC emission rate report	Legacy controlled landfills are not requried to resubmit reports listed by 40 CFR 6216711(h).
			40 CFR 62.16724(d) and (e)	GCCS Design Plan and Revised GCCS Design Plan	Legacy controlled landfills are not requried to resubmit reports listed by 40 CFR 6216711(h). Submit a Revised GCCS Design Plan prior to installations or expansions that meet criteria specified by 40 CFR 62.16724(e)(1) or (2)
			40 CFR 62.16724(f)	Closure report	Submit a closure report within 30 days of ceasing waste acceptance.
			40 CFR 62.16724(g)	Equipment Removal Report	Submit Equipment Removal Report within 30 days prior to removal or cessation of operation
			40 CFR 62.16724(h)	Semiannual report for landfills subject to NESHAP control.	Submit semiannual monitoring reports to inlcude information specified by 40 CFR 62.16724(h)(1) - (7).

Section V.4: Reporting Requirements

Emission Unit #	Emission Unit Description	Pollutant	Applicable Regulation or Requirement	Parameter Reported	Description of Reporting
			40 CFR 62.16724(i)	Initial performance test report	Legacy controlled landfills are not requried to resubmit reports listed by 40 CFR 6216711(h).
			40 CFR 62.16724(k)	Corrective Action and Corresponding Timeline	Submit Corrective Action and Corresponding Timeline.
			40 CFR 62.16724(l)	Liquid Addition Report	Submit the Initial 10-yr Liquid Addition Report prior to June 21, 2022. Submit Subsequent Annual Reports no later than 365 day after the previous report.
			40 CFR 62.16724(q)	24-hr High Temperature Report	If complying with 40 CFR 63 Subpart AAAA, submit a 24-hr High Temperature Report according to 40 CFFR 63.1981(k).
			40 CFR 63.1981	Certifying statement and date of prior submittal of reports listed in 40 CFR 63.1981	Landfills that have previously submitted the reports listed in opening paragraph of 40 CFR 63.1981 are not requried to resubmit reports. A certifying statement and date of prior submittal must be included in the first semiannual report.
			40 CFR 63.1981(a) and (b)	Initial or amended design capacity report	Landfills that have previously submitted the reports listed in opening paragraph of 40 CFR 63.1981 are not requried to resubmit reports.
			40 CFR 63.1981(c)	NMOC emission rate report	Landfills that have previously submitted the reports listed in opening paragraph of 40 CFR 63.1981 are not requried to resubmit reports.
			40 CFR 63.1981(d) and (e)	GCCS Design Plan and Revised GCCS Design Plan	Landfills that have previously submitted the reports listed in opening paragraph of 40 CFR 63.1981 are not requried to resubmit reports. Submit a Revised GCCS Design Plan prior to installations or expansions that meet criteria specified by 40 CFR 63.1981(e)(1) or (2)
			40 CFR 63.1981(f)	Closure report	Submit a closure report within 30 days of ceasing waste acceptance.
			40 CFR 63.1981(g)	Equipment Removal Report	Submit Equipment Removal Report within 30 days prior to removal or cessation of operation

Section V.4: Reporting Requirements

Emission Unit #	Emission Unit Description	Pollutant	Applicable Regulation or Requirement	Parameter Reported	Description of Reporting
			40 CFR 63.1981(h)	Semiannual report for landfills subject to NESHAP control.	Submit semiannual monitoring reports to inlcude information specified by 40 CFR 63.1981(h)(1) - (8).
			40 CFR 63.1981(i)	Initial performance test report	Landfills that have previously submitted the reports listed in opening paragraph of 40 CFR 63.1981 are not requried to resubmit reports.
			40 CFR 63.1981(j)	Corrective Action and Corresponding Timeline	Submit Corrective Action and Corresponding Timeline.
			40 CFR 63.1981(k)	24-hr High Temperature Report	Submit a 24-hr High Temperature Report if the temperature measured at either the wellhead or at any point in a well is $\geq$ 170 °F and the CO concentration is $\geq$ 1,000 ppm within 24 hours of the measurement unless a prior HOV had been approved.

Section V.5: Testing Requirements

Emission Unit #	Emission Unit Description	Pollutant	Applicable Regulation or Requirement	Parameter Tested	Description of Testing

Section V.6: Notes, Comments, and Explanations
This DEP7007V Form includes only the newly applicable requirements specified by 40 CFR 62 Subpart OOO, which superseded 40 CFR 60 Subpart WWW, and 40 CFR 63 Subpart AAAA revisions that apply to the Laurel Ridge Landfill in the facilities current configuration and NMOC emission level (>50 Mg NMOC) and as a Legacy Landfill.

2022 RY GREENHOUSE GAS REPORT

Certification Statement:

The designated representative or alternate designated representative must sign (i.e., agree to) this certification statement. If you are an agent and you click on "SUBMIT", you are not agreeing to the certification statement, but are submitting the certification statement on behalf of the designated representative or alternate designated representative who is agreeing to the certification statement. An agent is only authorized to make the electronic submission on behalf of the designated representative, not to sign (i.e., agree to) the certification statement.

Facility Name:LAUREL RIDGE LANDFILL
Facility Identifier:522885
Facility Reporting Year:2022
Facility Location:
Address: 3612 East Highway 552
City: LILY
State: KY
Postal Code: 40740

Facility Site Details:

CO2 equivalent emissions from facility subparts C-II, SS, and TT (metric tons):42,578.8
CO2 equivalent emissions from supplier subparts LL-QQ (metric tons):0
Biogenic CO2 emissions from facility subparts C-II, SS, and TT (metric tons):0
Cogeneration Unit Emissions Indicator:N
GHG Report Start Date:2022-01-01
GHG Report End Date:2022-12-31
Description of Changes to Calculation Methodology:
Plant Code Indicator:N
Primary NAICS Code:562212
Second Primary NAICS Code:

Parent Company Details:

Parent Company Name:WASTE CONNECTIONS US INC
Address:3 Waterway Square Place, Suite 110, The Woodlands, TX 77380
Percent Ownership Interest:100

Subpart HH: Municipal Solid Waste Landfills

Gas Information Details

Gas Name	Methane
Gas Quantity	1,703.15 (Metric Tons)
Own Result?	

Landfill Details

Is the landfill open?	Y
Estimated Year LandFill Closure	2048
Starting Year for Accepting Waste	1978
First year of emissions reporting	2010
Leachate recirculation was used during the reporting year	Y
Typical frequency of use for leachate recirculation system	Used occasionally (but not every year) over the past 10 years
Scales are present at the landfill in the reporting year	Y
Does the landfill have a landfill gas collection system?	Y

Passive vents and/or flares are present	N
Landfill Capacity	15654196.66 (Metric Tons)
Total surface area of the landfill containing waste	492548.2 (Square Meters)
Covertype Details	Clay cover

Aeration Details

Aeration Blower Capacity	( )
Landfill Fraction Affected by Aeration	( )
Aeration Blower Operations Hours	( )
Other MCF Factors	
Additional Description	

Current Waste Disposal Quantity Determination Details

First Year to Current Year Annual Waste Quantity Method

Reporting Year	**2022**
Total Annual Waste Disposal Quantity	366785.33 (Metric Tons)
Method Used to Determine Quantity	Used scales to weigh loads before off-loading and either used scales to weigh individual loads after off-loading or used representative tare vehicle/container weights
Annual Waste Disposal Quantity	366785.33 (Metric Tons)
Reporting Year	**2021**
Total Annual Waste Disposal Quantity	354900.87 (Metric Tons)
Method Used to Determine Quantity	Used scales to weigh loads before off-loading and either used scales to weigh individual loads after off-loading or used representative tare vehicle/container weights
Annual Waste Disposal Quantity	354900.87 (Metric Tons)
Reporting Year	**2020**
Total Annual Waste Disposal Quantity	327149.88 (Metric Tons)
Method Used to Determine Quantity	Used scales to weigh loads before off-loading and either used scales to weigh individual loads after off-loading or used representative tare vehicle/container weights
Annual Waste Disposal Quantity	327149.88 (Metric Tons)
Reporting Year	**2019**
Total Annual Waste Disposal Quantity	327406.9 (Metric Tons)
Method Used to Determine Quantity	Used scales to weigh loads before off-loading and either used scales to weigh individual loads after off-loading or used representative tare vehicle/container weights
Annual Waste Disposal Quantity	327406.9 (Metric Tons)
Reporting Year	**2018**
Total Annual Waste Disposal Quantity	309847.06 (Metric Tons)
Method Used to Determine Quantity	Used scales to weigh loads before off-loading and either used scales to weigh individual loads after off-loading or used representative tare

	vehicle/container weights
Annual Waste Disposal Quantity	309847.06 (Metric Tons)
Reporting Year	**2017**
Total Annual Waste Disposal Quantity	294001.19 (Metric Tons)
Method Used to Determine Quantity	Used scales to weigh loads before off-loading and either used scales to weigh individual loads after off-loading or used representative tare vehicle/container weights
Annual Waste Disposal Quantity	294001.19 (Metric Tons)
Reporting Year	**2016**
Total Annual Waste Disposal Quantity	288123.78 (Metric Tons)
Method Used to Determine Quantity	Used scales to weigh loads before off-loading and either used scales to weigh individual loads after off-loading or used representative tare vehicle/container weights
Annual Waste Disposal Quantity	288123.78 (Metric Tons)
Reporting Year	**2015**
Total Annual Waste Disposal Quantity	301788.87 (Metric Tons)
Method Used to Determine Quantity	Used scales to weigh loads before off-loading and either used scales to weigh individual loads after off-loading or used representative tare vehicle/container weights
Annual Waste Disposal Quantity	301788.87 (Metric Tons)
Reporting Year	**2014**
Total Annual Waste Disposal Quantity	274706.36 (Metric Tons)
Method Used to Determine Quantity	Used scales to weigh loads before off-loading and either used scales to weigh individual loads after off-loading or used representative tare vehicle/container weights
Annual Waste Disposal Quantity	274706.36 (Metric Tons)
Reporting Year	**2013**
Total Annual Waste Disposal Quantity	283365.52 (Metric Tons)
Method Used to Determine Quantity	Used scales to weigh loads before off-loading and either used scales to weigh individual loads after off-loading or used representative tare vehicle/container weights
Annual Waste Disposal Quantity	283365.52 (Metric Tons)
Reporting Year	**2012**
Total Annual Waste Disposal Quantity	293664.03 (Metric Tons)
Method Used to Determine Quantity	Used scales to weigh loads before off-loading and either used scales to weigh individual loads after off-loading or used representative tare vehicle/container weights
Annual Waste Disposal Quantity	293664.03 (Metric Tons)
Reporting Year	**2011**
Total Annual Waste Disposal Quantity	315225.65 (Metric Tons)
Method Used to Determine Quantity	Used scales to weigh loads before off-loading and either used scales to weigh individual loads after off-loading or used representative tare

	vehicle/container weights
Annual Waste Disposal Quantity	315225.65 (Metric Tons)
Reporting Year	**2010**
Total Annual Waste Disposal Quantity	331067.21 (Metric Tons)
Method Used to Determine Quantity	Used scales to weigh loads before off-loading and either used scales to weigh individual loads after off-loading or used representative tare vehicle/container weights
Annual Waste Disposal Quantity	331067.21 (Metric Tons)

Waste Type Details

Year Waste Disposed	**2022**
Missing data procedure used?	N
Number of Times Substituted	

Waste Type Details

Option	Waste Type	Percent by Weight	Degradable Organic Carbon Value	Fraction Of DOC Dissimilated	Decay Rate
Waste composition	sewage sludge	0.0299	0.05	0.5	0.185
Waste composition	bulk waste	0.8851	0.2	0.5	0.057
Waste composition	inerts	0.085	0	0.5	0

Year Waste Disposed	**2021**
Missing data procedure used?	N
Number of Times Substituted	

Waste Type Details

Option	Waste Type	Percent by Weight	Degradable Organic Carbon Value	Fraction Of DOC Dissimilated	Decay Rate
Waste composition	sewage sludge	0.0234	0.05	0.5	0.185
Waste composition	bulk waste	0.934	0.2	0.5	0.057
Waste composition	inerts	0.0425	0	0.5	0

Year Waste Disposed	**2020**
Missing data procedure used?	N
Number of Times Substituted	

Waste Type Details

Option	Waste Type	Percent by Weight	Degradable Organic Carbon Value	Fraction Of DOC Dissimilated	Decay Rate

	Waste composition	sewage sludge	0.023	0.05	0.5	0.185
	Waste composition	bulk waste	0.969	0.2	0.5	0.057
	Waste composition	inerts	0.008	0	0.5	0
Year Waste Disposed	**2019**					
Missing data procedure used?	N					
Number of Times Substituted						
Waste Type Details	Option	Waste Type	Percent by Weight	Degradable Organic Carbon Value	Fraction Of DOC Dissimilated	Decay Rate
	Waste composition	sewage sludge	0.037	0.05	0.5	0.185
	Waste composition	bulk waste	0.959	0.2	0.5	0.057
	Waste composition	inerts	0.004	0	0.5	0
Year Waste Disposed	**2018**					
Missing data procedure used?	N					
Number of Times Substituted						
Waste Type Details	Option	Waste Type	Percent by Weight	Degradable Organic Carbon Value	Fraction Of DOC Dissimilated	Decay Rate
	Waste composition	sewage sludge	0.024	0.05	0.5	0.185
	Waste composition	bulk waste	0.957	0.2	0.5	0.057
	Waste composition	inerts	0.019	0	0.5	0
Year Waste Disposed	**2017**					
Missing data procedure used?	N					
Number of Times Substituted						
Waste Type Details	Option	Waste Type	Percent by Weight	Degradable Organic Carbon Value	Fraction Of DOC Dissimilated	Decay Rate
	Waste composition	sewage sludge	0.022	0.05	0.5	0.185
	Waste composition	bulk waste	0.969	0.2	0.5	0.057
	Waste composition	inerts	0.009	0	0.5	0

<table>
<tr><td>Year Waste Disposed</td><td>2016</td></tr>
<tr><td>Missing data procedure used?</td><td>N</td></tr>
<tr><td>Number of Times Substituted</td><td></td></tr>
<tr><td>Waste Type Details</td><td>
<table>
<tr><th>Option</th><th>Waste Type</th><th>Percent by Weight</th><th>Degradable Organic Carbon Value</th><th>Fraction Of DOC Dissimilated</th><th>Decay Rate</th></tr>
<tr><td>Waste composition</td><td>sewage sludge</td><td>0.02192</td><td>0.05</td><td>0.5</td><td>0.185</td></tr>
<tr><td>Waste composition</td><td>bulk waste</td><td>0.97796</td><td>0.2</td><td>0.5</td><td>0.057</td></tr>
<tr><td>Waste composition</td><td>inerts</td><td>0.00012</td><td>0</td><td>0.5</td><td>0</td></tr>
</table>
</td></tr>
<tr><td>Year Waste Disposed</td><td>2015</td></tr>
<tr><td>Missing data procedure used?</td><td>N</td></tr>
<tr><td>Number of Times Substituted</td><td></td></tr>
<tr><td>Waste Type Details</td><td>
<table>
<tr><th>Option</th><th>Waste Type</th><th>Percent by Weight</th><th>Degradable Organic Carbon Value</th><th>Fraction Of DOC Dissimilated</th><th>Decay Rate</th></tr>
<tr><td>Waste composition</td><td>sewage sludge</td><td>0.02765</td><td>0.05</td><td>0.5</td><td>0.185</td></tr>
<tr><td>Waste composition</td><td>inerts</td><td>0.00005</td><td>0</td><td>0.5</td><td>0</td></tr>
<tr><td>Waste composition</td><td>bulk waste</td><td>0.9723</td><td>0.2</td><td>0.5</td><td>0.057</td></tr>
</table>
</td></tr>
<tr><td>Year Waste Disposed</td><td>2014</td></tr>
<tr><td>Missing data procedure used?</td><td>N</td></tr>
<tr><td>Number of Times Substituted</td><td></td></tr>
<tr><td>Waste Type Details</td><td>
<table>
<tr><th>Option</th><th>Waste Type</th><th>Percent by Weight</th><th>Degradable Organic Carbon Value</th><th>Fraction Of DOC Dissimilated</th><th>Decay Rate</th></tr>
<tr><td>Waste composition</td><td>sewage sludge</td><td>0.033</td><td>0.05</td><td>0.5</td><td>0.185</td></tr>
<tr><td>Waste composition</td><td>inerts</td><td>0.002</td><td>0</td><td>0.5</td><td>0</td></tr>
<tr><td>Waste composition</td><td>bulk waste</td><td>0.965</td><td>0.2</td><td>0.5</td><td>0.057</td></tr>
</table>
</td></tr>
<tr><td>Year Waste Disposed</td><td>2013</td></tr>
<tr><td>Missing data procedure used?</td><td>N</td></tr>
<tr><td>Number of Times Substituted</td><td></td></tr>
</table>

Waste Type Details	Option	Waste Type	Percent by Weight	Degradable Organic Carbon Value	Fraction Of DOC Dissimilated	Decay Rate
	Waste composition	sewage sludge	0.031	0.05	0.5	0.185
	Waste composition	bulk waste	0.969	0.2	0.5	0.057
Year Waste Disposed	**2012**					
Missing data procedure used?	N					
Number of Times Substituted						
Waste Type Details	Option	Waste Type	Percent by Weight	Degradable Organic Carbon Value	Fraction Of DOC Dissimilated	Decay Rate
	Waste composition	sewage sludge	0.032	0.05	0.5	0.185
	Waste composition	bulk waste	0.968	0.2	0.5	0.057
Year Waste Disposed	**2011**					
Missing data procedure used?	N					
Number of Times Substituted						
Waste Type Details	Option	Waste Type	Percent by Weight	Degradable Organic Carbon Value	Fraction Of DOC Dissimilated	Decay Rate
	Waste composition	sewage sludge	0.02882	0.05	0.5	0.185
	Waste composition	bulk waste	0.97118	0.2	0.5	0.057
Year Waste Disposed	**2010**					
Missing data procedure used?	N					
Number of Times Substituted						
Waste Type Details	Option	Waste Type	Percent by Weight	Degradable Organic Carbon Value	Fraction Of DOC Dissimilated	Decay Rate
	Waste composition	sewage sludge	0.02236	0.05	0.5	0.185
	Waste composition	bulk waste	0.97764	0.2	0.5	0.057

Historical Waste Disposal Quantity Estimation Details

Method used to determine the annual waste quantity for any prior years

Were scales used to determine the annual waste quantity	Y
Start Year	2007

End Year	2009

Prior Year Annual Waste Quantity Method

Reporting Year	**2009**
Total Annual Waste Disposal Quantity	310063.74 (Metric Tons)
Method Used to Determine Quantity	Used scales to weigh loads before off-loading and either used scales to weigh individual loads after off-loading or used representative tare vehicle/container weights
Annual Waste Disposal Quantity	310063.74 (Metric Tons)
Reporting Year	**2008**
Total Annual Waste Disposal Quantity	312950.06 (Metric Tons)
Method Used to Determine Quantity	Used scales to weigh loads before off-loading and either used scales to weigh individual loads after off-loading or used representative tare vehicle/container weights
Annual Waste Disposal Quantity	312950.06 (Metric Tons)
Reporting Year	**2007**
Total Annual Waste Disposal Quantity	309031.19 (Metric Tons)
Method Used to Determine Quantity	Used scales to weigh loads before off-loading and either used scales to weigh individual loads after off-loading or used representative tare vehicle/container weights
Annual Waste Disposal Quantity	309031.19 (Metric Tons)
Reporting Year	**2006**
Total Annual Waste Disposal Quantity	107152 (Metric Tons)
Method Used to Determine Quantity	other
Annual Waste Disposal Quantity	107152 (Metric Tons)
Reporting Year	**2005**
Total Annual Waste Disposal Quantity	107152 (Metric Tons)
Method Used to Determine Quantity	other
Annual Waste Disposal Quantity	107152 (Metric Tons)
Reporting Year	**2004**
Total Annual Waste Disposal Quantity	107152 (Metric Tons)
Method Used to Determine Quantity	other
Annual Waste Disposal Quantity	107152 (Metric Tons)
Reporting Year	**2003**
Total Annual Waste Disposal Quantity	107152 (Metric Tons)
Method Used to Determine Quantity	other
Annual Waste Disposal Quantity	107152 (Metric Tons)

Reporting Year	**2002**
Total Annual Waste Disposal Quantity	107152 (Metric Tons)
Method Used to Determine Quantity	other
Annual Waste Disposal Quantity	107152 (Metric Tons)
Reporting Year	**2001**
Total Annual Waste Disposal Quantity	107152 (Metric Tons)
Method Used to Determine Quantity	other
Annual Waste Disposal Quantity	107152 (Metric Tons)
Reporting Year	**2000**
Total Annual Waste Disposal Quantity	107152 (Metric Tons)
Method Used to Determine Quantity	other
Annual Waste Disposal Quantity	107152 (Metric Tons)
Reporting Year	**1999**
Total Annual Waste Disposal Quantity	107152 (Metric Tons)
Method Used to Determine Quantity	other
Annual Waste Disposal Quantity	107152 (Metric Tons)
Reporting Year	**1998**
Total Annual Waste Disposal Quantity	107152 (Metric Tons)
Method Used to Determine Quantity	other
Annual Waste Disposal Quantity	107152 (Metric Tons)
Reporting Year	**1997**
Total Annual Waste Disposal Quantity	107152 (Metric Tons)
Method Used to Determine Quantity	other
Annual Waste Disposal Quantity	107152 (Metric Tons)
Reporting Year	**1996**
Total Annual Waste Disposal Quantity	107152 (Metric Tons)
Method Used to Determine Quantity	other
Annual Waste Disposal Quantity	107152 (Metric Tons)
Reporting Year	**1995**
Total Annual Waste Disposal Quantity	107152 (Metric Tons)
Method Used to Determine Quantity	other

Annual Waste Disposal Quantity	107152 (Metric Tons)
Reporting Year	**1994**
Total Annual Waste Disposal Quantity	107152 (Metric Tons)
Method Used to Determine Quantity	other
Annual Waste Disposal Quantity	107152 (Metric Tons)
Reporting Year	**1993**
Total Annual Waste Disposal Quantity	107152 (Metric Tons)
Method Used to Determine Quantity	other
Annual Waste Disposal Quantity	107152 (Metric Tons)
Reporting Year	**1992**
Total Annual Waste Disposal Quantity	107152 (Metric Tons)
Method Used to Determine Quantity	other
Annual Waste Disposal Quantity	107152 (Metric Tons)
Reporting Year	**1991**
Total Annual Waste Disposal Quantity	107152 (Metric Tons)
Method Used to Determine Quantity	other
Annual Waste Disposal Quantity	107152 (Metric Tons)
Reporting Year	**1990**
Total Annual Waste Disposal Quantity	107152 (Metric Tons)
Method Used to Determine Quantity	other
Annual Waste Disposal Quantity	107152 (Metric Tons)
Reporting Year	**1989**
Total Annual Waste Disposal Quantity	107152 (Metric Tons)
Method Used to Determine Quantity	other
Annual Waste Disposal Quantity	107152 (Metric Tons)
Reporting Year	**1988**
Total Annual Waste Disposal Quantity	107152 (Metric Tons)
Method Used to Determine Quantity	other
Annual Waste Disposal Quantity	107152 (Metric Tons)
Reporting Year	**1987**
Total Annual Waste Disposal Quantity	107152 (Metric Tons)

Method Used to Determine Quantity	other
Annual Waste Disposal Quantity	107152 (Metric Tons)
Reporting Year	**1986**
Total Annual Waste Disposal Quantity	107152 (Metric Tons)
Method Used to Determine Quantity	other
Annual Waste Disposal Quantity	107152 (Metric Tons)
Reporting Year	**1985**
Total Annual Waste Disposal Quantity	107152 (Metric Tons)
Method Used to Determine Quantity	other
Annual Waste Disposal Quantity	107152 (Metric Tons)
Reporting Year	**1984**
Total Annual Waste Disposal Quantity	107152 (Metric Tons)
Method Used to Determine Quantity	other
Annual Waste Disposal Quantity	107152 (Metric Tons)
Reporting Year	**1983**
Total Annual Waste Disposal Quantity	107152 (Metric Tons)
Method Used to Determine Quantity	other
Annual Waste Disposal Quantity	107152 (Metric Tons)
Reporting Year	**1982**
Total Annual Waste Disposal Quantity	107152 (Metric Tons)
Method Used to Determine Quantity	other
Annual Waste Disposal Quantity	107152 (Metric Tons)
Reporting Year	**1981**
Total Annual Waste Disposal Quantity	107152 (Metric Tons)
Method Used to Determine Quantity	other
Annual Waste Disposal Quantity	107152 (Metric Tons)
Reporting Year	**1980**
Total Annual Waste Disposal Quantity	107152 (Metric Tons)
Method Used to Determine Quantity	other
Annual Waste Disposal Quantity	107152 (Metric Tons)
Reporting Year	**1979**

Total Annual Waste Disposal Quantity	107152 (Metric Tons)
Method Used to Determine Quantity	other
Annual Waste Disposal Quantity	107152 (Metric Tons)
Reporting Year	**1978**
Total Annual Waste Disposal Quantity	107152 (Metric Tons)
Method Used to Determine Quantity	other
Annual Waste Disposal Quantity	107152 (Metric Tons)

Waste Type Details

Year Waste Disposed	**2009**
Missing data procedure used?	N
Number of Times Substituted	

Waste Type Details

Option	Waste Type	Percent by Weight	Degradable Organic Carbon Value	Fraction Of DOC Dissimilated	Decay Rate
Waste composition	sewage sludge	0.02359	0.05	0.5	0.185
Waste composition	bulk waste	0.97641	0.2	0.5	0.057

Year Waste Disposed	**2008**
Missing data procedure used?	N
Number of Times Substituted	

Waste Type Details

Option	Waste Type	Percent by Weight	Degradable Organic Carbon Value	Fraction Of DOC Dissimilated	Decay Rate
Waste composition	sewage sludge	0.02048	0.05	0.5	0.185
Waste composition	bulk waste	0.97952	0.2	0.5	0.057

Year Waste Disposed	**2007**
Missing data procedure used?	N
Number of Times Substituted	

Waste Type Details

Option	Waste Type	Percent by Weight	Degradable Organic Carbon Value	Fraction Of DOC Dissimilated	Decay Rate
Waste composition	sewage sludge	0.01385	0.05	0.5	0.185

Waste composition	bulk waste	0.98615	0.2	0.5	0.057

Year Waste Disposed	**2006**
Missing data procedure used?	N
Number of Times Substituted	

Waste Type Details

Option	Waste Type	Percent by Weight	Degradable Organic Carbon Value	Fraction Of DOC Dissimilated	Decay Rate
Bulk Waste	Bulk waste	1	0.2	0.5	0.057

Year Waste Disposed	**2005**
Missing data procedure used?	N
Number of Times Substituted	

Waste Type Details

Option	Waste Type	Percent by Weight	Degradable Organic Carbon Value	Fraction Of DOC Dissimilated	Decay Rate
Bulk Waste	Bulk waste	1	0.2	0.5	0.057

Year Waste Disposed	**2004**
Missing data procedure used?	N
Number of Times Substituted	

Waste Type Details

Option	Waste Type	Percent by Weight	Degradable Organic Carbon Value	Fraction Of DOC Dissimilated	Decay Rate
Bulk Waste	Bulk waste	1	0.2	0.5	0.057

Year Waste Disposed	**2003**
Missing data procedure used?	N
Number of Times Substituted	

Waste Type Details

Option	Waste Type	Percent by Weight	Degradable Organic Carbon Value	Fraction Of DOC Dissimilated	Decay Rate
Bulk Waste	Bulk waste	1	0.2	0.5	0.057

Year Waste Disposed	**2002**
Missing data procedure used?	N
Number of Times Substituted	

Waste Type Details

Option	Waste Type	Percent by Weight	Degradable Organic Carbon Value	Fraction Of DOC Dissimilated	Decay Rate

	Bulk Waste	Bulk waste	1	0.2	0.5	0.057
Year Waste Disposed	**2001**					
Missing data procedure used?	N					
Number of Times Substituted						
Waste Type Details	Option	Waste Type	Percent by Weight	Degradable Organic Carbon Value	Fraction Of DOC Dissimilated	Decay Rate
	Bulk Waste	Bulk waste	1	0.2	0.5	0.057
Year Waste Disposed	**2000**					
Missing data procedure used?	N					
Number of Times Substituted						
Waste Type Details	Option	Waste Type	Percent by Weight	Degradable Organic Carbon Value	Fraction Of DOC Dissimilated	Decay Rate
	Bulk Waste	Bulk waste	1	0.2	0.5	0.057
Year Waste Disposed	**1999**					
Missing data procedure used?	N					
Number of Times Substituted						
Waste Type Details	Option	Waste Type	Percent by Weight	Degradable Organic Carbon Value	Fraction Of DOC Dissimilated	Decay Rate
	Bulk Waste	Bulk waste	1	0.2	0.5	0.057
Year Waste Disposed	**1998**					
Missing data procedure used?	N					
Number of Times Substituted						
Waste Type Details	Option	Waste Type	Percent by Weight	Degradable Organic Carbon Value	Fraction Of DOC Dissimilated	Decay Rate
	Bulk Waste	Bulk waste	1	0.2	0.5	0.057
Year Waste Disposed	**1997**					
Missing data procedure used?	N					
Number of Times Substituted						
Waste Type Details	Option	Waste Type	Percent by Weight	Degradable Organic Carbon Value	Fraction Of DOC Dissimilated	Decay Rate

	Bulk Waste	Bulk waste	1	0.2	0.5	0.057
Year Waste Disposed	**1996**					
Missing data procedure used?	N					
Number of Times Substituted						
Waste Type Details	Option	Waste Type	Percent by Weight	Degradable Organic Carbon Value	Fraction Of DOC Dissimilated	Decay Rate
	Bulk Waste	Bulk waste	1	0.2	0.5	0.057
Year Waste Disposed	**1995**					
Missing data procedure used?	N					
Number of Times Substituted						
Waste Type Details	Option	Waste Type	Percent by Weight	Degradable Organic Carbon Value	Fraction Of DOC Dissimilated	Decay Rate
	Bulk Waste	Bulk waste	1	0.2	0.5	0.057
Year Waste Disposed	**1994**					
Missing data procedure used?	N					
Number of Times Substituted						
Waste Type Details	Option	Waste Type	Percent by Weight	Degradable Organic Carbon Value	Fraction Of DOC Dissimilated	Decay Rate
	Bulk Waste	Bulk waste	1	0.2	0.5	0.057
Year Waste Disposed	**1993**					
Missing data procedure used?	N					
Number of Times Substituted						
Waste Type Details	Option	Waste Type	Percent by Weight	Degradable Organic Carbon Value	Fraction Of DOC Dissimilated	Decay Rate
	Bulk Waste	Bulk waste	1	0.2	0.5	0.057
Year Waste Disposed	**1992**					
Missing data procedure used?	N					
Number of Times Substituted						
Waste Type Details	Option	Waste Type	Percent by Weight	Degradable Organic Carbon Value	Fraction Of DOC Dissimilated	Decay Rate

	Bulk Waste	Bulk waste	1	0.2	0.5	0.057
Year Waste Disposed	**1991**					
Missing data procedure used?	N					
Number of Times Substituted						
Waste Type Details	Option	Waste Type	Percent by Weight	Degradable Organic Carbon Value	Fraction Of DOC Dissimilated	Decay Rate
	Bulk Waste	Bulk waste	1	0.2	0.5	0.057
Year Waste Disposed	**1990**					
Missing data procedure used?	N					
Number of Times Substituted						
Waste Type Details	Option	Waste Type	Percent by Weight	Degradable Organic Carbon Value	Fraction Of DOC Dissimilated	Decay Rate
	Bulk Waste	Bulk waste	1	0.2	0.5	0.057
Year Waste Disposed	**1989**					
Missing data procedure used?	N					
Number of Times Substituted						
Waste Type Details	Option	Waste Type	Percent by Weight	Degradable Organic Carbon Value	Fraction Of DOC Dissimilated	Decay Rate
	Bulk Waste	Bulk waste	1	0.2	0.5	0.057
Year Waste Disposed	**1988**					
Missing data procedure used?	N					
Number of Times Substituted						
Waste Type Details	Option	Waste Type	Percent by Weight	Degradable Organic Carbon Value	Fraction Of DOC Dissimilated	Decay Rate
	Bulk Waste	Bulk waste	1	0.2	0.5	0.057
Year Waste Disposed	**1987**					
Missing data procedure used?	N					
Number of Times Substituted						
Waste Type Details	Option	Waste Type	Percent by Weight	Degradable Organic Carbon Value	Fraction Of DOC Dissimilated	Decay Rate

	Bulk Waste	Bulk waste	1	0.2	0.5	0.057
Year Waste Disposed	**1986**					
Missing data procedure used?	N					
Number of Times Substituted						
Waste Type Details	Option	Waste Type	Percent by Weight	Degradable Organic Carbon Value	Fraction Of DOC Dissimilated	Decay Rate
	Bulk Waste	Bulk waste	1	0.2	0.5	0.057
Year Waste Disposed	**1985**					
Missing data procedure used?	N					
Number of Times Substituted						
Waste Type Details	Option	Waste Type	Percent by Weight	Degradable Organic Carbon Value	Fraction Of DOC Dissimilated	Decay Rate
	Bulk Waste	Bulk waste	1	0.2	0.5	0.057
Year Waste Disposed	**1984**					
Missing data procedure used?	N					
Number of Times Substituted						
Waste Type Details	Option	Waste Type	Percent by Weight	Degradable Organic Carbon Value	Fraction Of DOC Dissimilated	Decay Rate
	Bulk Waste	Bulk waste	1	0.2	0.5	0.057
Year Waste Disposed	**1983**					
Missing data procedure used?	N					
Number of Times Substituted						
Waste Type Details	Option	Waste Type	Percent by Weight	Degradable Organic Carbon Value	Fraction Of DOC Dissimilated	Decay Rate
	Bulk Waste	Bulk waste	1	0.2	0.5	0.057
Year Waste Disposed	**1982**					
Missing data procedure used?	N					
Number of Times Substituted						
Waste Type Details	Option	Waste Type	Percent by Weight	Degradable Organic Carbon Value	Fraction Of DOC Dissimilated	Decay Rate

	Bulk Waste	Bulk waste	1	0.2	0.5	0.057
Year Waste Disposed	**1981**					
Missing data procedure used?	N					
Number of Times Substituted						
Waste Type Details	Option	Waste Type	Percent by Weight	Degradable Organic Carbon Value	Fraction Of DOC Dissimilated	Decay Rate
	Bulk Waste	Bulk waste	1	0.2	0.5	0.057
Year Waste Disposed	**1980**					
Missing data procedure used?	N					
Number of Times Substituted						
Waste Type Details	Option	Waste Type	Percent by Weight	Degradable Organic Carbon Value	Fraction Of DOC Dissimilated	Decay Rate
	Bulk Waste	Bulk waste	1	0.2	0.5	0.057
Year Waste Disposed	**1979**					
Missing data procedure used?	N					
Number of Times Substituted						
Waste Type Details	Option	Waste Type	Percent by Weight	Degradable Organic Carbon Value	Fraction Of DOC Dissimilated	Decay Rate
	Bulk Waste	Bulk waste	1	0.2	0.5	0.057
Year Waste Disposed	**1978**					
Missing data procedure used?	N					
Number of Times Substituted						
Waste Type Details	Option	Waste Type	Percent by Weight	Degradable Organic Carbon Value	Fraction Of DOC Dissimilated	Decay Rate
	Bulk Waste	Bulk waste	1	0.2	0.5	0.057

Working Capacity Details

Were working capacities used to determine waste disposal quantities	N

Tipping Receipt Details

Were tipping receipts or company records used to determine waste disposal quantities	N

Method used for estimating all annual waste quantities that are not determined with the methods above

Method	Method #3: Use the landfill capacity or, for operating landfills, the amount of waste-in-place to estimate a constant average waste disposal quantity (Equation HH-3).

Method Start Year	1978
Method End Year	2006

Historical Estimation Population Details

Historical landfill Capacity	3214572Metric Tons
Reason	Records of waste received were unavailable for years prior to 2007

Methane Generation and Emissions for Landfills with LFG Collection Systems

Gas Collection System Information

System Manufacturer	Landtec, Waste Management, and ISCO
System Capacity	2294 (acfm)
Number of Wells	110

Methane Oxidation Fractions

Methane Oxidation Fraction HH-5	0.10
Methane Oxidation Fraction HH-6	0.10
Methane Oxidation Fraction HH-7	0.25
Methane Oxidation Fraction HH-8	0.25

Measurement Locations

Name	**01**		
Description	Common duct prior to flare skid and gas to electric plant		
Annual Operating Hours	8534 (Hours)		
Quantity of Recovered Methane	2616.607 (Metric Tons)		
Destruction Devices	Name	Annual Operating Hours	Destruction Efficiency
	Flare	602 (Hours)	0.99 (fraction (number between 0 and 1))
	Off-site Gas to Electric Plant	7932 (Hours)	1 (fraction (number between 0 and 1))

Methane Generation and Emissions values

Estimated Gas Collection Efficiency HH3	0.55 (decimal fraction)
Is Override Indicator?	N
Methane Generation Equation HH5	12673.44 (Metric Tons)
Is Override Indicator?	N
Methane Emissions Equation HH6	10331.58 (Metric Tons)
Is Override Indicator?	N
Methane Generation Equation HH7	3652.52 (Metric Tons)
Is Override Indicator?	N
Basis for Input Methane Generation Value	Equation HH-1
Methane Emission from Equation HH8	1703.15 (Metric Tons)
Is Override Indicator?	N

Gas Collection Systems details

Annual Volume FGCollected Gas Volumetric Flow	Measured Value	239879907.51 (scf)
	Is Substituted Indicator?	N

	Number of Times Substituted	
Annual Average Methane Concentration	Measured Value	56.8 (Number (between 0 and 100))
	Is Substituted Indicator?	N
	Number of Days Substituted	
	Number of Weeks Substituted	
	Number of Months Substituted	
	Number of Times Substituted	
Temperature Incorporated Indicator	Y	
Pressure Incorporated Indicator	Y	
LFG Flow Wet Basis Indicator	Y	
Methane Concentration Wet Basis Indicator	Y	
Site Destruction Location	Both	
Annual Quantity Of Recovered MethaneHH4	2616.61 (Metric Tons)	

Waste Depth Details

Area Type	Waste Depth	Surface Area
A1	0 (Meters)	149047.33 (Square Meters)
A2	13.97 (Meters)	130350.65 (Square Meters)
A3	0 (Meters)	0 (Square Meters)
A4	22.41 (Meters)	362197.55 (Square Meters)
A5	0 (Meters)	0 (Square Meters)

Equation HH-1 Details:

The fraction of CH4 in landfill gas (F), is it based on a measured value or default value	default
Fraction by volume of CH4 in landfill gas	0.5
An MCF value other than the default of 1 was used	N
Annual MCF Value	1.0

Annual Modeled Methane Generation	14081.60 (Metric Tons)
Annual Modeled Methane Generation User Overrided value?	N

2022 RY LANDGEM METHANE AND NMOC MODEL

Summary Report

Landfill Name or Identifier: Laurel Ridge Landfill

Date: Friday, July 7, 2023

Description/Comments:
Sourcewide model includes waste placed in GCCS excluded areas. Annual waste is the total waste received and does not exclude inert materials.

About LandGEM:

First-Order Decomposition Rate Equation:

$$Q_{CH_4} = \sum_{i=1}^{n} \sum_{j=0.1}^{1} kL_o \left(\frac{M_i}{10} \right) e^{-kt_{ij}}$$

Where,
Q_{CH4} = annual methane generation in the year of the calculation ($m^3/year$)
i = 1-year time increment
n = (year of the calculation) - (initial year of waste acceptance)
j = 0.1-year time increment
k = methane generation rate ($year^{-1}$)
L_o = potential methane generation capacity (m^3/Mg)
M_i = mass of waste accepted in the i^{th} year (Mg)
t_{ij} = age of the j^{th} section of waste mass M_i accepted in the i^{th} year (*decimal years*, e.g., 3.2 years)

LandGEM is based on a first-order decomposition rate equation for quantifying emissions from the decomposition of landfilled waste in municipal solid waste (MSW) landfills. The software provides a relatively simple approach to estimating landfill gas emissions. Model defaults are based on empirical data from U.S. landfills. Field test data can also be used in place of model defaults when available. Further guidance on EPA test methods, Clean Air Act (CAA) regulations, and other guidance regarding landfill gas emissions and control technology requirements can be found at http://www.epa.gov/ttnatw01/landfill/landflpg.html.

LandGEM is considered a screening tool — the better the input data, the better the estimates. Often, there are limitations with the available data regarding waste quantity and composition, variation in design and operating practices over time, and changes occurring over time that impact the emissions potential. Changes to landfill operation, such as operating under wet conditions through leachate recirculation or other liquid additions, will result in generating more gas at a faster rate. Defaults for estimating emissions for this type of operation are being developed to include in LandGEM along with defaults for convential landfills (no leachate or liquid additions) for developing emission inventories and determining CAA applicability. Refer to the Web site identified above for future updates.

Input Review

LANDFILL CHARACTERISTICS

Landfill Open Year	**1978**	
Landfill Closure Year (with 80-year limit)	**2034**	
Actual Closure Year (without limit)	***2034***	
Have Model Calculate Closure Year?	**Yes**	
Waste Design Capacity	**13,454,209**	*megagrams*

MODEL PARAMETERS

Methane Generation Rate, k	**0.040**	$year^{-1}$
Potential Methane Generation Capacity, L_o	**100**	m^3/Mg
NMOC Concentration	**1,008**	*ppmv as hexane*
Methane Content	**55**	*% by volume*

GASES / POLLUTANTS SELECTED

Gas / Pollutant #1:	**Total landfill gas**
Gas / Pollutant #2:	**Methane**
Gas / Pollutant #3:	**Carbon dioxide**
Gas / Pollutant #4:	**NMOC**

WASTE ACCEPTANCE RATES

Year	Waste Accepted		Waste-In-Place	
	(Mg/year)	*(short tons/year)*	*(Mg)*	*(short tons)*
1978	11,602	12,762	0	0
1979	11,602	12,762	11,602	12,762
1980	11,602	12,762	23,204	25,524
1981	11,602	12,762	34,805	38,286
1982	11,602	12,762	46,407	51,048
1983	85,325	93,858	58,009	63,810
1984	110,015	121,017	143,335	157,668
1985	110,015	121,017	253,350	278,685
1986	110,015	121,017	363,365	399,702
1987	110,015	121,017	473,381	520,719
1988	110,015	121,017	583,396	641,736
1989	110,015	121,017	693,412	762,753
1990	110,015	121,017	803,427	883,770
1991	110,015	121,017	913,443	1,004,787
1992	110,015	121,017	1,023,458	1,125,804
1993	137,604	151,364	1,133,474	1,246,821
1994	198,656	218,522	1,271,077	1,398,185
1995	220,007	242,008	1,469,734	1,616,707
1996	237,095	260,804	1,689,741	1,858,715
1997	244,694	269,163	1,926,835	2,119,519
1998	258,263	284,089	2,171,529	2,388,682
1999	258,578	284,436	2,429,792	2,672,771
2000	210,759	231,835	2,688,370	2,957,207
2001	219,045	240,950	2,899,129	3,189,042
2002	263,239	289,563	3,118,175	3,429,992
2003	252,760	278,036	3,381,414	3,719,555
2004	268,843	295,727	3,634,174	3,997,591
2005	209,960	230,956	3,903,016	4,293,318
2006	229,043	251,947	4,112,976	4,524,274
2007	265,455	292,000	4,342,019	4,776,221
2008	313,603	344,963	4,607,474	5,068,221
2009	310,710	341,781	4,921,076	5,413,184
2010	331,757	364,933	5,231,786	5,754,965
2011	315,882	347,470	5,563,544	6,119,898
2012	294,275	323,703	5,879,425	6,467,368
2013	283,956	312,352	6,173,701	6,791,071
2014	275,278	302,806	6,457,657	7,103,423
2015	293,327	322,660	6,732,935	7,406,229
2016	288,724	317,597	7,026,263	7,728,889
2017	294,614	324,075	7,314,987	8,046,486

WASTE ACCEPTANCE RATES (Continued)

Year	Waste Accepted		Waste-In-Place	
	(Mg/year)	*(short tons/year)*	*(Mg)*	*(short tons)*
2018	310,493	341,542	7,609,601	8,370,561
2019	328,089	360,898	7,920,094	8,712,103
2020	327,832	360,615	8,248,183	9,073,001
2021	355,641	391,205	8,576,015	9,433,616
2022	367,550	404,305	8,931,655	9,824,821
2023	367,550	404,305	9,299,205	10,229,126
2024	367,550	404,305	9,666,755	10,633,431
2025	367,550	404,305	10,034,305	11,037,736
2026	367,550	404,305	10,401,855	11,442,041
2027	367,550	404,305	10,769,405	11,846,346
2028	367,550	404,305	11,136,955	12,250,651
2029	367,550	404,305	11,504,505	12,654,956
2030	367,550	404,305	11,872,055	13,059,261
2031	367,550	404,305	12,239,605	13,463,566
2032	367,550	404,305	12,607,155	13,867,871
2033	367,550	404,305	12,974,705	14,272,176
2034	111,954	123,149	13,342,255	14,676,481
2035	0	0	13,454,209	14,799,630
2036	0	0	13,454,209	14,799,630
2037	0	0	13,454,209	14,799,630
2038	0	0	13,454,209	14,799,630
2039	0	0	13,454,209	14,799,630
2040	0	0	13,454,209	14,799,630
2041	0	0	13,454,209	14,799,630
2042	0	0	13,454,209	14,799,630
2043	0	0	13,454,209	14,799,630
2044	0	0	13,454,209	14,799,630
2045	0	0	13,454,209	14,799,630
2046	0	0	13,454,209	14,799,630
2047	0	0	13,454,209	14,799,630
2048	0	0	13,454,209	14,799,630
2049	0	0	13,454,209	14,799,630
2050	0	0	13,454,209	14,799,630
2051	0	0	13,454,209	14,799,630
2052	0	0	13,454,209	14,799,630
2053	0	0	13,454,209	14,799,630
2054	0	0	13,454,209	14,799,630
2055	0	0	13,454,209	14,799,630
2056	0	0	13,454,209	14,799,630
2057	0	0	13,454,209	14,799,630

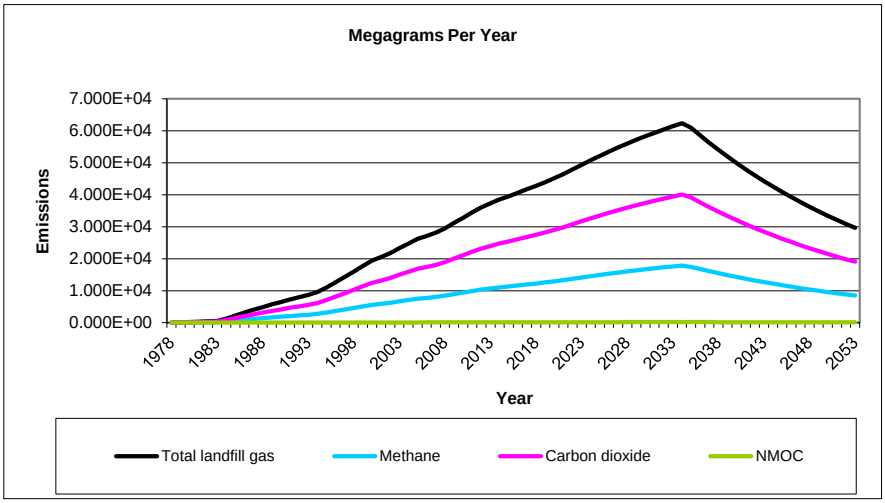
Pollutant Parameters

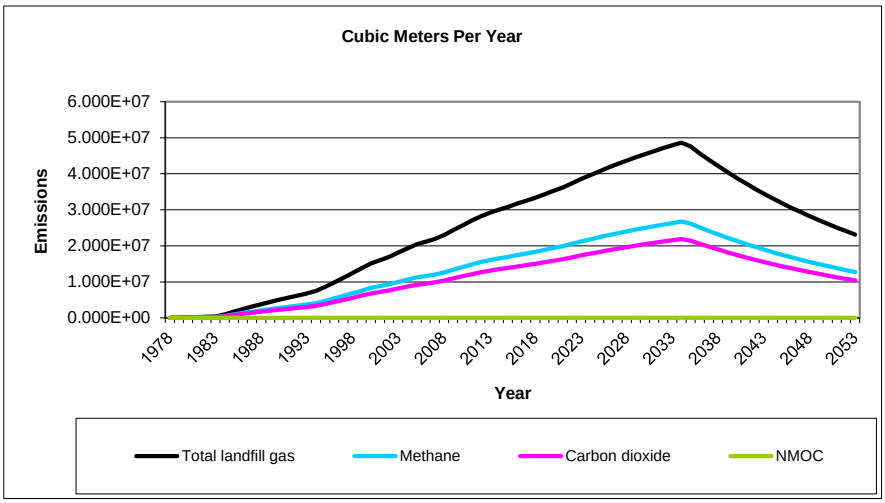
		Gas / Pollutant Default Parameters:		*User-specified Pollutant Parameters:*	
	Compound	Concentration (*ppmv*)	Molecular Weight	Concentration (*ppmv*)	Molecular Weight
Gases	Total landfill gas		0.00		
	Methane		16.04		
	Carbon dioxide		44.01		
	NMOC	4,000	86.18		
Pollutants	1,1,1-Trichloroethane (methyl chloroform) - HAP	0.48	133.41		
	1,1,2,2-Tetrachloroethane - HAP/VOC	1.1	167.85		
	1,1-Dichloroethane (ethylidene dichloride) - HAP/VOC	2.4	98.97		
	1,1-Dichloroethene (vinylidene chloride) - HAP/VOC	0.20	96.94		
	1,2-Dichloroethane (ethylene dichloride) - HAP/VOC	0.41	98.96		
	1,2-Dichloropropane (propylene dichloride) - HAP/VOC	0.18	112.99		
	2-Propanol (isopropyl alcohol) - VOC	50	60.11		
	Acetone	7.0	58.08		
	Acrylonitrile - HAP/VOC	6.3	53.06		
	Benzene - No or Unknown Co-disposal - HAP/VOC	1.9	78.11		
	Benzene - Co-disposal - HAP/VOC	11	78.11		
	Bromodichloromethane - VOC	3.1	163.83		
	Butane - VOC	5.0	58.12		
	Carbon disulfide - HAP/VOC	0.58	76.13		
	Carbon monoxide	140	28.01		
	Carbon tetrachloride - HAP/VOC	4.0E-03	153.84		
	Carbonyl sulfide - HAP/VOC	0.49	60.07		
	Chlorobenzene - HAP/VOC	0.25	112.56		
	Chlorodifluoromethane	1.3	86.47		
	Chloroethane (ethyl chloride) - HAP/VOC	1.3	64.52		
	Chloroform - HAP/VOC	0.03	119.39		
	Chloromethane - VOC	1.2	50.49		
	Dichlorobenzene - (HAP for para isomer/VOC)	0.21	147		
	Dichlorodifluoromethane	16	120.91		
	Dichlorofluoromethane - VOC	2.6	102.92		
	Dichloromethane (methylene chloride) - HAP	14	84.94		
	Dimethyl sulfide (methyl sulfide) - VOC	7.8	62.13		
	Ethane	890	30.07		
	Ethanol - VOC	27	46.08		

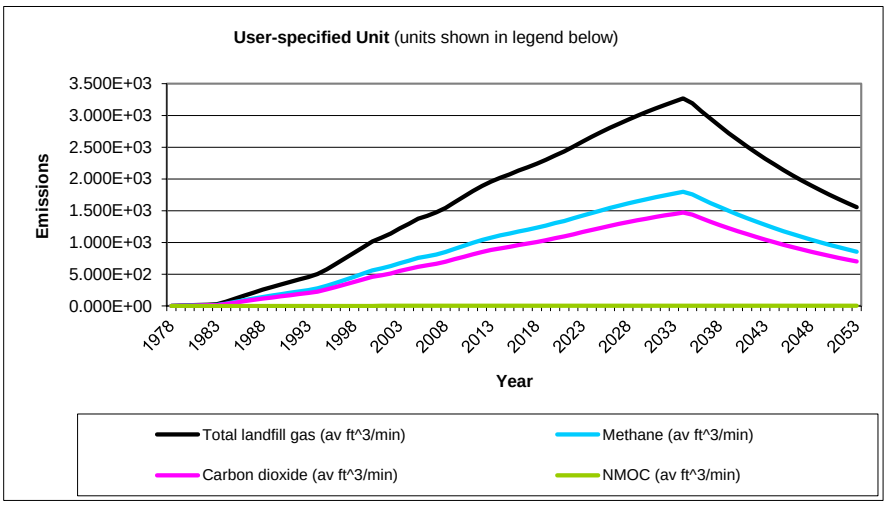
Pollutant Parameters (Continued)

		Gas / Pollutant Default Parameters:		*User-specified Pollutant Parameters:*	
	Compound	Concentration (*ppmv*)	Molecular Weight	Concentration (*ppmv*)	Molecular Weight
Pollutants	Ethyl mercaptan (ethanethiol) - VOC	2.3	62.13		
	Ethylbenzene - HAP/VOC	4.6	106.16		
	Ethylene dibromide - HAP/VOC	1.0E-03	187.88		
	Fluorotrichloromethane - VOC	0.76	137.38		
	Hexane - HAP/VOC	6.6	86.18		
	Hydrogen sulfide	36	34.08	95.00	
	Mercury (total) - HAP	2.9E-04	200.61		
	Methyl ethyl ketone - HAP/VOC	7.1	72.11		
	Methyl isobutyl ketone - HAP/VOC	1.9	100.16		
	Methyl mercaptan - VOC	2.5	48.11		
	Pentane - VOC	3.3	72.15		
	Perchloroethylene (tetrachloroethylene) - HAP	3.7	165.83		
	Propane - VOC	11	44.09		
	t-1,2-Dichloroethene - VOC	2.8	96.94		
	Toluene - No or Unknown Co-disposal - HAP/VOC	39	92.13		
	Toluene - Co-disposal - HAP/VOC	170	92.13		
	Trichloroethylene (trichloroethene) - HAP/VOC	2.8	131.40		
	Vinyl chloride - HAP/VOC	7.3	62.50		
	Xylenes - HAP/VOC	12	106.16		

Graphs


Megagrams Per Year
Emissions
7.000E+04
6.000E+04
5.000E+04
4.000E+04
3.000E+04
2.000E+04
1.000E+04
0.000E+00
1978
1983
1988
1993
1998
2003
2008
2013
2018
2023
2028
2033
2038
2043
2048
2053
Year
Total landfill gas
Methane
Carbon dioxide
NMOC


Cubic Meters Per Year
Emissions
6.000E+07
5.000E+07
4.000E+07
3.000E+07
2.000E+07
1.000E+07
0.000E+00
1978
1983
1988
1993
1998
2003
2008
2013
2018
2023
2028
2033
2038
2043
2048
2053
Year
Total landfill gas
Methane
Carbon dioxide
NMOC


User-specified Unit (units shown in legend below)
Emissions
3.500E+03
3.000E+03
2.500E+03
2.000E+03
1.500E+03
1.000E+03
5.000E+02
0.000E+00
1978
1983
1988
1993
1998
2003
2008
2013
2018
2023
2028
2033
2038
2043
2048
2053
Year
Total landfill gas (av ft^3/min)
Methane (av ft^3/min)
Carbon dioxide (av ft^3/min)
NMOC (av ft^3/min)

Results

Year	Total landfill gas			Methane		
	(Mg/year)	*(m^3/year)*	*(av ft^3/min)*	*(Mg/year)*	*(m^3/year)*	*(av ft^3/min)*
1978	0	0	0	0	0	0
1979	1.063E+02	8.288E+04	5.569E+00	3.041E+01	4.558E+04	3.063E+00
1980	2.084E+02	1.625E+05	1.092E+01	5.963E+01	8.938E+04	6.005E+00
1981	3.065E+02	2.390E+05	1.606E+01	8.770E+01	1.315E+05	8.832E+00
1982	4.007E+02	3.125E+05	2.100E+01	1.147E+02	1.719E+05	1.155E+01
1983	4.913E+02	3.831E+05	2.574E+01	1.406E+02	2.107E+05	1.416E+01
1984	1.254E+03	9.776E+05	6.569E+01	3.587E+02	5.377E+05	3.613E+01
1985	2.212E+03	1.725E+06	1.159E+02	6.330E+02	9.489E+05	6.375E+01
1986	3.133E+03	2.443E+06	1.642E+02	8.966E+02	1.344E+06	9.030E+01
1987	4.018E+03	3.134E+06	2.105E+02	1.150E+03	1.723E+06	1.158E+02
1988	4.868E+03	3.797E+06	2.551E+02	1.393E+03	2.088E+06	1.403E+02
1989	5.685E+03	4.434E+06	2.979E+02	1.627E+03	2.438E+06	1.638E+02
1990	6.469E+03	5.046E+06	3.390E+02	1.851E+03	2.775E+06	1.865E+02
1991	7.223E+03	5.634E+06	3.785E+02	2.067E+03	3.099E+06	2.082E+02
1992	7.948E+03	6.199E+06	4.165E+02	2.274E+03	3.409E+06	2.291E+02
1993	8.644E+03	6.741E+06	4.530E+02	2.474E+03	3.708E+06	2.491E+02
1994	9.565E+03	7.460E+06	5.012E+02	2.737E+03	4.103E+06	2.757E+02
1995	1.101E+04	8.587E+06	5.769E+02	3.151E+03	4.723E+06	3.173E+02
1996	1.259E+04	9.822E+06	6.599E+02	3.604E+03	5.402E+06	3.630E+02
1997	1.427E+04	1.113E+07	7.478E+02	4.084E+03	6.122E+06	4.113E+02
1998	1.595E+04	1.244E+07	8.360E+02	4.565E+03	6.843E+06	4.598E+02
1999	1.769E+04	1.380E+07	9.271E+02	5.063E+03	7.589E+06	5.099E+02
2000	1.937E+04	1.510E+07	1.015E+03	5.542E+03	8.308E+06	5.582E+02
2001	2.054E+04	1.602E+07	1.076E+03	5.878E+03	8.810E+06	5.919E+02
2002	2.174E+04	1.695E+07	1.139E+03	6.221E+03	9.325E+06	6.266E+02
2003	2.330E+04	1.817E+07	1.221E+03	6.667E+03	9.994E+06	6.715E+02
2004	2.470E+04	1.926E+07	1.294E+03	7.068E+03	1.059E+07	7.119E+02
2005	2.619E+04	2.043E+07	1.373E+03	7.496E+03	1.124E+07	7.549E+02
2006	2.709E+04	2.113E+07	1.420E+03	7.752E+03	1.162E+07	7.808E+02
2007	2.812E+04	2.194E+07	1.474E+03	8.049E+03	1.206E+07	8.106E+02
2008	2.945E+04	2.297E+07	1.543E+03	8.429E+03	1.263E+07	8.489E+02
2009	3.117E+04	2.431E+07	1.633E+03	8.920E+03	1.337E+07	8.984E+02
2010	3.279E+04	2.558E+07	1.719E+03	9.385E+03	1.407E+07	9.452E+02
2011	3.455E+04	2.694E+07	1.810E+03	9.887E+03	1.482E+07	9.957E+02
2012	3.609E+04	2.814E+07	1.891E+03	1.033E+04	1.548E+07	1.040E+03
2013	3.737E+04	2.914E+07	1.958E+03	1.069E+04	1.603E+07	1.077E+03
2014	3.850E+04	3.003E+07	2.018E+03	1.102E+04	1.652E+07	1.110E+03
2015	3.951E+04	3.082E+07	2.071E+03	1.131E+04	1.695E+07	1.139E+03
2016	4.065E+04	3.170E+07	2.130E+03	1.163E+04	1.744E+07	1.172E+03
2017	4.170E+04	3.252E+07	2.185E+03	1.193E+04	1.789E+07	1.202E+03
2018	4.276E+04	3.335E+07	2.241E+03	1.224E+04	1.834E+07	1.233E+03
2019	4.393E+04	3.426E+07	2.302E+03	1.257E+04	1.884E+07	1.266E+03
2020	4.521E+04	3.526E+07	2.369E+03	1.294E+04	1.939E+07	1.303E+03
2021	4.644E+04	3.622E+07	2.434E+03	1.329E+04	1.992E+07	1.339E+03
2022	4.788E+04	3.734E+07	2.509E+03	1.370E+04	2.054E+07	1.380E+03
2023	4.937E+04	3.850E+07	2.587E+03	1.413E+04	2.118E+07	1.423E+03
2024	5.080E+04	3.962E+07	2.662E+03	1.454E+04	2.179E+07	1.464E+03
2025	5.217E+04	4.069E+07	2.734E+03	1.493E+04	2.238E+07	1.504E+03
2026	5.350E+04	4.172E+07	2.803E+03	1.531E+04	2.295E+07	1.542E+03
2027	5.476E+04	4.271E+07	2.870E+03	1.567E+04	2.349E+07	1.578E+03

Results (Continued)

Year	Total landfill gas			Methane		
	(Mg/year)	*(m^3/year)*	*(av ft^3/min)*	*(Mg/year)*	*(m^3/year)*	*(av ft^3/min)*
2028	5.598E+04	4.366E+07	2.934E+03	1.602E+04	2.401E+07	1.614E+03
2029	5.715E+04	4.458E+07	2.995E+03	1.636E+04	2.452E+07	1.647E+03
2030	5.828E+04	4.545E+07	3.054E+03	1.668E+04	2.500E+07	1.680E+03
2031	5.936E+04	4.630E+07	3.111E+03	1.699E+04	2.546E+07	1.711E+03
2032	6.040E+04	4.711E+07	3.165E+03	1.729E+04	2.591E+07	1.741E+03
2033	6.140E+04	4.789E+07	3.217E+03	1.757E+04	2.634E+07	1.770E+03
2034	6.236E+04	4.863E+07	3.268E+03	1.785E+04	2.675E+07	1.797E+03
2035	6.094E+04	4.753E+07	3.193E+03	1.744E+04	2.614E+07	1.756E+03
2036	5.855E+04	4.566E+07	3.068E+03	1.676E+04	2.511E+07	1.687E+03
2037	5.625E+04	4.387E+07	2.948E+03	1.610E+04	2.413E+07	1.621E+03
2038	5.405E+04	4.215E+07	2.832E+03	1.547E+04	2.318E+07	1.558E+03
2039	5.193E+04	4.050E+07	2.721E+03	1.486E+04	2.227E+07	1.497E+03
2040	4.989E+04	3.891E+07	2.614E+03	1.428E+04	2.140E+07	1.438E+03
2041	4.794E+04	3.739E+07	2.512E+03	1.372E+04	2.056E+07	1.382E+03
2042	4.606E+04	3.592E+07	2.413E+03	1.318E+04	1.976E+07	1.327E+03
2043	4.425E+04	3.451E+07	2.319E+03	1.266E+04	1.898E+07	1.275E+03
2044	4.251E+04	3.316E+07	2.228E+03	1.217E+04	1.824E+07	1.225E+03
2045	4.085E+04	3.186E+07	2.141E+03	1.169E+04	1.752E+07	1.177E+03
2046	3.925E+04	3.061E+07	2.057E+03	1.123E+04	1.683E+07	1.131E+03
2047	3.771E+04	2.941E+07	1.976E+03	1.079E+04	1.617E+07	1.087E+03
2048	3.623E+04	2.826E+07	1.898E+03	1.037E+04	1.554E+07	1.044E+03
2049	3.481E+04	2.715E+07	1.824E+03	9.961E+03	1.493E+07	1.003E+03
2050	3.344E+04	2.608E+07	1.753E+03	9.571E+03	1.435E+07	9.639E+02
2051	3.213E+04	2.506E+07	1.684E+03	9.195E+03	1.378E+07	9.261E+02
2052	3.087E+04	2.408E+07	1.618E+03	8.835E+03	1.324E+07	8.898E+02
2053	2.966E+04	2.313E+07	1.554E+03	8.488E+03	1.272E+07	8.549E+02
2054	2.850E+04	2.223E+07	1.493E+03	8.156E+03	1.222E+07	8.214E+02
2055	2.738E+04	2.136E+07	1.435E+03	7.836E+03	1.175E+07	7.892E+02
2056	2.631E+04	2.052E+07	1.379E+03	7.529E+03	1.128E+07	7.582E+02
2057	2.528E+04	1.971E+07	1.325E+03	7.233E+03	1.084E+07	7.285E+02
2058	2.428E+04	1.894E+07	1.273E+03	6.950E+03	1.042E+07	6.999E+02
2059	2.333E+04	1.820E+07	1.223E+03	6.677E+03	1.001E+07	6.725E+02
2060	2.242E+04	1.748E+07	1.175E+03	6.415E+03	9.616E+06	6.461E+02
2061	2.154E+04	1.680E+07	1.129E+03	6.164E+03	9.239E+06	6.208E+02
2062	2.069E+04	1.614E+07	1.084E+03	5.922E+03	8.877E+06	5.964E+02
2063	1.988E+04	1.551E+07	1.042E+03	5.690E+03	8.529E+06	5.731E+02
2064	1.910E+04	1.490E+07	1.001E+03	5.467E+03	8.194E+06	5.506E+02
2065	1.835E+04	1.431E+07	9.618E+02	5.253E+03	7.873E+06	5.290E+02
2066	1.763E+04	1.375E+07	9.241E+02	5.047E+03	7.564E+06	5.083E+02
2067	1.694E+04	1.321E+07	8.879E+02	4.849E+03	7.268E+06	4.883E+02
2068	1.628E+04	1.270E+07	8.530E+02	4.659E+03	6.983E+06	4.692E+02
2069	1.564E+04	1.220E+07	8.196E+02	4.476E+03	6.709E+06	4.508E+02
2070	1.503E+04	1.172E+07	7.875E+02	4.300E+03	6.446E+06	4.331E+02
2071	1.444E+04	1.126E+07	7.566E+02	4.132E+03	6.193E+06	4.161E+02
2072	1.387E+04	1.082E+07	7.269E+02	3.970E+03	5.950E+06	3.998E+02
2073	1.333E+04	1.039E+07	6.984E+02	3.814E+03	5.717E+06	3.841E+02
2074	1.281E+04	9.987E+06	6.710E+02	3.665E+03	5.493E+06	3.691E+02
2075	1.230E+04	9.595E+06	6.447E+02	3.521E+03	5.277E+06	3.546E+02
2076	1.182E+04	9.219E+06	6.194E+02	3.383E+03	5.071E+06	3.407E+02
2077	1.136E+04	8.858E+06	5.951E+02	3.250E+03	4.872E+06	3.273E+02
2078	1.091E+04	8.510E+06	5.718E+02	3.123E+03	4.681E+06	3.145E+02

Results (Continued)

Year	Total landfill gas			Methane		
	(Mg/year)	*(m^3/year)*	*(av ft^3/min)*	*(Mg/year)*	*(m^3/year)*	*(av ft^3/min)*
2079	1.048E+04	8.177E+06	5.494E+02	3.000E+03	4.497E+06	3.022E+02
2080	1.007E+04	7.856E+06	5.278E+02	2.883E+03	4.321E+06	2.903E+02
2081	9.678E+03	7.548E+06	5.072E+02	2.770E+03	4.151E+06	2.789E+02
2082	9.298E+03	7.252E+06	4.873E+02	2.661E+03	3.989E+06	2.680E+02
2083	8.934E+03	6.968E+06	4.682E+02	2.557E+03	3.832E+06	2.575E+02
2084	8.584E+03	6.695E+06	4.498E+02	2.456E+03	3.682E+06	2.474E+02
2085	8.247E+03	6.432E+06	4.322E+02	2.360E+03	3.538E+06	2.377E+02
2086	7.924E+03	6.180E+06	4.152E+02	2.268E+03	3.399E+06	2.284E+02
2087	7.613E+03	5.938E+06	3.989E+02	2.179E+03	3.266E+06	2.194E+02
2088	7.314E+03	5.705E+06	3.833E+02	2.093E+03	3.138E+06	2.108E+02
2089	7.028E+03	5.481E+06	3.683E+02	2.011E+03	3.015E+06	2.025E+02
2090	6.752E+03	5.266E+06	3.538E+02	1.932E+03	2.896E+06	1.946E+02
2091	6.487E+03	5.060E+06	3.400E+02	1.857E+03	2.783E+06	1.870E+02
2092	6.233E+03	4.861E+06	3.266E+02	1.784E+03	2.674E+06	1.796E+02
2093	5.989E+03	4.671E+06	3.138E+02	1.714E+03	2.569E+06	1.726E+02
2094	5.754E+03	4.487E+06	3.015E+02	1.647E+03	2.468E+06	1.658E+02
2095	5.528E+03	4.312E+06	2.897E+02	1.582E+03	2.371E+06	1.593E+02
2096	5.311E+03	4.142E+06	2.783E+02	1.520E+03	2.278E+06	1.531E+02
2097	5.103E+03	3.980E+06	2.674E+02	1.460E+03	2.189E+06	1.471E+02
2098	4.903E+03	3.824E+06	2.569E+02	1.403E+03	2.103E+06	1.413E+02
2099	4.711E+03	3.674E+06	2.469E+02	1.348E+03	2.021E+06	1.358E+02
2100	4.526E+03	3.530E+06	2.372E+02	1.295E+03	1.941E+06	1.304E+02
2101	4.349E+03	3.392E+06	2.279E+02	1.244E+03	1.865E+06	1.253E+02
2102	4.178E+03	3.259E+06	2.189E+02	1.196E+03	1.792E+06	1.204E+02
2103	4.014E+03	3.131E+06	2.104E+02	1.149E+03	1.722E+06	1.157E+02
2104	3.857E+03	3.008E+06	2.021E+02	1.104E+03	1.654E+06	1.112E+02
2105	3.706E+03	2.890E+06	1.942E+02	1.060E+03	1.590E+06	1.068E+02
2106	3.560E+03	2.777E+06	1.866E+02	1.019E+03	1.527E+06	1.026E+02
2107	3.421E+03	2.668E+06	1.793E+02	9.789E+02	1.467E+06	9.859E+01
2108	3.287E+03	2.563E+06	1.722E+02	9.405E+02	1.410E+06	9.472E+01
2109	3.158E+03	2.463E+06	1.655E+02	9.037E+02	1.355E+06	9.101E+01
2110	3.034E+03	2.366E+06	1.590E+02	8.682E+02	1.301E+06	8.744E+01
2111	2.915E+03	2.273E+06	1.528E+02	8.342E+02	1.250E+06	8.401E+01
2112	2.801E+03	2.184E+06	1.468E+02	8.015E+02	1.201E+06	8.072E+01
2113	2.691E+03	2.099E+06	1.410E+02	7.701E+02	1.154E+06	7.755E+01
2114	2.585E+03	2.016E+06	1.355E+02	7.399E+02	1.109E+06	7.451E+01
2115	2.484E+03	1.937E+06	1.302E+02	7.109E+02	1.066E+06	7.159E+01
2116	2.387E+03	1.861E+06	1.251E+02	6.830E+02	1.024E+06	6.878E+01
2117	2.293E+03	1.788E+06	1.202E+02	6.562E+02	9.836E+05	6.609E+01
2118	2.203E+03	1.718E+06	1.154E+02	6.305E+02	9.450E+05	6.350E+01

Results (Continued)

Year	Carbon dioxide			NMOC		
	(Mg/year)	*(m^3/year)*	*(av ft^3/min)*	*(Mg/year)*	*(m^3/year)*	*(av ft^3/min)*
1978	0	0	0	0	0	0
1979	6.827E+01	3.729E+04	2.506E+00	2.994E-01	8.354E+01	5.613E-03
1980	1.339E+02	7.313E+04	4.913E+00	5.872E-01	1.638E+02	1.101E-02
1981	1.969E+02	1.076E+05	7.227E+00	8.636E-01	2.409E+02	1.619E-02
1982	2.574E+02	1.406E+05	9.449E+00	1.129E+00	3.150E+02	2.117E-02
1983	3.156E+02	1.724E+05	1.158E+01	1.384E+00	3.862E+02	2.595E-02
1984	8.053E+02	4.399E+05	2.956E+01	3.532E+00	9.855E+02	6.621E-02
1985	1.421E+03	7.763E+05	5.216E+01	6.233E+00	1.739E+03	1.168E-01
1986	2.013E+03	1.100E+06	7.388E+01	8.828E+00	2.463E+03	1.655E-01
1987	2.581E+03	1.410E+06	9.474E+01	1.132E+01	3.159E+03	2.122E-01
1988	3.127E+03	1.708E+06	1.148E+02	1.372E+01	3.827E+03	2.571E-01
1989	3.652E+03	1.995E+06	1.341E+02	1.602E+01	4.469E+03	3.003E-01
1990	4.156E+03	2.271E+06	1.526E+02	1.823E+01	5.086E+03	3.417E-01
1991	4.641E+03	2.535E+06	1.703E+02	2.036E+01	5.679E+03	3.816E-01
1992	5.106E+03	2.789E+06	1.874E+02	2.240E+01	6.248E+03	4.198E-01
1993	5.553E+03	3.034E+06	2.038E+02	2.436E+01	6.795E+03	4.566E-01
1994	6.145E+03	3.357E+06	2.256E+02	2.695E+01	7.520E+03	5.053E-01
1995	7.073E+03	3.864E+06	2.596E+02	3.102E+01	8.655E+03	5.816E-01
1996	8.090E+03	4.420E+06	2.970E+02	3.549E+01	9.900E+03	6.652E-01
1997	9.168E+03	5.009E+06	3.365E+02	4.021E+01	1.122E+04	7.538E-01
1998	1.025E+04	5.599E+06	3.762E+02	4.495E+01	1.254E+04	8.426E-01
1999	1.137E+04	6.209E+06	4.172E+02	4.986E+01	1.391E+04	9.346E-01
2000	1.244E+04	6.797E+06	4.567E+02	5.458E+01	1.523E+04	1.023E+00
2001	1.319E+04	7.208E+06	4.843E+02	5.788E+01	1.615E+04	1.085E+00
2002	1.397E+04	7.630E+06	5.126E+02	6.126E+01	1.709E+04	1.148E+00
2003	1.497E+04	8.177E+06	5.494E+02	6.565E+01	1.832E+04	1.231E+00
2004	1.587E+04	8.669E+06	5.824E+02	6.960E+01	1.942E+04	1.305E+00
2005	1.683E+04	9.193E+06	6.177E+02	7.381E+01	2.059E+04	1.384E+00
2006	1.740E+04	9.507E+06	6.388E+02	7.634E+01	2.130E+04	1.431E+00
2007	1.807E+04	9.871E+06	6.632E+02	7.926E+01	2.211E+04	1.486E+00
2008	1.892E+04	1.034E+07	6.946E+02	8.300E+01	2.316E+04	1.556E+00
2009	2.003E+04	1.094E+07	7.351E+02	8.784E+01	2.451E+04	1.647E+00
2010	2.107E+04	1.151E+07	7.733E+02	9.241E+01	2.578E+04	1.732E+00
2011	2.219E+04	1.212E+07	8.147E+02	9.735E+01	2.716E+04	1.825E+00
2012	2.318E+04	1.266E+07	8.510E+02	1.017E+02	2.837E+04	1.906E+00
2013	2.401E+04	1.311E+07	8.811E+02	1.053E+02	2.938E+04	1.974E+00
2014	2.474E+04	1.351E+07	9.079E+02	1.085E+02	3.027E+04	2.034E+00
2015	2.539E+04	1.387E+07	9.318E+02	1.113E+02	3.106E+04	2.087E+00
2016	2.612E+04	1.427E+07	9.586E+02	1.146E+02	3.196E+04	2.147E+00
2017	2.679E+04	1.464E+07	9.834E+02	1.175E+02	3.278E+04	2.203E+00
2018	2.747E+04	1.501E+07	1.008E+03	1.205E+02	3.362E+04	2.259E+00
2019	2.822E+04	1.542E+07	1.036E+03	1.238E+02	3.454E+04	2.321E+00
2020	2.905E+04	1.587E+07	1.066E+03	1.274E+02	3.555E+04	2.388E+00
2021	2.984E+04	1.630E+07	1.095E+03	1.309E+02	3.651E+04	2.453E+00
2022	3.076E+04	1.680E+07	1.129E+03	1.349E+02	3.764E+04	2.529E+00
2023	3.172E+04	1.733E+07	1.164E+03	1.391E+02	3.881E+04	2.608E+00
2024	3.264E+04	1.783E+07	1.198E+03	1.432E+02	3.994E+04	2.683E+00
2025	3.352E+04	1.831E+07	1.230E+03	1.470E+02	4.102E+04	2.756E+00
2026	3.437E+04	1.877E+07	1.261E+03	1.507E+02	4.206E+04	2.826E+00
2027	3.518E+04	1.922E+07	1.291E+03	1.543E+02	4.305E+04	2.893E+00

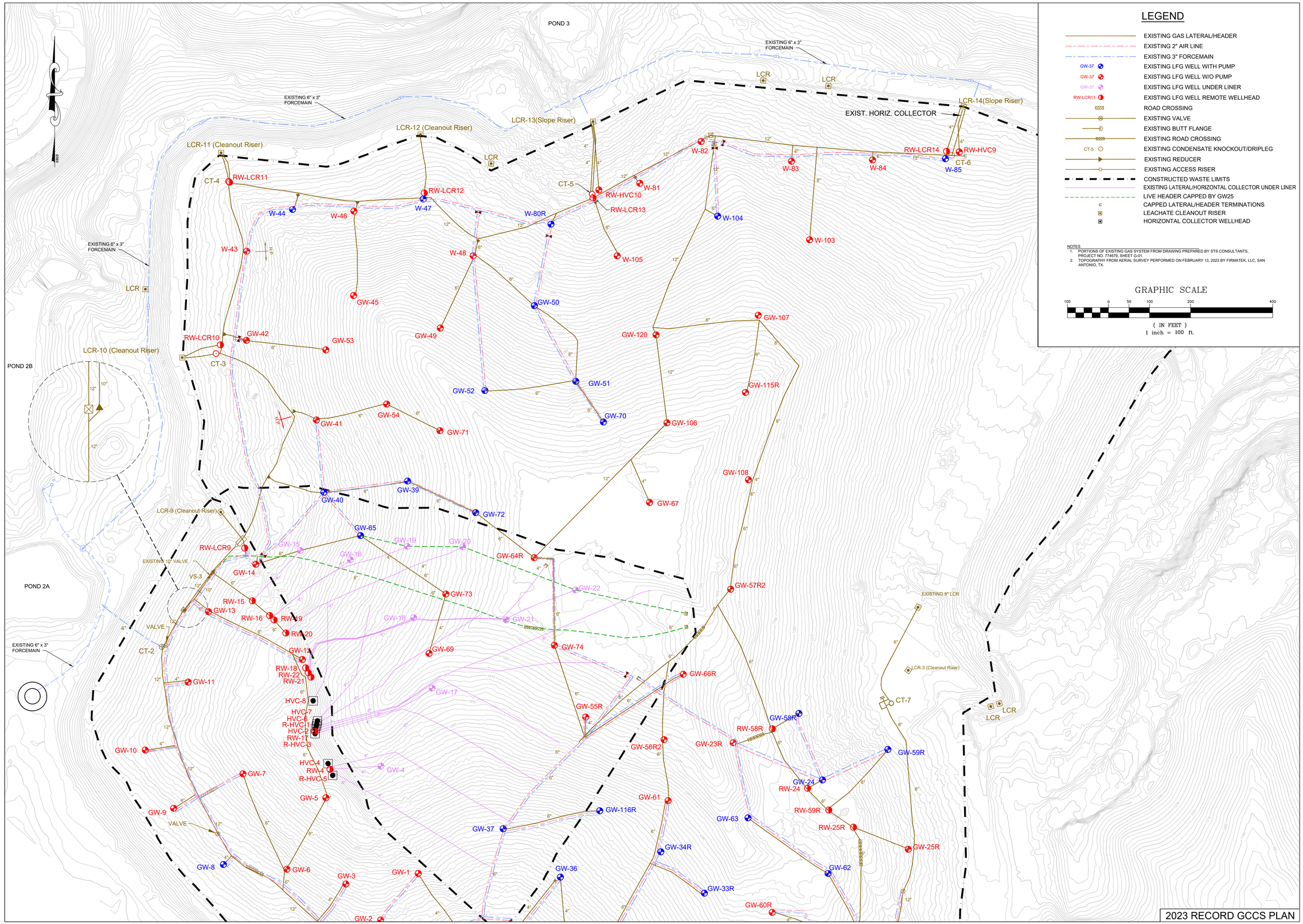
Results (Continued)

Year	Carbon dioxide			NMOC		
	(Mg/year)	*(m^3/year)*	*(av ft^3/min)*	*(Mg/year)*	*(m^3/year)*	*(av ft^3/min)*
2028	3.597E+04	1.965E+07	1.320E+03	1.578E+02	4.401E+04	2.957E+00
2029	3.672E+04	2.006E+07	1.348E+03	1.611E+02	4.493E+04	3.019E+00
2030	3.744E+04	2.045E+07	1.374E+03	1.642E+02	4.582E+04	3.078E+00
2031	3.814E+04	2.083E+07	1.400E+03	1.673E+02	4.667E+04	3.136E+00
2032	3.880E+04	2.120E+07	1.424E+03	1.702E+02	4.748E+04	3.190E+00
2033	3.944E+04	2.155E+07	1.448E+03	1.730E+02	4.827E+04	3.243E+00
2034	4.006E+04	2.189E+07	1.470E+03	1.757E+02	4.902E+04	3.294E+00
2035	3.915E+04	2.139E+07	1.437E+03	1.717E+02	4.791E+04	3.219E+00
2036	3.761E+04	2.055E+07	1.381E+03	1.650E+02	4.603E+04	3.093E+00
2037	3.614E+04	1.974E+07	1.327E+03	1.585E+02	4.422E+04	2.971E+00
2038	3.472E+04	1.897E+07	1.274E+03	1.523E+02	4.249E+04	2.855E+00
2039	3.336E+04	1.822E+07	1.225E+03	1.463E+02	4.082E+04	2.743E+00
2040	3.205E+04	1.751E+07	1.177E+03	1.406E+02	3.922E+04	2.635E+00
2041	3.080E+04	1.682E+07	1.130E+03	1.351E+02	3.768E+04	2.532E+00
2042	2.959E+04	1.616E+07	1.086E+03	1.298E+02	3.621E+04	2.433E+00
2043	2.843E+04	1.553E+07	1.043E+03	1.247E+02	3.479E+04	2.337E+00
2044	2.731E+04	1.492E+07	1.003E+03	1.198E+02	3.342E+04	2.246E+00
2045	2.624E+04	1.434E+07	9.632E+02	1.151E+02	3.211E+04	2.158E+00
2046	2.521E+04	1.377E+07	9.255E+02	1.106E+02	3.085E+04	2.073E+00
2047	2.422E+04	1.323E+07	8.892E+02	1.063E+02	2.964E+04	1.992E+00
2048	2.327E+04	1.271E+07	8.543E+02	1.021E+02	2.848E+04	1.914E+00
2049	2.236E+04	1.222E+07	8.208E+02	9.809E+01	2.736E+04	1.839E+00
2050	2.149E+04	1.174E+07	7.886E+02	9.424E+01	2.629E+04	1.767E+00
2051	2.064E+04	1.128E+07	7.577E+02	9.055E+01	2.526E+04	1.697E+00
2052	1.983E+04	1.083E+07	7.280E+02	8.700E+01	2.427E+04	1.631E+00
2053	1.906E+04	1.041E+07	6.995E+02	8.359E+01	2.332E+04	1.567E+00
2054	1.831E+04	1.000E+07	6.720E+02	8.031E+01	2.240E+04	1.505E+00
2055	1.759E+04	9.610E+06	6.457E+02	7.716E+01	2.153E+04	1.446E+00
2056	1.690E+04	9.233E+06	6.204E+02	7.413E+01	2.068E+04	1.390E+00
2057	1.624E+04	8.871E+06	5.960E+02	7.123E+01	1.987E+04	1.335E+00
2058	1.560E+04	8.523E+06	5.727E+02	6.843E+01	1.909E+04	1.283E+00
2059	1.499E+04	8.189E+06	5.502E+02	6.575E+01	1.834E+04	1.232E+00
2060	1.440E+04	7.868E+06	5.286E+02	6.317E+01	1.762E+04	1.184E+00
2061	1.384E+04	7.559E+06	5.079E+02	6.070E+01	1.693E+04	1.138E+00
2062	1.329E+04	7.263E+06	4.880E+02	5.832E+01	1.627E+04	1.093E+00
2063	1.277E+04	6.978E+06	4.689E+02	5.603E+01	1.563E+04	1.050E+00
2064	1.227E+04	6.705E+06	4.505E+02	5.383E+01	1.502E+04	1.009E+00
2065	1.179E+04	6.442E+06	4.328E+02	5.172E+01	1.443E+04	9.695E-01
2066	1.133E+04	6.189E+06	4.158E+02	4.969E+01	1.386E+04	9.315E-01
2067	1.088E+04	5.946E+06	3.995E+02	4.774E+01	1.332E+04	8.950E-01
2068	1.046E+04	5.713E+06	3.839E+02	4.587E+01	1.280E+04	8.599E-01
2069	1.005E+04	5.489E+06	3.688E+02	4.407E+01	1.230E+04	8.262E-01
2070	9.654E+03	5.274E+06	3.544E+02	4.235E+01	1.181E+04	7.938E-01
2071	9.275E+03	5.067E+06	3.405E+02	4.069E+01	1.135E+04	7.626E-01
2072	8.912E+03	4.868E+06	3.271E+02	3.909E+01	1.091E+04	7.327E-01
2073	8.562E+03	4.678E+06	3.143E+02	3.756E+01	1.048E+04	7.040E-01
2074	8.227E+03	4.494E+06	3.020E+02	3.608E+01	1.007E+04	6.764E-01
2075	7.904E+03	4.318E+06	2.901E+02	3.467E+01	9.672E+03	6.499E-01
2076	7.594E+03	4.149E+06	2.787E+02	3.331E+01	9.293E+03	6.244E-01
2077	7.296E+03	3.986E+06	2.678E+02	3.200E+01	8.929E+03	5.999E-01
2078	7.010E+03	3.830E+06	2.573E+02	3.075E+01	8.578E+03	5.764E-01

Results (Continued)

Year	Carbon dioxide			NMOC		
	(Mg/year)	*(m^3/year)*	*(av ft^3/min)*	*(Mg/year)*	*(m^3/year)*	*(av ft^3/min)*
2079	6.735E+03	3.680E+06	2.472E+02	2.954E+01	8.242E+03	5.538E-01
2080	6.471E+03	3.535E+06	2.375E+02	2.839E+01	7.919E+03	5.321E-01
2081	6.218E+03	3.397E+06	2.282E+02	2.727E+01	7.608E+03	5.112E-01
2082	5.974E+03	3.263E+06	2.193E+02	2.620E+01	7.310E+03	4.912E-01
2083	5.739E+03	3.135E+06	2.107E+02	2.518E+01	7.023E+03	4.719E-01
2084	5.514E+03	3.013E+06	2.024E+02	2.419E+01	6.748E+03	4.534E-01
2085	5.298E+03	2.894E+06	1.945E+02	2.324E+01	6.483E+03	4.356E-01
2086	5.090E+03	2.781E+06	1.868E+02	2.233E+01	6.229E+03	4.185E-01
2087	4.891E+03	2.672E+06	1.795E+02	2.145E+01	5.985E+03	4.021E-01
2088	4.699E+03	2.567E+06	1.725E+02	2.061E+01	5.750E+03	3.864E-01
2089	4.515E+03	2.466E+06	1.657E+02	1.980E+01	5.525E+03	3.712E-01
2090	4.338E+03	2.370E+06	1.592E+02	1.903E+01	5.308E+03	3.567E-01
2091	4.168E+03	2.277E+06	1.530E+02	1.828E+01	5.100E+03	3.427E-01
2092	4.004E+03	2.188E+06	1.470E+02	1.756E+01	4.900E+03	3.292E-01
2093	3.847E+03	2.102E+06	1.412E+02	1.688E+01	4.708E+03	3.163E-01
2094	3.696E+03	2.019E+06	1.357E+02	1.621E+01	4.523E+03	3.039E-01
2095	3.551E+03	1.940E+06	1.304E+02	1.558E+01	4.346E+03	2.920E-01
2096	3.412E+03	1.864E+06	1.252E+02	1.497E+01	4.176E+03	2.806E-01
2097	3.278E+03	1.791E+06	1.203E+02	1.438E+01	4.012E+03	2.696E-01
2098	3.150E+03	1.721E+06	1.156E+02	1.382E+01	3.855E+03	2.590E-01
2099	3.026E+03	1.653E+06	1.111E+02	1.327E+01	3.703E+03	2.488E-01
2100	2.908E+03	1.588E+06	1.067E+02	1.275E+01	3.558E+03	2.391E-01
2101	2.794E+03	1.526E+06	1.025E+02	1.225E+01	3.419E+03	2.297E-01
2102	2.684E+03	1.466E+06	9.852E+01	1.177E+01	3.285E+03	2.207E-01
2103	2.579E+03	1.409E+06	9.466E+01	1.131E+01	3.156E+03	2.120E-01
2104	2.478E+03	1.354E+06	9.095E+01	1.087E+01	3.032E+03	2.037E-01
2105	2.381E+03	1.301E+06	8.738E+01	1.044E+01	2.913E+03	1.957E-01
2106	2.287E+03	1.250E+06	8.396E+01	1.003E+01	2.799E+03	1.881E-01
2107	2.198E+03	1.201E+06	8.066E+01	9.639E+00	2.689E+03	1.807E-01
2108	2.111E+03	1.153E+06	7.750E+01	9.262E+00	2.584E+03	1.736E-01
2109	2.029E+03	1.108E+06	7.446E+01	8.898E+00	2.482E+03	1.668E-01
2110	1.949E+03	1.065E+06	7.154E+01	8.549E+00	2.385E+03	1.603E-01
2111	1.873E+03	1.023E+06	6.874E+01	8.214E+00	2.292E+03	1.540E-01
2112	1.799E+03	9.829E+05	6.604E+01	7.892E+00	2.202E+03	1.479E-01
2113	1.729E+03	9.444E+05	6.345E+01	7.583E+00	2.115E+03	1.421E-01
2114	1.661E+03	9.074E+05	6.097E+01	7.285E+00	2.032E+03	1.366E-01
2115	1.596E+03	8.718E+05	5.857E+01	7.000E+00	1.953E+03	1.312E-01
2116	1.533E+03	8.376E+05	5.628E+01	6.725E+00	1.876E+03	1.261E-01
2117	1.473E+03	8.048E+05	5.407E+01	6.462E+00	1.803E+03	1.211E-01
2118	1.415E+03	7.732E+05	5.195E+01	6.208E+00	1.732E+03	1.164E-01

GENERAL SITE MAP



LEGEND

- EXISTING GAS LATERAL/HEADER
- EXISTING 2" AIR LINE
- EXISTING 3" FORCEMAIN
- GW-37 — EXISTING LFG WELL WITH PUMP
- GW-37 — EXISTING LFG WELL W/O PUMP
- GW-37 — EXISTING LFG WELL UNDER LINER
- RW-LCR11 — EXISTING LFG WELL REMOTE WELLHEAD
- ROAD CROSSING
- EXISTING VALVE
- EXISTING BUTT FLANGE
- EXISTING ROAD CROSSING
- CT-5 — EXISTING CONDENSATE KNOCKOUT/DRIPLEG
- EXISTING REDUCER
- EXISTING ACCESS RISER
- CONSTRUCTED WASTE LIMITS
- EXISTING LATERAL/HORIZONTAL COLLECTOR UNDER LINER
- LIVE HEADER CAPPED BY GW25
- CAPPED LATERAL/HEADER TERMINATIONS
- LEACHATE CLEANOUT RISER
- HORIZONTAL COLLECTOR WELLHEAD

NOTES:
1. PORTIONS OF EXISTING GAS SYSTEM FROM DRAWING PREPARED BY STS CONSULTANTS, PROJECT NO. 774679, SHEET G-01.
2. TOPOGRAPHY FROM AERIAL SURVEY PERFORMED ON FEBRUARY 13, 2023 BY FIRMATEK, LLC, SAN ANTONIO, TX.

GRAPHIC SCALE

100 0 50 100 200 400

(IN FEET)
1 inch = 100 ft.

2023 RECORD GCCS PLAN

LAUREL RIDGE LANDFILL
LAUREL COUNTY, KENTUCKY
PERMIT NO. 063-00003
GAS COLLECTION & CONTROL SYSTEM
2023 GCCS PLAN

WASTE CONNECTIONS INC.

STATE OF KENTUCKY
7/26/23
SAMUEL T. OAKES
21483
LICENSED PROFESSIONAL ENGINEER

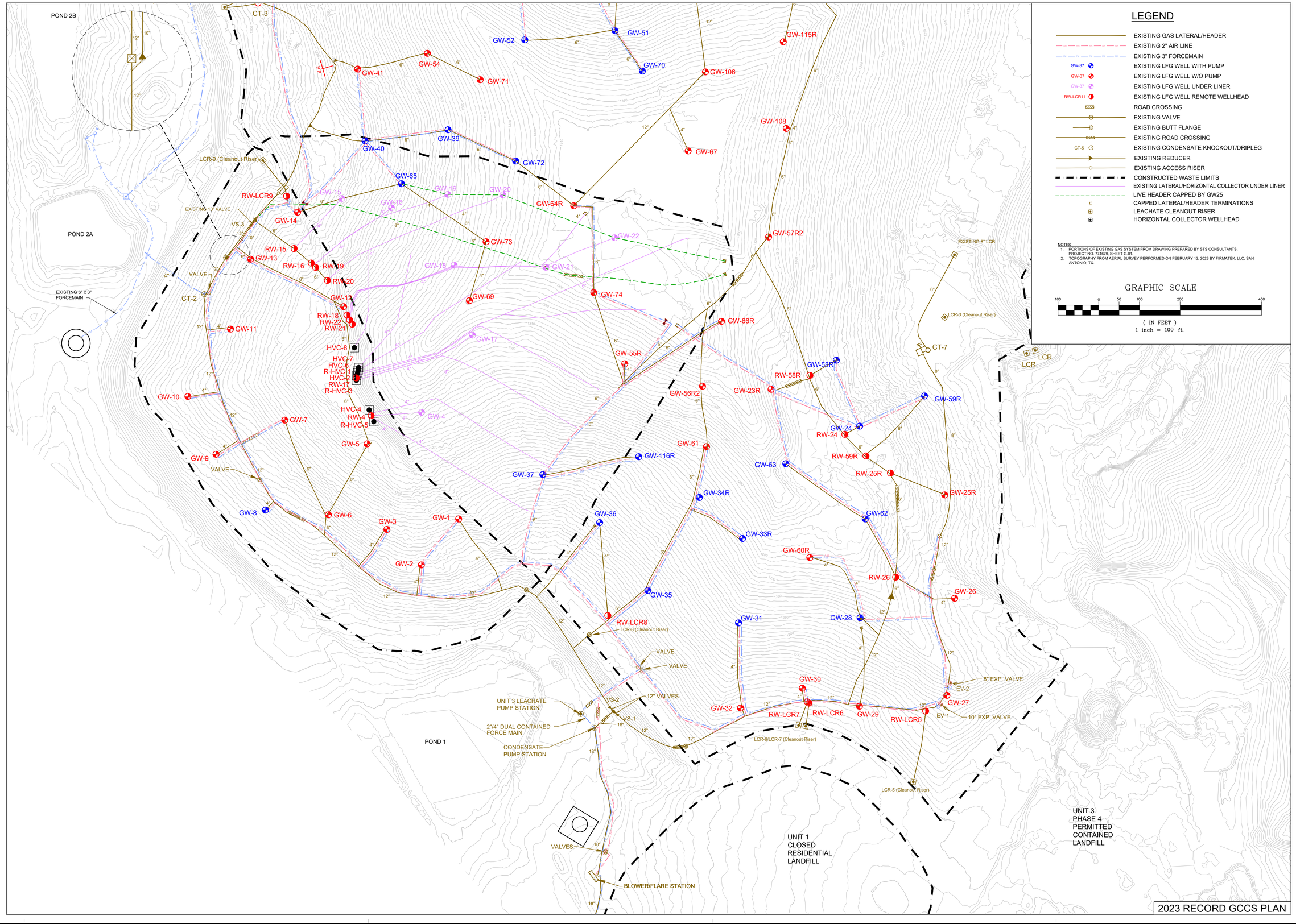
DRAWN BY: MAS
CHECKED BY: JWV
CHECKED BY: STO
DATE: JULY 2023
SCALE: NTS
REVISIONS

KENVIRONS
Civil & Environmental Engineers

PROJECT NO.
2018137

SHEET NO.
1 of 2

N:\P\2018137\GCCS DESIGN\2023\LR_2023 RECORD GCCS LAYOUT_071323-REV 1.dwg, 7/26/2023 2:24:33 PM, DWG To PDF.pc3



LEGEND

- EXISTING GAS LATERAL/HEADER
- EXISTING 2" AIR LINE
- EXISTING 3" FORCEMAIN
- GW-37 — EXISTING LFG WELL WITH PUMP
- GW-37 — EXISTING LFG WELL W/O PUMP
- GW-37 — EXISTING LFG WELL UNDER LINER
- RW-LCR11 — EXISTING LFG WELL REMOTE WELLHEAD
- ROAD CROSSING
- EXISTING VALVE
- EXISTING BUTT FLANGE
- EXISTING ROAD CROSSING
- CT-5 — EXISTING CONDENSATE KNOCKOUT/DRIPLEG
- EXISTING REDUCER
- EXISTING ACCESS RISER
- CONSTRUCTED WASTE LIMITS
- EXISTING LATERAL/HORIZONTAL COLLECTOR UNDER LINER
- LIVE HEADER CAPPED BY GW25
- CAPPED LATERAL/HEADER TERMINATIONS
- LEACHATE CLEANOUT RISER
- HORIZONTAL COLLECTOR WELLHEAD

NOTES
1. PORTIONS OF EXISTING GAS SYSTEM FROM DRAWING PREPARED BY STS CONSULTANTS, PROJECT NO. 774679, SHEET G-01.
2. TOPOGRAPHY FROM AERIAL SURVEY PERFORMED ON FEBRUARY 13, 2023 BY FIRMATEK, LLC, SAN ANTONIO, TX.

GRAPHIC SCALE

100 0 50 100 200 400

(IN FEET)
1 inch = 100 ft.

LAUREL RIDGE LANDFILL
LAUREL COUNTY, KENTUCKY
PERMIT NO. 063-00003
GAS COLLECTION & CONTROL SYSTEM
2023 GCCS PLAN

WASTE CONNECTIONS INC.

COMMONWEALTH OF KENTUCKY
7/26/23
SAMUEL T. OAKES
21483
LICENSED PROFESSIONAL ENGINEER

DRAWN BY: MAS
CHECKED BY: JWV
CHECKED BY: STO
DATE: JULY 2023
SCALE: NTS

REVISIONS

KENVIRONS
Civil & Environmental Engineers

PROJECT NO.
2018137

SHEET NO.
2 of 2

N:\P\2018137\GCCS DESIGN\2023\LR_2023 RECORD GCCS LAYOUT_071323-REV 1.dwg, 7/26/2023 2:25:37 PM, DWG To PDF.pc3